Town of Paradise
Town Council Meeting Agenda

April 12, 2016

Date/Time: 2nd Tuesday of each month at 6:00 p.m.
Location: Town Hall Council Chamber, 5555 Skyway, Paradise, CA

Mayor, Jody Jones
Vice Mayor, Scott Lotter
Council Member, Greg Bolin
Council Member, Steve "Woody" Culleton
Council Member, John J. Rawlings

Town Manager, Lauren Gill
Town Attorney, Dwight L. Moore
Town Clerk, Joanna Gutierrez
Community Development Director, Craig Baker
Finance Director/Town Treasurer, Gina Will
Public Works Director/Town Engineer, Marc Mattox
Division Chief, CAL FIRE/Paradise Fire, David Hawks
Chief of Police, Gabriela Tazzari-Dineen

Meeting Procedures

I. The Mayor is the Presiding Chair and is responsible for maintaining an orderly meeting. The Mayor calls the meeting to order and introduces each item on the agenda.

II. The Town staff then provides a report to Council and answers questions from the Council.

III. Citizens are encouraged to participate in the meeting process and are provided several opportunities to address Council. Any speaker addressing the Council is limited to three minutes per speaker - fifteen minutes per agenda item

A. If you wish to address the Council regarding a specific agenda item, please complete a "Request to Address Council" card and give it to the Town Clerk prior to the beginning of the meeting. This process is voluntary and allows for citizens to be called to the speaker podium in alphabetical order. Comments and questions from the public must be directed to the Presiding Chair and Town Council Members (please do not address staff.) Town staff is available to address citizen concerns Monday through Thursday at Town Hall between the hours of 8am and 5pm.

B. If you wish to address Council regarding an item not on the agenda, you may do so under Item 6, "Public Communication." Again, please fill out a card and give it to the Town Clerk before the meeting. State Law prohibits Council action on items not listed on a public agenda.

In compliance with the Americans with Disabilities Act (ADA) Compliance, persons who need special accommodations to participate in the Town Council meeting may contact the Town Clerk at least three business days prior to the date of the meeting to provide time for any such accommodation.

1. OPENING

a. Call to Order
b. Pledge of Allegiance to the Flag of the United States of America
c. Invocation
d. Roll Call

Proclamations: p5

- National Library Week
- Paradise Rotary - 70th Anniversary
- Child Abuse and Sexual Assault Awareness Month

Presentation:

- 211 Services - Free & Low-cost Community Resources in Butte County- By Lynn Haskell (Butte211.org)

2. CONSENT CALENDAR

One roll call vote is taken for all items. Consent items are considered to be routine business that does not call for discussion.

2a. p8 Approve the Minutes of the February 25, 2016 Special Council Meeting and March 8, 2016 Regular Council Meeting.

2b. p16 Approve cash disbursements for March 2016 in the amount of $1,584,332.97.

2c. p25 Adopt Resolution No. 16-07, A Resolution Authorizing Submittal of Applications for CalRecycle Payment Programs. (CalRecycle has established procedures that require an Applicant's governing body to adopt by resolution certain authorizations related to the administration of the payment program.)

2d. p29 Acknowledge receipt of the 2nd Quarter Investment Report for the Fiscal Year Ending June 30, 2016 and approve the Investment Policy.

2e. p42 Acknowledge receipt of the annual Northern California Cities Self Insurance Fund report.

2f. p74 Adopt Resolution No. 16-08, A Resolution declaring the 1989 Pierce Dash fire engine (E-281) as surplus property and authorizing sale of the vehicle by the Town Manager to either 1) the Butte College Fire Academy at a cost of not less than $8,000 or, 2) sell the 1989 Pierce Dash fire engine (E-281) on the fire apparatus open market.

2g. p76 1) Review and approve amended job description for the Building/Onsite Permit Technician; and, 2) Amend position control and budget appropriation for Building/Onsite Permit Technician position.

2h. p80 Waive the second reading of entire Ordinance No. 560 and approve reading by title only and adopt Ordinance No. 560, "An Ordinance of the Town of Paradise Amending Section 1.09.050 Relating to Administrative Civil Citations."

3. ITEMS REMOVED FROM CONSENT CALENDAR

4. PUBLIC COMMUNICATION

For matters that are not on the Council business agenda, speakers are allowed three (3) minutes to address the Council. The Town Council is prohibited from taking action on matters that are not listed on the public agenda. The Council may briefly respond for clarification and may refer the matter to the Town staff.

5. PUBLIC HEARINGS - None.

6. COUNCIL CONSIDERATION

Action items are presented by staff and the vote of each Council Member must be announced. A roll call vote is taken for each item on the action calendar. Citizens are allowed three (3) minutes to comment on agenda items.

6a. p83 Consider (1) Adopting the 2016-17 Subrecipient funding recommendations regarding grant funding for local organizations; (2) Adopting the FINAL 2016-2017 Annual Plan as submitted; or, (3) Revising the FINAL 2016-2017 Annual Plan; and, (4) Authorizing staff to submit the adopted 2016-2017 Annual Plan to the U.S. Department of Housing and Urban Development. **(ROLL CALL VOTE)** (CDBG funds are awarded for the purpose of community development activities that are directed toward revitalizing neighborhoods, for economic development and providing improved community facilities and services)

6b. p111 Consider (1) Concurring with staff's recommendation of Bennett Engineering Services to perform Alternatives Analysis, Feasibility Report and Special District Formation Services for the Paradise Sewer Project, and (2) Approving the attached Professional Services Agreement with Bennett Engineering Services and authorize the Town Manager and Town Mayor to execute, and (3) Authorizing the Town Manager to execute additional work orders up to 15% of the contract amount. **(ROLL CALL VOTE)**

6c. p136 Consider Adopting Resolution No. 16-__, A Resolution of the Town Council of the Town of Paradise approving a partial budget for the Town of Paradise temporary transaction and use tax (Measure C) funds for the 2016-2017 fiscal year ending June 30, 2017. **(ROLL CALL VOTE)**

6d. p139 Consider Adopting Resolution No. 16-__, A Resolution rejecting bids dated April 5, 2016 and approving the revised plans and specifications for the Measure C Road Rehabilitation Project 2016 and authorizing re-advertisement for bids on the project. **(ROLL CALL VOTE)**

6e. p143 Consider Adopting Resolution No. 16-__, A Resolution rejecting bid dated March 29, 2016 and approving the revised plans and specifications for the Measure "C" Pearson Rd Improvements Project and authorizing re-advertisement for bids on the project. **(ROLL CALL VOTE)**

6f. p148 Consider Adopting Resolution No. 16-__, to (1) Approve the Program Supplement Agreement No. F016 to Administering Agency-State Agreement No. 03-5425F15 for Federal-Aid Project HSIPL-5425 (035) to assure receipt of $470,900 in federal funds and authorize the Town Manager to execute; and (2) Adopting Resolution No. 16-__, A Resolution to Approve Administering Agency-State Agreement for Federal-Aid Projects, Agreement No. 03-5425F15 and authorize the Town Manager to execute. **(ROLL CALL VOTE)**

6g. p186 Consider Adopting Resolution No. 16-__, A Resolution of the Town Council of the Town of Paradise, California, Reporting Unexpended Development Impact Fees in Accordance with Government Code Section 66006. **(ROLL CALL VOTE)**

6h. p194 Consider Adopting Resolution No. 16-__, A Resolution Amending Multiple Chapters of the Town of Paradise Manual for the Onsite Treatment of Wastewater in Accordance with State Requirements known as Tier II Local Agency Management Program (LAMP) Which shall take effect immediately. **(ROLL CALL VOTE)**

7. COUNCIL INITIATED ITEMS AND REPORTS

a. Council initiated agenda items
b. Council reports on committee representation
c. Future Agenda Items

8. STAFF COMMUNICATION

a. Town Manager Report
b. Community Development Director

9. CLOSED SESSION

9a. Pursuant to Government Code Section 54957.6, the Town Council will hold a closed session to meet with Lauren Gill, Gina Will and Crystal Peters, its designated representatives, regarding labor relations between the Town of Paradise and the Confidential/Mid-Management Association, General Employees Unit, Management Group, Police Mid-Management and the Paradise Police Officers Association.

9b. Pursuant to Government Code section 54956.9(a), the Town Council will meet in closed session with Town Attorney Dwight Moore and Town Manager Lauren Gill relating to existing ligation as follows: Town of Paradise vs. Brandy L. Braun, Butte County Superior Court Case No. 164611.

9c. Pursuant to Government Code section 54956.9 (d)(4), the Town Council will meet in closed session with Town Attorney Dwight Moore and Town Manager Lauren Gill relating to initiation of litigation: one potential case.

10. ADJOURNMENT

Town of Paradise, California

PROCLAMATION

WHEREAS, libraries have long served as trusted and treasured institutions, and library workers and librarians fuel efforts to better their communities, campuses and schools;

WHEREAS, libraries are evolving in order to serve their communities and to continue to fulfill their role in leveling the playing field for all who seek information and access to technologies;

WHEREAS, libraries and librarians open up a world of possibilities through innovative programming, job-seeking resources and the power of reading;

WHEREAS, libraries and librarians are looking beyond their traditional roles and providing more opportunities for community engagement and deliver new services that connect closely with patrons' needs; and,

WHEREAS, libraries support democracy and can effect social change through their commitment to provide equitable access to information for all library users.

NOW, THEREFORE, I Jody Jones, Mayor of the Town of Paradise, hereby proclaim the week of April 10, 2016 as National Library Week. I encourage all residents to visit the library this week to explore what's new and to engage with your librarian. Because of you, Libraries Transform.

IN WITNESS WHEREOF I hereunto set my hand and cause the official seal of the Town of Paradise to be affixed hereto this 12th day of April, 2016.

[redacted]

Jody Jones, Mayor

Town of Paradise, California

PROCLAMATION

WHEREAS, on April 14, 2016, the Rotary Club of Paradise will celebrate their 70th Anniversary;

WHEREAS, Rotary is a worldwide organization of business and professional leaders that provides humanitarian services, encourages high ethical standards in all vocations, and helps build goodwill and peace in the world;

WHEREAS, there are many examples of Paradise Rotary's commitment to our community, including the following recent projects: Ponderosa Elementary School Science Technology Engineering Mathematics (STEM) Lab, the Paradise Ice Rink, the annual mini-grants to teachers for new classroom equipment and projects, the Bille park Playground equipment, the Egleson baseball field new scoreboards, the International project in Mexico, the Skyway Streetscape & Beautification project, the replacement of smoke detectors or smoke detector batteries for seniors, Skyway cleanup and the Paradise of Flags setup and takedown.

NOW, THEREFORE, I Jody Jones, Mayor of the Town of Paradise, hereby recognize the 70th Anniversary of the Rotary Club of Paradise and commend their efforts to improve our community and to carry out their ideals of service as well as the demonstrating the objective of Rotary, to encourage and foster the ideal of service as a basis of worthy enterprise.

IN WITNESS WHEREOF I hereunto set my hand and cause the official seal of the Town of Paradise to be affixed hereto this 12th day of April, 2016.

[redacted]

Jody Jones, Mayor

Town of Paradise, California

PROCLAMATION

WHEREAS, Child Abuse & Sexual Assault Awareness Month calls attention to the fact that sexual violence is widespread; and

WHEREAS, women, children, and men are all victims of sexual violence, and it is estimated that nearly one in two women and one in five men experience sexual violence other than rape throughout their lifetime; and

WHEREAS, the federal Centers for Disease Control and Prevention have identified sexual violence as a significant, costly, and preventable health issue; and

WHEREAS, A coalition of rape crisis centers and their allies, known as the California Coalition Against Sexual Assault, has emerged to directly confront this crisis with the cooperation of law enforcement agencies, health care providers, institutions of higher education, and other allied professionals from California's diverse communities; and

WHEREAS, it is our responsibility to support all rape survivors by treating them with dignity, compassion, and respect; and it is important to recognize the compassion and dedication of the individuals involved in this effort, applaud their commitment, and increase public understanding of this significant problem; and,

WHEREAS, for the past 42 years **Rape Crisis Intervention & Prevention** has led the way in **Paradise** in addressing sexual violence by providing FREE 24-hour crisis line services to victim/survivors.

NOW, THEREFORE, I, Jody Jones, Mayor of the Town of Paradise, join **Rape Crisis Intervention & Prevention,** advocates and communities across the country in taking action to prevent sexual violence. Along with the United States Government and the State of California, I do herby proclaim April 2016 as "Child Abuse & Sexual violence Awareness Month".

IN WITNESS WHEREOF I hereunto set my hand and caused the official seal of the Town of Paradise to be affixed hereto this 12th day of April 2016.

[redacted]

Jody Jones, Mayor

MINUTES
PARADISE TOWN COUNCIL
SPECIAL MEETING – 3:00 PM – February 25, 2016

1. OPENING

Mayor Jody Jones called the February 25, 2016 Special Town Council Meeting to order at 3:04 p.m. in the Council Chamber located at 5555 Skyway, Paradise, California and led the Pledge of Allegiance to the Flag of the United States of America.

COUNCIL MEMBERS PRESENT: Greg Bolin, Steve "Woody" Culleton, Scott Lotter and Jody Jones, Mayor.

COUNCIL MEMBERS ABSENT: John Rawlings

STAFF PRESENT: Assistant Town Clerk Dina Volenski, Town Manager Lauren Gill, Town Attorney Dwight Moore, Finance Director/Town Treasurer Gina Will, Community Development Services Director Craig Baker, Public Works Director Marc Mattox, Administrative Assistant Colette Curtis, Police Chief Gabriela Tazzari-Dineen, North Division Chief David Hawks, CAL FIRE/Paradise Fire and Human Resources Manager Crystal Peters.

2. COUNCIL CONSIDERATION - ACTION CALENDAR

Town Manager Gill reported to Council regarding the purpose of this special meeting which is for the Council to discuss their town-wide priorities and expectations for the 2016/2017 fiscal year, provide general direction on where to focus limited staff time and resources and provide direction for the 2016 Measure C funding priorities.

Manager Gill stated that she is requesting general guidelines and direction from the Council today and displayed a PowerPoint that outlined the budget process and timeline/schedule.

Manager Gill shared all of the 2015/2016 department accomplishments that have been met and the 2016/2017 department goals for CALFIRE, the Police Department, Animal Control, Development Services and Engineering/Public Works.

Town Engineer Marc Mattox provided information on the several Grants that have been awarded for road projects and where they are in the process. The Town does not have adequate revenues to maintain critical roadways and the current projected need exceeds $32,000,000. Mr. Mattox shared that the road maintenance done since 2009 has barely scratched the surface and that regular road maintenance is needed to reduce overall costs. An annual investment of $500,000 - $800,000 is needed just to maintain current road conditions and there is a unique opportunity with the low cost of oil prices to receive reduced costs on surface treatments for the roads. Mr. Mattox presented two options for Council to consider: Option One included micro-surface, new striping and recessed markers and Option Two included micro-surface, new striping and recessed markers with an additional section that was only new striping and recessed

markers. The $500,000 in funding could come from Measure C funding. Council discussed the options and requested staff to bring a project for formal consideration to the March Council meeting.

Manager Gill discussed the past budget without the voter approved Measure C funding and the draconian cuts that were made to all department budgets, that Measure C is a short-term solution and the Town needs to continue to think long term to become self-sustaining and have a good savings plan/reserves in place.

Council Member Rawlings was not in attendance, but requested that the Town Manager include an Animal Shelter addition for $175,000 from the Measure C funding on the priority list.

The Town Council discussed their individual goals and overall desire to restore necessary services and established the following general priorities for the upcoming year. Some of the priorities were considered to be essential and were all rated number one.

1. Paradise Sewer Project
1. CALFIRE Contract
1. Town-wide Personnel Structure
1. NRWS Franchise Agreement
2. Business Identification/License
3. Master Fee Schedule
4. Facilities Best Use / Deferred Maintenance
5. Tourism/Economic Development
6. Increased Traffic Enforcement
7. Review of Code Enforcement/AC Processes
8. $175,000 for Animal Shelter Addition

3. ADJOURNMENT

Mayor Jones adjourned the Council meeting at 4:34 p.m.

Date Approved:

By: _____
Jody Jones, Mayor

_____
Dina Volenski, CMC, Assistant Town Clerk

MINUTES
PARADISE TOWN COUNCIL
REGULAR MEETING – 6:00 PM – March 08, 2016

1. OPENING

a. Called to order by Mayor Jody Jones at 6:01 p.m.
b. Pledge of Allegiance to the Flag of the United States of America
c. Invocation by Council Member John J. Rawlings.

COUNCIL MEMBERS PRESENT: Greg Bolin, Steve "Woody" Culleton, Scott Lotter, John J. Rawlings and Jody Jones, Mayor.

COUNCIL MEMBER ABSENT: None.

STAFF PRESENT: Town Clerk Joanna Gutierrez, Town Manager Lauren Gill, Town Attorney Dwight L. Moore, Finance Director/Town Treasurer Gina Will, Human Resources Manager Crystal Peters, Administrative Assistant

e. Town Council Recognitions of Employee Service to the Town
Presented by Mayor Jody Jones (630-20-22))

20 Years

Stephen Rowe - Police Lieutenant

15 Years

Robert Nichols - Police Sergeant

5 Years

Crystal Peters - Human Resources Manager
Gabriela Tazzari-Dineen - Police Chief
Anthony Lindsey - Fire Marshal/Building Official
Jake Smith - Police Sergeant

f. Town of Paradise Employees of the Year
Presented by Town Manager Lauren Gill

- Susan Hartman, Assistant Planner
- Anthony Lindsey, Fire Marshal/Building Official

g. Volunteers in Police Services (VIPS) 2015 Annual Report –
Presented by Community Services Officer Charlie Rollo. (480-60-09)

2. CONSENT CALENDAR

MOTION by Bolin, seconded by Culleton, approved the following consent calendar items as presented. Roll call vote was unanimous. One roll call vote is taken for all items.

2a. Approved Minutes of the January 25 and February 9, 2016 Regular Council meetings.

2b. Approved February 2016 Cash Disbursements in the amount of $1,732,375.12. (310-10-31)

2c. Waived reading of entire Ordinance No. 559 and approved reading by title only; and, adopted Ordinance No. 559, An Ordinance Amending Paradise Municipal Code Sections 13.04.05, 13.04.040, 13.04.070, 13.04.080, 13.04.110 and 13.04.112 Relating to Onsite Sewage Disposal Regulations. The revisions to the Paradise Municipal Code contained in the ordinance were necessary to put the Town in a position to submit Town regulations (PMC & Onsite Manual) relating to onsite wastewater treatment to the State Water Resources Control Board pursuant to State Policy to consider authorizing Town establishment of a Local Agency Management Program (LAMP) for the Town of Paradise. (540-16-128)

3. ITEMS REMOVED FROM CONSENT CALENDAR – None.

4. PUBLIC COMMUNICATION

1. Claudia Benike spoke about hydraulic fracturing to inform the Council of its negative effects to the environment.

2. Ward Habriel believes that the Town could influence motorist behavior by parking an empty police vehicle with flashing lights at various places on Skyway to slow down the speeders, especially those that are diverting to Clark Road to avoid Skyway.

3. Michael Ledbetter asked the Town Council to refund the fines that are on his tax bill as a result of his not having garbage service, that he does not need garbage service and that he had been granted an exception by the previous Community Development Director as a self-hauler.

4. Jon Remalia stated that the Cobblestone Pharmacy in Paradise is closing, that he understands they were bought out by a big-box store and asked the Town Council to do something to stop big-box stores from taking over the smaller businesses in Paradise.

5. PUBLIC HEARINGS

5a. Following a report from Town Manager Gill, Mayor Jones opened the public hearing at 6:38 p.m. regarding the proposed ordinance and resolution relating to the administrative civil citation penalty process and establishment of a temporary amnesty program relating to payment of administrative civil citation penalties and liens.

1. Ward Habriel spoke in favor of the proposed program and that he believes it will help to address issues of blight in the Town and bring up the property values for all residents.

2. Jon Remalia thinks this is a step in the right direction, that the 75% reduction is too much, that there is a constitutional issue when the punishment does not fit the crime, that fines should be assessed based on an individual's ability to pay and that there should be a hearing process.

Mayor Jones closed the public hearing at 6:45 p.m.

MOTION by Bolin, seconded by Culleton, adopted Resolution No. 16-05, A Resolution of the Town Council of the Town of Paradise Establishing a Temporary Amnesty Relating to the Payment of Administrative Civil Citation Penalties and Liens. Roll call vote was unanimous.

Council directed staff to bring back a report on the amnesty program in six months for review.

MOTION by Culleton, seconded by Rawlings, concurred with the California Environmental Quality Act 9CEQA) determination signed by the Town Planning Director, waived the reading of entire Ordinance No. 560 and approved reading by title only, and introduced Ordinance No. 560, An Ordinance Amending Section 1.09.050 of Paradise Municipal Code Chapter 1.09 Relating to Administrative Civil Citation Penalties. Roll call vote was unanimous. (540-16-129)

Council concurred to direct staff to bring this matter back to Council on a future agenda for further discussion of issues related to the administrative civil citation process, including but not limited to how property owners are billed for outstanding, unpaid fines for code violations, hearing and appeal processes, and other mechanisms to address public nuisances and to gain compliance by property owners.

6. COUNCIL CONSIDERATION

6a. **MOTION by Bolin, seconded by Culleton,** approved the Professional Services Agreement with CSU Chico Research Foundation, on behalf of the Center for Healthy Communities related to the Pearson Road SR2S Connectivity Project Education and Outreach Services (Non-Infrastructure Component) for an estimated amount of $71,289 and authorized the Town Manager to execute the agreement. Roll call vote was unanimous. (540-20-120 & 950-40-25)

The services for this effort will be 100% funded by the State Active Transportation Program. The budgeted grant amount for the Non-Infrastructure phase of the project is $91,000. The estimated total contract cost is $71,189.

6b. **MOTION by Bolin, seconded by Rawlings,** (1) Concurred with staff's recommendation of Rolls Anderson & Rolls to perform engineering services for the Maxwell Drive Safe Routes to School Project; (2) Approved the Professional Services Agreement with Rolls Anderson & Rolls and authorized the Town Manager to execute; and, (3) Authorized the Town Manager to execute additional work orders up to 10% of the contract amount. Roll call vote was unanimous. (510-20-121 & 950-40-26)

The professional services agreement and respective services will be 100% funded by the State Active Transportation Program. The budgeted grant amount for the Preliminary Engineering phase of the project is $98,000. The estimated total contract cost is $59,856.00.

6c. Following a report from Public Works Director/Town Engineer Mattox, Mayor Jones called for public comment cards.

1. Ward Habriel stated that he would like to see more law enforcement and that he thinks people remember that Measure C monies are for police and fire.

MOTION by Lotter, seconded by Rawlings, adopted Resolution No. 16-06, A Resolution Approving the Plans and Specifications for the Measure C Road Rehabilitation Project 2016 for an estimated construction cost of $500,000 with 10% contingency from local transportation/transit and authorized advertisement for bids on the project. Roll call vote was unanimous. (950-40-029 & 395-70-17)

Council concurred to direct staff to include an addendum within the contract that would allow for a contractor to rehabilitate additional priority roadways including Oliver, Elliott, Wagstaff and Pentz south of Pearson if the project came in under the $500,000 budget. The proposed project includes micro-surfacing, re-striping and placing recessed markers to maintain and extend the life of critical roadways.

6d. **MOTION by Lotter, seconded by Bolin,** (1) Authorized staff to award a contract Chrisp Company of Woodland, CA to perform striping modifications at the intersection of Skyway at Elliott Road at a cost not to exceed $7,335.00; and, (2) Authorized in-house public works staff to make structural changes to the Skyway/Elliott triangle, permitting two northbound lanes to proceed straight through intersection. Roll call vote was unanimous. (510-20-122 & 950-40-19)

6e. **MOTION by Lotter, seconded by Culleton,** reinstated the Community Development Block Grant Small Business Assistance Program to offer loans and grants to small businesses for start up and expansion. The proposed total budget for the program in its first year 2016-2017 would be $153,000. Roll call vote was unanimous. (710-05-20)

7. COUNCIL INITIATED ITEMS AND REPORTS

7a. Council concurred to oppose Measure SB876 (Liu), a measure that would preempt local authority to address important issues affecting public health and safety and approved sending a letter in opposition of SB 876 (Liu). (550-40-18)

7b. Council Member Rawlings stated that he would like the Council to consider a specific allocation of Measure C Funds for the Animal Control shelter to build a 900' building next to the existing Animal Control facility that would be dedicated to the care and keeping of cats, that he has met with PASH members and other community volunteers and that he believes the cost of such a building would be $200 per square foot for a cost of $180,000.

1. Dan Wentland stated that he and other members of PASH realize that this type of facility is not a funding priority for Measure C funds, that PASH anticipates holding fund raisers for the project and that he thinks there will be volunteers for the construction with the exception of the masonry work.

   Council concurred to request that Council Member Rawlings and the PASH committee keep the Council informed on how to participate in the community fundraising efforts for this proposed facility.

   7c. Council Reports on Committee Representation

   Council Member Rawlings participated in the CDBG Sub-recipient review process, attended Destination Downtown meetings and a PASH committee meeting.

   Council Member Lotter attended the Local Area Formation Commission (LAFCo) meeting.

   Council Member Culleton attended the Local Task Force (LTF) meeting on February 18, 2016 and a Fire Pals presentation at the Paradise Intermediate School.

   Mayor Jones attended Butte County Association of Governments and Air Quality Management District meetings, presented sewer information to the Lions Service Group, that the Downtown Destination Committee has scheduled a Wine Walk in Paradise on September 16, 2016, and that the assistant pastor of the Seventh Day Adventist Church has informed her that they would like to assist the Town with any projects in any way that they can.

   7d. Future Agenda Items: Vice Mayor Lotter requested that a Butane Control Ordinance similar to the City of Anderson's be brought to the Council for consideration.

8. STAFF COMMUNICATION

a. Town Manager Gill reported that development of apartments on the site of the form Carousel Motel is in progress, that there will a hearing regarding tree removal from the construction site of the Eye Life Institute, DRP opened up in the Liberty Plaza on Skyway, and a mattress clearance business and a Priced Right Chair and Sofa shop are also open in Paradise.

9. CLOSED SESSION

At 8:30 p.m. Town Attorney Moore announced that the Town Council would meet in closed session for the following matters:

9a. Pursuant to Government Code Section 54957.6, the Town Council will hold a closed session to meet with Lauren Gill, Gina Will and Crystal Peters, its designated representatives, regarding labor relations between the Town of Paradise and the Confidential/Mid-Management Association, General Employees Unit, Management Group, Police Mid-Management and the Paradise Police Officers Association; and,

9b. Pursuant to Government Code section 54956.9(a), the Town Council will meet in closed session with Town Attorney Dwight Moore and Town Manager Lauren Gill relating to existing litigation as follows: Town of Paradise vs. Brandy L. Braun, Butte County Superior Court Case No. 164611.

Mayor Jones reconvened the Council meeting at 9:08 p.m. Town Attorney Moore reported that direction was given to staff regarding labor relations matters and that Council concurred unanimously to approve a stipulation relating to the sale of property located at 1433 Bille Road, the property that is the subject of existing litigation, Town of Paradise vs. Brandy L. Braun.

10. ADJOURNMENT

Mayor Jones adjourned the Council Meeting at 9:10 p.m.

Date Approved:

By: _____
Jody Jones, Mayor

Attest: _____
Joanna Gutierrez, CMC, Town Clerk

TOWN OF PARADISE

CASH DISBURSEMENTS REPORT

FOR THE PERIOD OF

MARCH 1, 2016 - MARCH 31, 2016

March 1, 2016 - March 31, 2016

Check Date	Pay Period End	DESCRIPTION	AMOUNT	
03/11/16	03/06/16	Net Payroll - Direct Deposits & Checks	$113,173.29	
03/25/16	03/20/16	Net Payroll - Direct Deposits & Checks	$111,885.01	
	TOTAL NET WAGES PAYROLL			**$225,058.30**

Accounts Payble

PAYROLL VENDORS: TAXES, PERS, DUES, INSURANCE, ETC.	$245,148.43	
OPERATIONS VENDORS: SUPPLIES, CONTRACTS, UTILITIES, ETC.	$1,114,126.24	
TOTAL CASH DISBURSEMENTS - ACCOUNTS PAYABLE (Detail attached)		**$1,359,274.67**
GRAND TOTAL CASH DISBURSEMENTS		**$1,584,332.97**

APPROVED BY: _____
LAUREN GILL, TOWN MANAGER

APPROVED BY: _____
GINA S. WILL, FINANCE DIRECTOR/TOWN TREASURER

TOWN OF PARADISE

CASH DISBURSEMENTS REPORT

From Payment Date: 3/1/2016 - To Payment Date: 3/31/2016

Number	Date	Status	Void Reason	Reconciled/ Voided Date	Source	Payee Name	Transaction Amount	Reconciled Amount	Difference
AP - US Bank TOP AP Checking									
Check									
64222	03/01/2016	Open			Accounts Payable	BRUNO, SHERRY	$226.40		
64223	03/01/2016	Open			Accounts Payable	BUZZARD , CHRIS	$446.23		
64224	03/01/2016	Open			Accounts Payable	GALLAGHER, CRAIG	$390.71		
64225	03/01/2016	Open			Accounts Payable	HAUNSCHILD, MARK	$531.55		
64226	03/01/2016	Open			Accounts Payable	HONEYWELL, JANICE, J.	$955.41		
64227	03/01/2016	Open			Accounts Payable	HOUSEWORTH, JERILYN	$194.85		
64228	03/01/2016	Open			Accounts Payable	JEFFORDS, ROBERT, D.	$478.07		
64229	03/01/2016	Open			Accounts Payable	MOORE, DWIGHT, L.	$13,800.00		
64230	03/01/2016	Open			Accounts Payable	PILGRIM, CHRIS	$478.21		
64231	03/01/2016	Open			Accounts Payable	SBA Monarch Towers III LLC	$121.67		
64232	03/01/2016	Open			Accounts Payable	WESTAMERICA BANK	$8,584.61		
64233	03/03/2016	Open			Accounts Payable	ACCESS INFORMATION PROTECTED	$32.00		
64234	03/03/2016	Open			Accounts Payable	AgendaPal Corporation	$399.00		
64235	03/03/2016	Open			Accounts Payable	ARAMARK UNIFORM SERV. INC.	$59.01		
64236	03/03/2016	Open			Accounts Payable	Bertagna, Steve	$396.50		
64237	03/03/2016	Open			Accounts Payable	Big O Tires	$534.26		
64238	03/03/2016	Open			Accounts Payable	BURTON'S FIRE, INC.	$3,393.93		
64239	03/03/2016	Open			Accounts Payable	CHOICE PROPERTY SERVICES	$120.00		
64240	03/03/2016	Open			Accounts Payable	Discount Chimney Sweep	$315.00		
64241	03/03/2016	Open			Accounts Payable	DOBRICH & SONS SEPTIC	$698.50		
64242	03/03/2016	Open			Accounts Payable	DON'S SAW & MOWER	$167.68		
64243	03/03/2016	Open			Accounts Payable	EVERGREEN JANITORIAL SUPPLY, INC.	$133.41		
64244	03/03/2016	Open			Accounts Payable	FEATHER RIVER HOSPITAL	$264.00		
64245	03/03/2016	Open			Accounts Payable	FOOTHILL MILL & LUMBER	$164.62		
64246	03/03/2016	Open			Accounts Payable	Goodyear Tire & Rubber Company	$1,198.52		
64247	03/03/2016	Open			Accounts Payable	GREAT AMERICA LEASING CORP.	$129.62		
64248	03/03/2016	Open			Accounts Payable	HELENA SPECIALTY PRODUCTS	$520.24		
64249	03/03/2016	Open			Accounts Payable	I.M.P.A.C. PAYMENTS IMPAC GOV SVCS/US BANCORP	$3,782.08		
64250	03/03/2016	Open			Accounts Payable	INDUSTRIAL EQUIPMENT	$448.97		
64251	03/03/2016	Open			Accounts Payable	INTERSTATE OIL COMPANY	$369.55		
64252	03/03/2016	Open			Accounts Payable	JAMES RIOTTO & ASSOCIATES	$266.00		
64253	03/03/2016	Open			Accounts Payable	KNIFE RIVER CONSTRUCTION	$439.73		
64254	03/03/2016	Open			Accounts Payable	KOEFRAN INDUSTRIES	$250.00		
64255	03/03/2016	Open			Accounts Payable	LIEBERT CASSIDY WHITMORE	$1,300.00		
64256	03/03/2016	Open			Accounts Payable	MAGOON SIGNS	$117.71		
64257	03/03/2016	Open			Accounts Payable	MARK THOMAS & COMPANY INC	$3,948.89		
64258	03/03/2016	Open			Accounts Payable	McCullough, Marshall Brick	$616.00		
64259	03/03/2016	Open			Accounts Payable	MIKE'S APPLIANCE	$258.12		
64260	03/03/2016	Open			Accounts Payable	NICOLETTI, CHRISTOPHER	$71.71		
64261	03/03/2016	Open			Accounts Payable	NORTHGATE PETROLEUM CO	$3,852.75		
64262	03/03/2016	Open			Accounts Payable	NORTHSTAR ENGINEERING INC	$1,637.82		
64263	03/03/2016	Open			Accounts Payable	O'REILLY AUTO PARTS	$545.46		
64264	03/03/2016	Open			Accounts Payable	OFFICE DEPOT ACCT#36233169	$441.26		
64265	03/03/2016	Open			Accounts Payable	Oroville Hospital	$1,166.00		
64266	03/03/2016	Open			Accounts Payable	PACIFIC GAS & ELECTRIC	$184.11		

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64267	03/03/2016	Open			Accounts Payable	PARADISE IRRIGATION DIST	$597.39		
64268	03/03/2016	Open			Accounts Payable	PARADISE POST/NORTH VALLEY COMMTY MEDIA	$459.92		
64269	03/03/2016	Open			Accounts Payable	PEERLESS BUILDING MAINT	$560.00		
64270	03/03/2016	Open			Accounts Payable	PEPPAS, KEVIN	$107.49		
64271	03/03/2016	Voided		03/15/2016	Accounts Payable	PESTICIDE APPLICATORS PROF ASSOC	$45.00		
64272	03/03/2016	Open			Accounts Payable	PETERS RUSH HABIB & MCKENNA	$540.00		
64273	03/03/2016	Open			Accounts Payable	Riebes Auto Parts	$4,600.04		
64274	03/03/2016	Open			Accounts Payable	SANTA ROSA JR COLLEGE	$34.50		
64275	03/03/2016	Open			Accounts Payable	SANTA ROSA JR COLLEGE	$126.00		
64276	03/03/2016	Open			Accounts Payable	SINCLAIR'S AUTOMOTIVE & TOWING	$60.00		
64277	03/03/2016	Open			Accounts Payable	SNAP-ON TOOLS	$32.35		
64278	03/03/2016	Open			Accounts Payable	SONSRAY MACHINERY LLC	$138.81		
64279	03/03/2016	Open			Accounts Payable	Sunrun Installation Services Inc	$105.12		
64280	03/03/2016	Open			Accounts Payable	SUTTER BUTTES COMMUNICATIONS, INC.	$495.00		
64281	03/03/2016	Open			Accounts Payable	THOMAS ACE HARDWARE - ENG. DEPT.	$526.07		
64282	03/03/2016	Open			Accounts Payable	THOMAS ACE HARDWARE - FIRE DEPT.	$78.55		
64283	03/03/2016	Open			Accounts Payable	THOMAS ACE HARDWARE - MOTORPOOL	$56.14		
64284	03/03/2016	Open			Accounts Payable	THOMAS ACE HARDWARE - POLICE DEPT.	$35.13		
64285	03/03/2016	Open			Accounts Payable	THOMAS HYDRAULIC & HARDWARE SUPPLY, INC.	$54.65		
64286	03/03/2016	Open			Accounts Payable	THRIFTY ROOTER	$89.00		
64287	03/03/2016	Open			Accounts Payable	Tri Flame Propane	$248.77		
64288	03/03/2016	Open			Accounts Payable	TUCKER PEST CONTROL INC	$126.00		
64289	03/03/2016	Open			Accounts Payable	Walters, Perry	$152.50		
64290	03/07/2016	Voided/Spoiled	Printer Error	03/03/2016	Converted/Imported		$0.00	$0.00	$0.00
64291	03/07/2016	Voided/Spoiled	Printer Error	03/03/2016	Converted/Imported		$0.00	$0.00	$0.00
64292	03/07/2016	Voided/Spoiled	Printer Error	03/03/2016	Converted/Imported		$0.00	$0.00	$0.00
64293	03/07/2016	Voided/Spoiled	Printer Error	03/03/2016	Converted/Imported		$0.00	$0.00	$0.00
64294	03/07/2016	Voided/Spoiled	Printer Error	03/03/2016	Converted/Imported		$0.00	$0.00	$0.00
64295	03/07/2016	Voided/Spoiled	Printer Error	03/03/2016	Converted/Imported		$0.00	$0.00	$0.00
64296	03/07/2016	Voided/Spoiled	Printer Error	03/03/2016	Converted/Imported		$0.00	$0.00	$0.00
64297	03/07/2016	Voided/Spoiled	Printer Error	03/03/2016	Converted/Imported		$0.00	$0.00	$0.00
64298	03/07/2016	Voided/Spoiled	Printer Error	03/03/2016	Converted/Imported		$0.00	$0.00	$0.00
64299	03/07/2016	Voided/Spoiled	Printer Error	03/03/2016	Converted/Imported		$0.00	$0.00	$0.00
64300	03/07/2016	Voided/Spoiled	Printer Error	03/03/2016	Converted/Imported		$0.00	$0.00	$0.00
64301	03/07/2016	Voided/Spoiled	Printer Error	03/03/2016	Converted/Imported		$0.00	$0.00	$0.00
64302	03/07/2016	Voided/Spoiled	Printer Error	03/03/2016	Converted/Imported		$0.00	$0.00	$0.00
64303	03/07/2016	Voided/Spoiled	Printer Error	03/03/2016	Converted/Imported		$0.00	$0.00	$0.00
64304	03/03/2016	Open			Accounts Payable	BLOOD SOURCE	$55.00		
64305	03/03/2016	Open			Accounts Payable	Met Life	$8,066.17		
64306	03/03/2016	Open			Accounts Payable	OPERATING ENGINEERS	$652.50		

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64307	03/03/2016	Open			Accounts Payable	PARADISE POLICE OFFICERS ASSOCIATION	$1,928.64		
64308	03/03/2016	Open			Accounts Payable	SUN LIFE INSURANCE	$3,619.46		
64309	03/03/2016	Open			Accounts Payable	SUPERIOR VISION SVC NGLIC	$644.42		
64310	03/03/2016	Open			Accounts Payable	TOP CONFIDENTIAL MID MGMT ASSOCIATION	$110.00		
64311	03/04/2016	Open			Accounts Payable	MID VALLEY TITLE & ESCROW	$10,801.95		
64312	03/11/2016	Open			Accounts Payable	ICMA 457 - VANTAGEPOINT	$50.00		
64313	03/11/2016	Open			Accounts Payable	STATE DISBURSEMENT UNIT	$314.76		
64314	03/17/2016	Open			Accounts Payable	A & A Concrete Supply	$1,587.30		
64315	03/17/2016	Open			Accounts Payable	ABLE PLUMBING & ELECTRIC	$29.00		
64316	03/17/2016	Open			Accounts Payable	ACCESS INFORMATION PROTECTED	$32.00		
64317	03/17/2016	Open			Accounts Payable	ACI ENTERPRISES, INC.	$463.32		
64318	03/17/2016	Open			Accounts Payable	ALHAMBRA	$76.95		
64319	03/17/2016	Open			Accounts Payable	ARAMARK UNIFORM SERV. INC.	$59.01		
64320	03/17/2016	Open			Accounts Payable	AT&T	$1,049.97		
64321	03/17/2016	Open			Accounts Payable	AT&T MOBILITY	$54.20		
64322	03/17/2016	Open			Accounts Payable	Bauer Compressors	$37.68		
64323	03/17/2016	Open			Accounts Payable	Bear Electric Solutions	$1,425.00		
64324	03/17/2016	Open			Accounts Payable	Big O Tires	$379.95		
64325	03/17/2016	Open			Accounts Payable	Biometrics4ALL, Inc	$6.75		
64326	03/17/2016	Open			Accounts Payable	BURTON'S FIRE, INC.	$159.71		
64327	03/17/2016	Open			Accounts Payable	BUTTE CO RECORDER	$64.00		
64328	03/17/2016	Open			Accounts Payable	BUTTE REGIONAL TRANSIT	$1,831.50		
64329	03/17/2016	Open			Accounts Payable	CALIFORNIA STATE DEPARTMENT OF JUSTICE	$292.00		
64330	03/17/2016	Open			Accounts Payable	CLARK ROAD ANIMAL HOSPITAL	$105.00		
64331	03/17/2016	Open			Accounts Payable	COLYER VET SERVICE	$15.00		
64332	03/17/2016	Open			Accounts Payable	COMCAST CABLE	$86.05		
64333	03/17/2016	Open			Accounts Payable	COMCAST CABLE	$306.05		
64334	03/17/2016	Open			Accounts Payable	COMCAST CABLE	$291.05		
64335	03/17/2016	Open			Accounts Payable	COMPANIONS ANIMAL HOSPITAL	$15.00		
64336	03/17/2016	Open			Accounts Payable	CRAIG DREBERTS AUTOMOTIVE	$1,431.09		
64337	03/17/2016	Open			Accounts Payable	DEPARTMENT OF FORESTRY & FIRE PROTECTION	$746,035.78		
64338	03/17/2016	Open			Accounts Payable	Eagle Security Systems	$193.50		
64339	03/17/2016	Open			Accounts Payable	ELLIS ART & ENGINEERING	$809.48		
64340	03/17/2016	Open			Accounts Payable	ENTENMANN-ROVIN COMPANY	$260.80		
64341	03/17/2016	Open			Accounts Payable	Entersect	$84.95		
64342	03/17/2016	Open			Accounts Payable	FEDERAL EXPRESS	$35.34		
64343	03/17/2016	Open			Accounts Payable	FRANK'S REFRIGERATION & HEATING INC.	$420.00		
64344	03/17/2016	Open			Accounts Payable	GALLAGHER'S HEATING & AIR	$85.25		
64345	03/17/2016	Open			Accounts Payable	GENESIS SOCIETY	$500.00		
64346	03/17/2016	Open			Accounts Payable	Ginno Construction Inc	$6,850.95		
64347	03/17/2016	Open			Accounts Payable	HINDERLITER, DE LLAMAS & ASSOCIATES INC.	$460.34		
64348	03/17/2016	Open			Accounts Payable	I.M.P.A.C. PAYMENTS IMPAC GOV SVCS/US BANCORP	$11,279.48		

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64349	03/17/2016	Open			Accounts Payable	INDUSTRIAL EQUIPMENT	$4,125.19		
64350	03/17/2016	Open			Accounts Payable	INLAND BUSINESS MACHINES	$681.15		
64351	03/17/2016	Open			Accounts Payable	JAMES RIOTTO & ASSOCIATES	$100.00		
64352	03/17/2016	Open			Accounts Payable	KNIFE RIVER CONSTRUCTION	$466.14		
64353	03/17/2016	Open			Accounts Payable	Larson, Tiffany	$335.50		
64354	03/17/2016	Open			Accounts Payable	LOCATE PLUS CORPORATION	$25.00		
64355	03/17/2016	Open			Accounts Payable	M.S. TEDESCO CONSTRUCTION	$599.00		
64356	03/17/2016	Open			Accounts Payable	MARK THOMAS & COMPANY INC	$6,724.58		
64357	03/17/2016	Open			Accounts Payable	MID VALLEY TITLE & ESCROW	$131,410.00		
64358	03/17/2016	Open			Accounts Payable	MYERS STEVENS TOOHEY & COMPANY	$64.80		
64359	03/17/2016	Open			Accounts Payable	Nesci Appraisal Service	$700.00		
64360	03/17/2016	Open			Accounts Payable	NEW PIG CORPORATION	$266.33		
64361	03/17/2016	Open			Accounts Payable	NORTH STATE RENDERING INC	$160.00		
64362	03/17/2016	Open			Accounts Payable	NORTHERN CALIFORNIA FENCE	$729.73		
64363	03/17/2016	Open			Accounts Payable	NORTHSTAR ENGINEERING INC	$18,503.29		
64364	03/17/2016	Open			Accounts Payable	O'REILLY AUTO PARTS	$706.55		
64365	03/17/2016	Open			Accounts Payable	OFFICE DEPOT ACCT#36233169	$841.21		
64366	03/17/2016	Open			Accounts Payable	PACIFIC GAS & ELECTRIC	$9,454.59		
64367	03/17/2016	Open			Accounts Payable	PARADISE POST/NORTH VALLEY COMMTY MEDIA	$90.03		
64368	03/17/2016	Open			Accounts Payable	PBM SUPPLY & MFG INC	$17.08		
64369	03/17/2016	Open			Accounts Payable	PEERLESS BUILDING MAINT	$880.00		
64370	03/17/2016	Open			Accounts Payable	PLATT	$541.78		
64371	03/17/2016	Open			Accounts Payable	R & R Construction	$635.00		
64372	03/17/2016	Open			Accounts Payable	Riebes Auto Parts	$758.46		
64373	03/17/2016	Open			Accounts Payable	Robbins, Jennifer	$364.00		
64374	03/17/2016	Open			Accounts Payable	SCREEN & WINDOW SHOP	$200.00		
64375	03/17/2016	Open			Accounts Payable	SISC GASB 45 TRUST	$25,000.00		
64376	03/17/2016	Open			Accounts Payable	Smith, Susan	$27.95		
64377	03/17/2016	Open			Accounts Payable	SONSRAY MACHINERY LLC	$1,464.79		
64378	03/17/2016	Open			Accounts Payable	STATEWIDE TRAFFIC SAFETY & SIGNS	$280.59		
64379	03/17/2016	Open			Accounts Payable	Sunrun Installation Services Inc	$131.41		
64380	03/17/2016	Open			Accounts Payable	SUTTER BUTTES COMMUNICATIONS, INC.	$4,388.98		
64381	03/17/2016	Open			Accounts Payable	The Door Company	$304.00		
64382	03/17/2016	Open			Accounts Payable	THOMAS ACE HARDWARE - ENG. DEPT.	$6.78		
64383	03/17/2016	Open			Accounts Payable	THOMAS ACE HARDWARE - FIRE DEPT.	$8.26		
64384	03/17/2016	Open			Accounts Payable	THOMAS ACE HARDWARE - MOTORPOOL	$38.15		
64385	03/17/2016	Open			Accounts Payable	THOMAS ACE HARDWARE - POLICE DEPT.	$11.22		
64386	03/17/2016	Open			Accounts Payable	THOMAS HYDRAULIC & HARDWARE SUPPLY, INC.	$110.94		
64387	03/17/2016	Open			Accounts Payable	Tri Flame Propane	$29.68		
64388	03/17/2016	Open			Accounts Payable	VALLEY OAK VETERINARY CENTER	$115.36		
64389	03/17/2016	Open			Accounts Payable	VALLEY TOXICOLOGY SERVICE	$635.00		

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64390	03/17/2016	Open			Accounts Payable	VERIZON WIRELESS	$326.79		
64391	03/17/2016	Open			Accounts Payable	VERIZON WIRELESS	$104.70		
64392	03/17/2016	Open			Accounts Payable	VERIZON WIRELESS	$122.27		
64393	03/17/2016	Open			Accounts Payable	Vievu LLC	$4,701.28		
64394	03/17/2016	Open			Accounts Payable	Vigilant Canine Services	$175.00		
64395	03/17/2016	Open			Accounts Payable	VistaNet Inc.	$1,744.63		
64396	03/17/2016	Open			Accounts Payable	WITTMEIER AUTO CENTER	$46.47		
64397	03/17/2016	Open			Accounts Payable	WSROP Graphic Communications	$80.00		
64398	03/25/2016	Open			Accounts Payable	ICMA 457 - VANTAGEPOINT	$50.00		
64399	03/25/2016	Open			Accounts Payable	STATE DISBURSEMENT UNIT	$314.76		
64400	03/31/2016	Open			Accounts Payable	ACCESS INFORMATION PROTECTED	$32.00		
64401	03/31/2016	Open			Accounts Payable	ACE RENTALS	$17.45		
64402	03/31/2016	Open			Accounts Payable	AgendaPal Corporation	$399.00		
64403	03/31/2016	Open			Accounts Payable	AIRGAS SAFETY, INC.	$91.29		
64404	03/31/2016	Open			Accounts Payable	Alvies, John	$34.50		
64405	03/31/2016	Open			Accounts Payable	Andys Bullseye Repair	$35.00		
64406	03/31/2016	Open			Accounts Payable	ARAMARK UNIFORM SERV. INC.	$59.01		
64407	03/31/2016	Open			Accounts Payable	AT&T MOBILITY	$54.00		
64408	03/31/2016	Open			Accounts Payable	BATTERIES PLUS	$118.23		
64409	03/31/2016	Open			Accounts Payable	Bear Electric Solutions	$1,425.00		
64410	03/31/2016	Open			Accounts Payable	Big O Tires	$773.85		
64411	03/31/2016	Open			Accounts Payable	BUTTE COUNTY PUBLIC HEALTH - OROVILLE	$80.00		
64412	03/31/2016	Open			Accounts Payable	CHICO IMMEDIATE CARE	$238.00		
64413	03/31/2016	Open			Accounts Payable	Christlib, Todd	$200.00		
64414	03/31/2016	Open			Accounts Payable	CLARK ROAD ANIMAL HOSPITAL	$3.00		
64415	03/31/2016	Open			Accounts Payable	COLYER VET SERVICE	$72.00		
64416	03/31/2016	Open			Accounts Payable	COMPANIONS ANIMAL HOSPITAL	$12.00		
64417	03/31/2016	Open			Accounts Payable	Door Company Inc, The	$568.00		
64418	03/31/2016	Open			Accounts Payable	FEATHER RIVER HOSPITAL	$440.00		
64419	03/31/2016	Open			Accounts Payable	FLORES TOOL & FASTENER	$419.04		
64420	03/31/2016	Open			Accounts Payable	GAGER DISTRIBUTING, INC.	$120.13		
64421	03/31/2016	Open			Accounts Payable	Goodyear Tire & Rubber Company	$200.12		
64422	03/31/2016	Open			Accounts Payable	GREAT AMERICA LEASING CORP.	$129.60		
64423	03/31/2016	Open			Accounts Payable	HELENA SPECIALTY PRODUCTS	$2,161.57		
64424	03/31/2016	Open			Accounts Payable	Honea, Kassidy	$11.50		
64425	03/31/2016	Open			Accounts Payable	HUNTERS PEST CONTROL	$55.00		
64426	03/31/2016	Open			Accounts Payable	INLAND BUSINESS MACHINES	$160.64		
64427	03/31/2016	Open			Accounts Payable	JAMES RIOTTO & ASSOCIATES	$300.00		
64428	03/31/2016	Open			Accounts Payable	KEN'S HITCH & WELDING	$10.80		
64429	03/31/2016	Open			Accounts Payable	KNIFE RIVER CONSTRUCTION	$564.05		
64430	03/31/2016	Open			Accounts Payable	LADRINI, PSD, CAROL	$140.39		
64431	03/31/2016	Open			Accounts Payable	LEAGUE OF CALIFORNIA CITIES	$9,725.00		
64432	03/31/2016	Open			Accounts Payable	MARK THOMAS & COMPANY INC	$4,701.93		
64433	03/31/2016	Open			Accounts Payable	MATT WOLFE	$368.00		
64434	03/31/2016	Open			Accounts Payable	MUNICIPAL CODE CORP	$488.16		
64435	03/31/2016	Open			Accounts Payable	NORTH VALLEY BARRICADE, INC.	$324.00		
64436	03/31/2016	Open			Accounts Payable	NORTHGATE PETROLEUM CO	$4,202.80		
64437	03/31/2016	Open			Accounts Payable	O'REILLY AUTO PARTS	$1,002.62		

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64438	03/31/2016	Open			Accounts Payable	OFFICE DEPOT ACCT#36233169	$196.70		
64439	03/31/2016	Open			Accounts Payable	OROVILLE FORD	$3,130.67		
64440	03/31/2016	Open			Accounts Payable	PACIFIC GAS & ELECTRIC	$121.36		
64441	03/31/2016	Open			Accounts Payable	PARADISE IRRIGATION DIST	$950.21		
64442	03/31/2016	Open			Accounts Payable	PARADISE POST/NORTH VALLEY COMMTY MEDIA	$1,003.92		
64443	03/31/2016	Open			Accounts Payable	PARADISE SCREEN PRINT	$21.49		
64444	03/31/2016	Open			Accounts Payable	PBM SUPPLY & MFG INC	$117.02		
64445	03/31/2016	Open			Accounts Payable	PETTY CASH CUSTODIAN, HELEN CHEUNG	$229.79		
64446	03/31/2016	Open			Accounts Payable	Riebes Auto Parts	$197.76		
64447	03/31/2016	Open			Accounts Payable	Sacramento Sheriff Department Training Trust Fund	$139.00		
64448	03/31/2016	Open			Accounts Payable	SIERRA SAFETY ASSOCIATES	$3,402.73		
64449	03/31/2016	Open			Accounts Payable	SIERRA-SACRAMENTO VALLEY EMS	$130.00		
64450	03/31/2016	Open			Accounts Payable	SINCLAIR'S AUTOMOTIVE & TOWING	$300.00		
64451	03/31/2016	Open			Accounts Payable	STATEWIDE TRAFFIC SAFETY & SIGNS	$217.70		
64452	03/31/2016	Open			Accounts Payable	SUTTER BUTTES COMMUNICATIONS, INC.	$1,147.00		
64453	03/31/2016	Open			Accounts Payable	THOMAS ACE HARDWARE - ENG. DEPT.	$497.94		
64454	03/31/2016	Open			Accounts Payable	THOMAS ACE HARDWARE - FIRE DEPT.	$36.07		
64455	03/31/2016	Open			Accounts Payable	THOMAS ACE HARDWARE - MOTORPOOL	$77.74		
64456	03/31/2016	Open			Accounts Payable	THOMAS ACE HARDWARE - POLICE DEPT.	$10.34		
64457	03/31/2016	Open			Accounts Payable	THOMAS HYDRAULIC & HARDWARE SUPPLY, INC.	$236.50		
64458	03/31/2016	Open			Accounts Payable	THRIFTY ROOTER	$377.60		
64459	03/31/2016	Open			Accounts Payable	Tri Flame Propane	$62.07		
64460	03/31/2016	Open			Accounts Payable	TUCKER PEST CONTROL INC	$126.00		
64461	03/31/2016	Open			Accounts Payable	VERIZON WIRELESS	$514.20		
64462	03/31/2016	Open			Accounts Payable	WILSON PRINTING CO.	$98.60		
64463	03/31/2016	Open			Accounts Payable	WRIGHT, ROBERT	$213.50		
64464	03/31/2016	Open			Accounts Payable	YORK INSURANCE SERVICES GROUP, INC. - CA	$330.00		
Type Check Totals:					243 Transactions		$1,129,976.95	$0.00	$0.00
EFT									
421	03/03/2016	Open			Accounts Payable	CALPERS	$116,019.58		
422	03/11/2016	Open			Accounts Payable	CALPERS - RETIREMENT	$25,268.96		
423	03/11/2016	Open			Accounts Payable	EMPLOYMENT DEVELOPMENT DEPARTMENT	$4,559.36		
424	03/11/2016	Open			Accounts Payable	ING LIFE INS & ANNUITY COMPANY	$6,196.83		
425	03/11/2016	Open			Accounts Payable	INTERNAL REVENUE SERVICE	$20,734.09		
427	03/25/2016	Open			Accounts Payable	CALPERS - RETIREMENT	$25,338.77		
428	03/25/2016	Open			Accounts Payable	EMPLOYMENT DEVELOPMENT DEPARTMENT	$4,380.83		

TOWN OF PARADISE

CASH DISBURSEMENTS REPORT

From Payment Date: 3/1/2016 - To Payment Date: 3/31/2016

Number	Date	Status	Void Reason	Reconciled/ Voided Date	Source	Payee Name	Transaction Amount	Reconciled Amount	Difference
429	03/25/2016	Open			Accounts Payable	ING LIFE INS & ANNUITY COMPANY	$6,695.22		
430	03/25/2016	Open			Accounts Payable	INTERNAL REVENUE SERVICE	$20,149.08		
Type EFT Totals:					9 Transactions		$229,342.72		

AP - US Bank TOP AP Checking Totals

Checks	Status	Count	Transaction Amount	Reconciled Amount
	Open	228	$1,129,931.95	$0.00
	Reconciled	0	$0.00	$0.00
	Voided	15	$45.00	$0.00
	Stopped	0	$0.00	$0.00
	Total	243	$1,129,976.95	$0.00

EFTs	Status	Count	Transaction Amount	Reconciled Amount
	Open	9	$229,342.72	$0.00
	Reconciled	0	$0.00	$0.00
	Voided	0	$0.00	$0.00
	Total	9	$229,342.72	$0.00

All	Status	Count	Transaction Amount	Reconciled Amount
	Open	237	$1,359,274.67	$0.00
	Reconciled	0	$0.00	$0.00
	Voided	15	$45.00	$0.00
	Stopped	0	$0.00	$0.00
	Total	252	$1,359,319.67	$0.00

Grand Totals:

Checks	Status	Count	Transaction Amount	Reconciled Amount
	Open	**228**	**$1,129,931.95**	**$0.00**
	Reconciled	**0**	**$0.00**	**$0.00**
	Voided	**15**	**$45.00**	**$0.00**
	Stopped	**0**	**$0.00**	**$0.00**
	Total	**243**	**$1,129,976.95**	**$0.00**

EFTs	Status	Count	Transaction Amount	Reconciled Amount
	Open	**9**	**$229,342.72**	**$0.00**
	Reconciled	**0**	**$0.00**	**$0.00**
	Voided	**0**	**$0.00**	**$0.00**
	Total	**9**	**$229,342.72**	**$0.00**

All	Status	Count	Transaction Amount	Reconciled Amount
	Open	**237**	**$1,359,274.67**	**$0.00**
	Reconciled	**0**	**$0.00**	**$0.00**
	Voided	**15**	**$45.00**	**$0.00**
	Stopped	**0**	**$0.00**	**$0.00**
	Total	**252**	**$1,359,319.67**	**$0.00**

TOWN OF PARADISE
Council Agenda Summary
Date: April 12, 2016

AGENDA NO. 2(c)

ORIGINATED BY: Susan Hartman, Assistant Planner

REVIEWED BY: Lauren Gill, Town Manager
Craig Baker, Community Development Director

SUBJECT: Adopt Resolution Authorizing Submittal of Applications for CalRecycle Payment Programs

COUNCIL ACTION REQUESTED: Adopt a **MOTION TO:**

1. Adopt Town of Paradise Resolution No. 16-____, "A Resolution of the Town of Paradise Authorizing Submittal of Application for CalRecycle Payment Programs and Related Authorizations"

2. Adopt an alternative directive to town staff concerning this agenda item.

NOTE: Town staff recommends Town Council approval of item no. 1 above.

BACKGROUND: The state adopted Public Resources Code authorizes CalRecycle to establish and administer various payment programs to make payments to qualifying jurisdictions.

In furtherance of its authority, CalRecycle has established procedures that require an Applicant's governing body to adopt by resolution certain authorizations related to the administration of the payment program.

Currently the Town of Paradise participates in a payment program which provides opportunities for beverage container recycling to help reach and maintain an 80 percent recycling rate for all California refund value beverage containers.

DISCUSSION: The Town of Paradise has an existing and current franchise agreement with Northern Recycling & Waste Services [NRWS] whereby NRWS is not only obligated to provide solid waste and recycling materials collection services but is also required to prepare on behalf of the Town of Paradise annual waste management reports and related fund applications for submittal to funding agencies, etc.

However, at the request of CalRecycle, town staff has prepared a revised resolution document relative only to payment programs that is attached to this council agenda summary and is recommended for Town Council consideration and adoption. If adopted by the Town Council, this resolution specifically authorizes NRWS to prepare and the Town Manager, or his/her

designee, to execute and submit payment program applications to CalRecycle for which the Town of Paradise is eligible.

FINANCIAL IMPACT: Approval of this agenda item as recommended will not result in any financial impact upon the town's general fund.

Attachments

TOWN OF PARADISE
RESOLUTION NO. 16-__

A RESOLUTION OF THE TOWN OF PARADISE AUTHORIZING SUBMITTAL OF APPLICATION FOR CALRECYCLE PAYMENT PROGRAMS AND RELATED AUTHORIZATIONS

WHEREAS, pursuant to Public Resources Code Section 48000 et seq., 14581, and 42023.1(g), the Department of Resources Recycling and Recovery (CalRecycle), has established various payment programs to make payments to qualifying jurisdictions; and

WHEREAS, in furtherance of this authority CalRecycle is required to establish procedures governing the administration of the payment programs; and

WHEREAS, CalRecycle's procedures for administering payment programs require, among other things, an applicant's governing body to declare by resolution certain authorizations related to the administration of the payment program; and

WHEREAS, the Town of Paradise has an existing and duly executed franchise agreement with Northern Recycling &Waste Services (NRWS) whereby NRWS is obligated to prepare on behalf of the Town of Paradise, annual waste management reports and related fund applications for submittal to CalRecycle.

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF PARADISE AS FOLLOWS:

Section 1. The Town Council authorizes NRWS to prepare and the Town Manager, or her designee, to execute and submit a payment program application to CalRecycle; and

Section 2. The Town Manager, or her designee, is hereby authorized and empowered to execute on behalf of the Town of Paradise all documents, including but not limited to: applications, agreements, annual reports including expenditure reports and amendments necessary to secure said payments; and

Section 3. This authorization is effective until rescinded by the Town Council of the Town of Paradise.

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TOWN OF PARADISE
RESOLUTION NO. 16-___

PASSED AND ADOPTED by the Town Council of the Town of Paradise, State of California, this 12th day of April, 2016 by the following vote:

AYES:

NOES:

ABSENT:

NOT VOTING:

Jody Jones, Mayor

ATTEST:

Joanna Gutierrez, Town Clerk

APPROVED AS TO FORM:

Dwight Moore, Town Attorney

Town of Paradise
Council Agenda Summary
Date: April 12, 2016

Agenda Item: 2(d)

Originated by: Gina S. Will, Finance Director/Town Treasurer

Reviewed by: Lauren Gill, Town Manager

Subject: Quarterly Investment Report

Council Action Requested:

1. Review and file the 2nd Quarter Investment Report for the Fiscal Year Ending June 30, 2016; and,
2. Review and approve the attached Investment Policy; or,

Alternatives:

Refer the matter back to staff for further development and consideration.

Background:

Attached is a report on the Town's cash and investments for the quarter ended December 31, 2015.

A US Bank checking account is currently being used for payroll, accounts payable and other operating purposes. Most accounts payable disbursements are drawn through checks, and most payroll disbursements are processed through direct deposit. Deposits are fully collateralized and after reserve requirements, provide an earnings credit rate of 0.50% up to the amount of monthly fees. As the earnings credit rate is currently higher than the yield provided by LAIF, staff maximized the earnings potential in this account.

The Town uses the State of California managed Local Agency Investment Fund (LAIF) for investment of cash in excess of immediately needed operating capital. With same day liquidity and comparable yields, LAIF is currently the best investment option for the Town. Funds are able to be transferred electronically through phone authorization between LAIF and the Town checking account. The Town will continue to research other investment options that match LAIF's liquidity and security in order to improve investment yield.

In June of 2011, the Town established an irrevocable trust to begin funding the future obligations associated with retiree health as required by GASB 45. The funds are being managed by Self-Insured Schools of California (SISC) and can only be used for the payment of retiree health benefits.

The Town establishes escrow funds at the start of each new lease. The escrow fund is drawn down to zero through the process of purchasing equipment against the lease. Interest is accrued on any unspent escrow balance. The "other" investment type represents these available escrow funds as well as petty cash balances. As of December 31, 2015, there were no unspent escrow funds.

Discussion

The increased investment balance as of December 31, 2015 as compared to December 31, 2014 is an improvement to the Town's overall cash liquidity. Last fiscal year the Town needed a $2.7 million TRAN which was funded October 10, 2014. This year the Town funded a TRAN of $2.5 million as of September 18, 2015. The TRAN will be repaid in May 2016 after the second annual property tax payment is received in April 2016. As of December 31, 2015, the General Fund has used all of its cash flow reserve and has used most of the TRAN. The General Fund cash was restored in January 2016 with the first installment of property tax payments. There will be sufficient to funds for operations and payroll for the remainder of the 2015/16 fiscal year.

The GASB 45 trust investment managed by SISC experienced a 4.39% return on investment during the 2nd quarter of 2015/16. The economy is picking up but interest rates remain historically low and the stock market volatile. Long term, SISC has been successful with its allocation model of approximately 60% equity and 40% fixed income.

The Town Treasurer has directed the Trustee, Wells Fargo Bank, to invest the reserve funds of the Paradise Redevelopment 2009 Bond and the Pension Obligation Bond in accordance with the Town's investment policy. The reserve funds had been yielding less than 0.01% in mutual funds. The reserve funds are now invested in CD's which will yield between 0.50% and 0.75% over three months to a one year period. While these investments and balances are not part of the Town's idle or operating cash, the yield will ultimately lessen the amount the Town will be required to contribute in future debt service payments.

Finally, staff is submitting an Investment Policy for Town Council's review and approval. The investment policy has not changed as the laws governing the local agency investment of funds had very minor changes; however, Government Code Section 53646 requires that this policy be reviewed and approved annually.

Fiscal Impact Analysis:

Isolating the gain from the GASB 45 trust, the Town earned $4,077.66 for the quarter ended December 31, 2015. That is compared to $2,953.16 for the quarter ended December 31, 2014. Again, isolating the GASB 45 return, the Town realized about three basis points more in yield compared to a year ago, and had more average balances invested. Year to date this fiscal year, the Town earned $7,540.57 after isolating the GASB 45 return. Last fiscal year to date, the Town had earned $4,904.81.

TOWN OF PARADISE
QUARTERLY SUMMARY OF INVESTMENTS
For Quarter Ended December 31, 2015

Investment	Type	For Quarter Ended Dec. 31, 2015 Yield	Book Value	Market Value*	For Quarter Ended Dec. 31, 2014 Yield	Book Value	Market Value*	Net Change
US Bank	Checking	0.50%	554,364.29	554,364.29	0.50%	1,513,824.97	1,513,824.97	(959,460.68)
Local Agency Investment Fund (LAIF)	Savings	0.38%	2,956,553.48	2,954,149.69	0.26%	1,708,370.25	1,708,336.73	1,248,183.23
SISC GASB 45 Trust B	Various	4.39%	64,924.36	64,924.36	2.92%	66,533.03	66,533.03	(1,608.67)
Fiscal Agents & Petty Cash	Other	0.00%	1,750.00	1,750.00	0.08%	86,302.78	86,302.78	(84,552.78)
	Totals		3,577,592.13	3,575,188.34		3,375,031.03	3,374,997.51	202,561.10
Total Quarterly Earnings on accrual basis			6,810.94			4,842.07		
Year-to-Date Earnings (July 1st - December 31st)			4,859.79			5,510.47		

* Market Value determined by LAIF

Reserve Funds Invested

Pension Obligation Bond	$	925,000.00
Paradise RDA Bond 2009	$	340,000.00
	$	1,265,000.00

Issuer	FDIC Number	Yield	Settlement Date	Maturity Date	Type	Investment	Earnings
Apple Bank	16068	0.500%	12/30/15	03/30/16	CD	249,000.00	310.40
Bank of Baroda	33681	0.500%	12/18/15	03/18/16	CD	249,000.00	310.40
Berkshire Bank	23621	0.500%	12/23/15	03/23/16	CD	249,000.00	310.40
Mizrahi Tefahot	33661	0.500%	12/22/15	03/22/16	CD	178,000.00	221.89
Goldman Sachs	33124	0.750%	12/18/15	12/16/16	CD	248,000.00	1,854.90
BMW Bank	35141	0.750%	12/18/15	12/16/16	CD	92,000.00	688.11
						1,265,000.00	3,696.10

In compliance with the California Code Section 53646; the Treasurer of the Town of Paradise herby certifies that sufficient investment liquidity and anticipated revenues are available to meet the Town's budgeted expenditure requirements for the next six months.

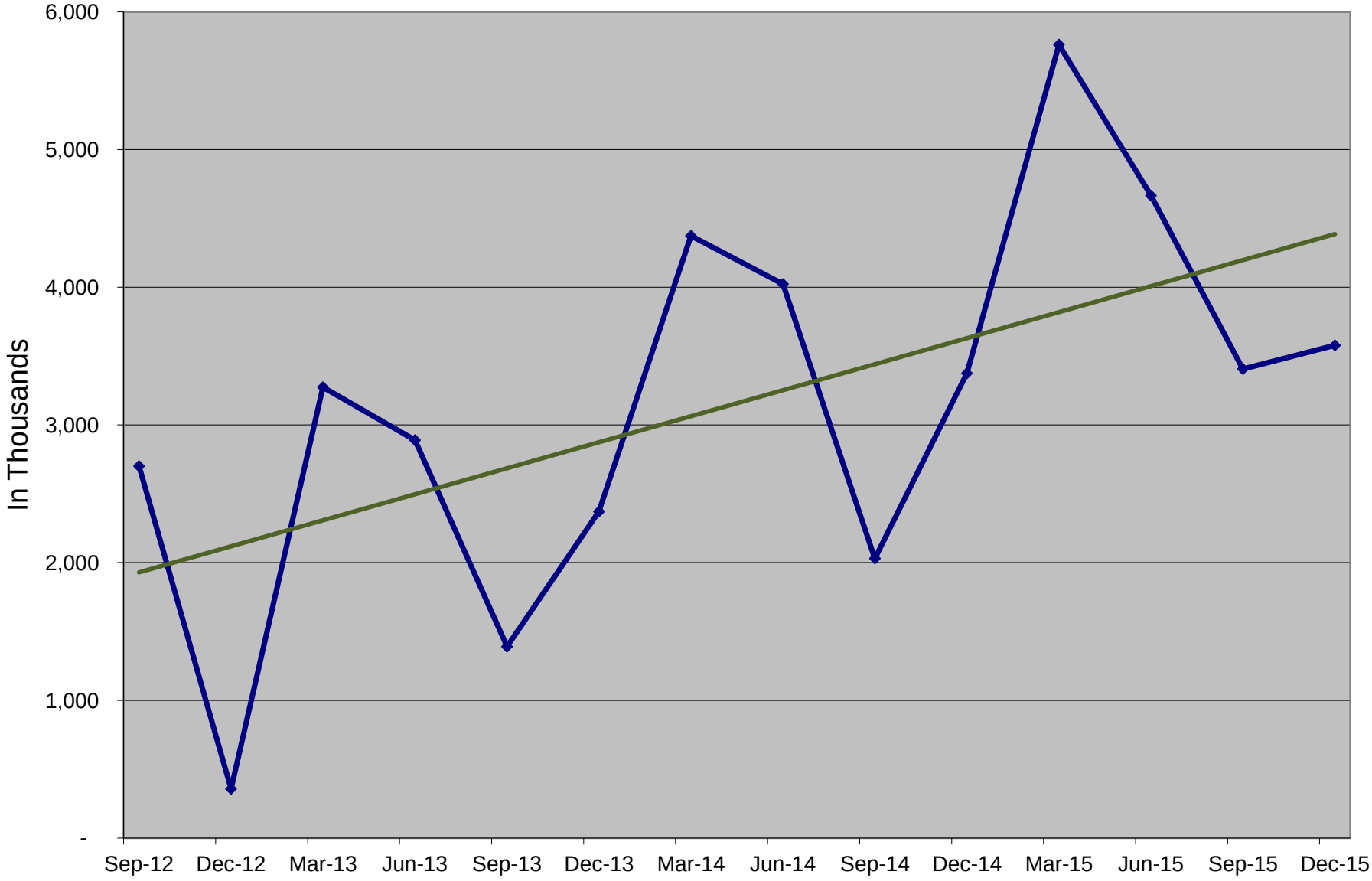
Investments in the report meet the requirements of the Town of Paradise's adopted investment policy.

Respectfully submitted,

/s/

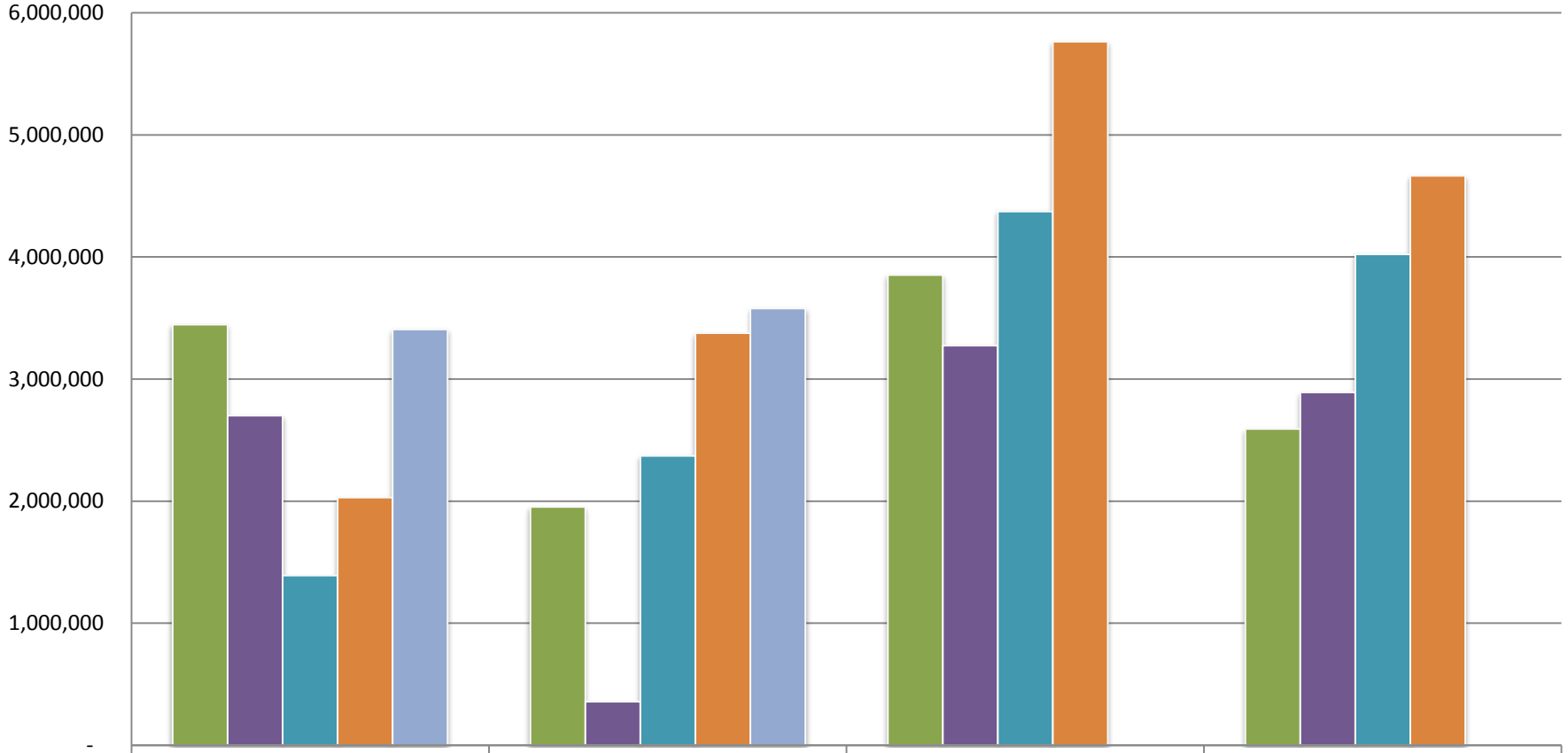
Gina S. Will
Finance Director/Town Treasurer

Town of Paradise
Investment Balances with Trendline
September 2012 - December 2015



	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13	Mar-14	Jun-14	Sep-14	Dec-14	Mar-15	Jun-15	Sep-15	Dec-15
Series1	2,701	357	3,274	2,890	1,390	2,371	4,373	4,023	2,030	3,375	5,762	4,665	3,406	3,578

Town of Paradise
Investment Balances
2011/12 - 2015/16



	Sept. 30th	Dec. 31st	March 31st	June 30th
2011/12	3,446,611	1,952,141	3,852,176	2,591,170
2012/13	2,701,104	357,101	3,274,156	2,890,429
2013/14	1,389,733	2,370,880	4,372,599	4,022,638
2014/15	2,029,885	3,375,031	5,764,007	4,665,263
2015/16	3,406,433	3,577,592		

Town of Paradise

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Investment Policy

Approved by Town Council
April 12, 2016

II. PURPOSE

This investment policy is intended to provide guidelines for the prudent investment of the temporary idle cash of the Town of Paradise and to outline the policies for maximizing the efficiency of the Town's cash management system. The ultimate goal is to enhance the financial status of the Town of Paradise, while protecting its pooled cash.

III. SCOPE

The Town of Paradise cash management system is designed to accurately monitor and forecast revenues and expenditures, thus enabling the Town of Paradise to invest funds to the fullest extent possible. The Town of Paradise will attempt to obtain the highest yield obtainable, as long as investments meet the criteria established for safety and liquidity.

The Town of Paradise operates its pooled cash investments under the ''Prudent Investor" standard pursuant to California Government Code Section 53600.3, and within the specific terms governing investments for municipal governments as set forth in California Government Code Sections 53600 through 53659.

The Town of Paradise shall strive to maintain the level of investment of all idle funds as near 100% as possible, through projected cash flow determinations. Idle cash management and investment transactions are the responsibility of the Town Treasurer, and the Town of Paradise Investment Committee.

IV. OBJECTIVES

Criteria for selecting investments and the order of priority are:

A. Safety

The safety and risk associated with an investment refers to the potential loss of principal, interest or a combination of these amounts. All "allowable investments" are of a very high quality and would be considered extremely safe and conservative.

B. Liquidity

An adequate percentage of the portfolio will be maintained in liquid short term securities that can be converted to cash as necessary to meet disbursement requirements. The liquidity percentage will be determined from time to time from projected cash flow reports. Investments will be made in securities with active secondary and resale markets.

C. Yield

Within the constraints of safety and liquidity, the highest and best return will be sought. The investment portfolio will be designed to attain a market average rate of return, taking into account the Town's risk constraints, the cash flow characteristics of the portfolio, and state law.

D. Maturity

The maturity of each investment shall not exceed a period of five years. Maturities shall be selected to anticipate cash needs, thus avoiding forced liquidations.

E. Diversification

The portfolio will be diversified to avoid incurring unreasonable and unavoidable risks regarding specific security types or individual financial institutions.

F. Prudence

Person(s) authorized to make investment decisions on behalf of local agencies are trustees and therefore, fiduciaries subject to the prudent investor standard. When investing, reinvesting, purchasing, acquiring, exchanging, selling and managing public funds, a trustee shall act with care, skill, prudence, and diligence under the circumstances then prevailing, that a prudent person acting in a like capacity and familiarity with those matters would use in the conduct of funds of a like character and with like aims, to safeguard the principal and maintain the liquidity needs of the agency. Within the limitations of this section and considering individual investments as part of an overall strategy, a trustee is authorized to acquire investments as authorized by law.

G. Public Trust

All participants in the investment process shall act as custodians of the public trust. Investment officials shall recognize that the investment portfolio is subject to public review and evaluation. The overall program shall be designed and managed with a degree of professionalism that is worthy of the public trust. In a diversified portfolio it must be recognized that occasional measured losses are inevitable and must be considered within the context of the overall investment return.

H. Non-Discriminatory

The Town of Paradise shall not knowingly make or allow investments in any institution, company, corporation, subsidiary or affiliate that practices or supports, directly or indirectly through its actions, discrimination on the basis of race, religion, creed, national or ethnic origin, age, sex, sexual preference or physical disability.

V. AUTHORITY TO INVEST

California Government Code Section 53600 et seq. provides legal authorization for investment of funds of local agencies. All investments of the Town of Paradise shall conform to the provisions of those laws.

VI. REPORTING REQUIREMENTS

A. Annually

In accordance with the California Government Code Section 53646, the Town Treasurer will annually submit to the Town Council and the Investment Committee

(consisting of the Town Manager, Finance Director/Town Treasurer, and one member of Town Council,) a statement of investment policy which the Town Council shall consider at a public meeting. The policy shall be reviewed on an annual basis by the Treasurer and the Investment Committee. Any investment held at the time this Investment Policy is adopted that does not meet the guidelines of this policy shall be exempted from the requirements of this policy. At maturity or liquidation, however, such monies shall be reinvested only as provided by this policy.

B. Quarterly

Pursuant to California Government Code Sections 53607 and 53646, the Town Treasurer shall submit a quarterly report (the "Report") detailing the performance of the investment portfolio to the Town Council and the Investment Committee. The Report will be submitted to the Town Council within 30 days following the end of the quarter. The Report will contain the following:

1. Type of investment
2. Issuer
3. Date of maturity
4. The par value
5. The cost of all funds invested subject to this policy
6. The current market value of securities with the source of the market valuation for all securities held by the Town, and under management of any outside party that is not also a local agency, or the State of California Local Agency Investment Fund (LAIF)
7. Rate of interest
8. A statement of compliance with the investment policy
9. Accrued interest
10. Interest earned to date
11. Average weighted book yield
12. Average term to maturity
13. Transactions
14. Percentage distribution of investment types
15. Modified duration
16. Total rate of return

VII. INTERNAL CONTROLS

The Town Treasurer, in cooperation with the Investment Committee, shall develop a system of internal investment control procedures and a segregation of responsibilities of investment functions in order to assure an adequate system of internal control over the investment function. Internal control procedures shall address wire controls, separation of duties, delivery of securities to a third party for custodial safekeeping, and written procedures for placing investment transactions.

VIII. EXTERNAL CONTROLS

The Town's external auditor will review and verify the Town's investment activity, holdings and compliance with this Investment Policy on an annual basis, and submit a report to the Town Council relating thereto. The external auditor shall maintain errors and omissions insurance coverage.

IX. QUALIFIED DEALERS AND INSTITUTIONS

The Town shall transact business only with banks, savings and loans, and registered investment securities dealers. The purchase of any investment, other than those purchased directly from the issuer, shall be purchased either from an institution licensed by the State as a broker-dealer, as defined in Corporation Code Section 25004, or from a member of a federally regulated securities exchange, from a national or state charted bank, from a savings association or federal association (as defined by Financial Code Section 5102), or a brokerage firm designated as a Primary Government Dealer by the Federal Reserve Bank.

The Town Treasurer and the Investment Committee shall investigate all institutions that wish to do business with the Town, in order to determine if they are adequately capitalized, make markets in securities appropriate to the Town's needs, and agree to abide by the conditions set forth in this Investment Policy. All financial institutions and broker-dealers who desire to become qualified bidders for investment transactions must provide a current audited financial statement, sign a statement that they have received a copy of this Investment Policy and will abide by its conditions, and document that they are properly regulated as indicated above.

X. COLLATERAL REQUIREMENTS

California Government Code, Sections 53652 through 53667 requires depositories to post certain types and levels of collateral for public funds above the Federal Deposit Insurance Corporation ("FDIC") insurance amounts. The collateral requirements apply to bank deposits, both active (checking and savings accounts) and inactive (non-negotiable time certificates of deposit).

Collateral is also required for repurchase agreements. The collateral level shall be valued daily and must be maintained at a level of 102% for the life of the repurchase agreement.

XI. AUTHORIZED INVESTMENTS AND DIVERSIFICATION

Securities purchased will be maintained within the statutory requirements imposed by California Government Code Section 53601. The Government Code currently allows for the following:

		Maximum % of Portfolio	Minimum Quality	Maximum Maturity
A.	**Asset Backed Securities**	20%	Rated "AA" or better by NRSRO	5 Years
B.	**Bankers Acceptances**	40% (30% of any one bank)	N/A	180 Days
C.	**Collateralized Bank Deposits**	Unlimited	N/A	5 Years
D.	**Commercial Paper**	25% (10% of single issuer)	Highest ranking of NRSRO	270 Days
E.	**Local Agency Investment Fund**	Unlimited	Assets exceed $500 million	5 Years
F.	**Medium Term Notes**	30%	Rated "A" or better by NRSRO	5 Years
G.	**Mutual Funds**	20% (10% of any one fund)	Highest rating by two NRSRO	5 Years
H.	**Certificates of Deposit**	30%	N/A	5 Years
I.	**Repurchase Agreements**	20%	Primary dealers	1 Year
J.	**Subranationals: IBRD, IFC, IADB**	30%	Rated "AA" or better by NRSRO	5 Years
K.	**Treasury Bills and Notes**	Unlimited	N/A	5 Years
L.	**US Government, State(s) and Agency Securities**	Unlimited	N/A	5 Years

If the California Government Code adopts more restrictive investment restrictions, then those restrictions will have precedence over those listed above.

Funds deposited with a trustee for the purpose of debt reserve or future payment of indebtedness may be invested in accordance with the covenant of the trust agreement.

Investments shall be purchased according to the minimum credit standards listed above. In the event of a downgrade in credit after the date of purchase, the Town Treasurer shall advise the Investment Committee and will make a recommendation as to the disposition of the security.

XII. PROHIBITED I N V E S T M E N T S

The following investments are prohibited under this Investment Policy:

A. Investments not specifically stated under "authorized investments".

B. The Town will not invest in inverse floaters, range notes, or mortgage derived, interest-only strips.

C. The Town will not invest in any security that could result in zero interest accrual if held to maturity.

XIII. SAFEKEEPING AND CUSTODY

Securities purchased from broker/dealer will be held in a third-party custodian/safekeeping account except the collateral for time deposits in banks and savings and loans. Collateral for time deposits shall be held in accordance with California law.

XIV. DELEGATION OF AUTHORITY

The Town Treasurer is authorized to invest the Town's idle funds in accordance with California Government Code Sections 53600 et seq., 16429.1 and 53684. In the absence of the Town Treasurer the investment of the funds will be delegated to the Town Manager. Investments made by the Town Manager will be restricted to the State managed California Local Agency Investment Fund ("LAIF") or to securities maturing within six months. Prior to investing in securities, the Town Manager will consider the cash flow requirements of the Town and may invest in securities maturing over six months if directed by the Treasurer in writing or verbally, if confirmed in writing within 30 days.

XV. ETHICS AND CONFLICTS OF INTEREST

The Town Treasurer and other officers, officials, and/or employees involved in the investment process shall refrain from personal business activity that could conflict with the proper execution of the investment program or which could impair their ability to make impartial investment decisions. The Treasurer, other officers, officials and/or employees involved in the investment process shall disclose to the Town Council any material interest in financial institutions with which they conduct business. They shall further disclose to the Town Council any personal financial/investment positions that could be related to the performance of the investment portfolio and shall refrain from undertaking personal investment transactions with the same individual with whom business is conducted on behalf of their entity. The Treasurer, other officers, officials, and/or investment employees are required to file annual disclosure statements as required by the Fair Political Practices Commission ("FPPC"). During the course of the year, if there is an event subject to disclosure that could impair impartial decisions, the Town Council will be notified in writing within ten (10) days of the event.

Town of Paradise
Council Agenda Summary **Agenda Item: 2(e)**
Date: April 12, 2016

Originated by: Gina S. Will, Finance Director/Town Treasurer

Reviewed by: Lauren Gill, Town Manager

Subject: Northern California Cities Self Insurance Fund (NCCSIF) Annual Report

Council Action Requested:

1. Receive and file the 2016 NCCSIF report, or

Alternatives:

Refer the matter back to staff for further development and consideration.

Background:

The Northern California Cities Self Insurance Fund (NCCSIF) is an association of municipalities joined together in 1979 to protect Member resources by stabilizing risk costs in a reliable, economical and beneficial manner while providing members with broad coverage and quality services in risk management and claims management. There were eight founding members, and today the membership is twenty-two strong with its newest addition in 2013.

Each member has a representative and an alternate that serves on the JPA Board. The Finance Director/Town Treasurer and the HR/Risk Manager are the Town's current representatives. Members take turns rotating through the executive committee.

The Town of Paradise joined the NCCSIF Liability Program in 1985 and the Workers Compensation program in 1987. Today, the Town participates in the following NCCSIF programs:

Liability Program

The Liability Program provides coverage for losses Member Entities become legally obligated to pay as damages because of bodily injury, property damage, employment practices liability, personal injury and public officials' errors or omissions. Coverage is provided through three layers:

Banking Fund	$0 - $50,000
Shared Risk	$50,001 - $500,000
Excess Coverage	$500,001 - $40,000,000

Workers' Compensation

California Workers' Compensation laws require every employer to provide benefits to employees for injury and/or illness arising out of, or in the course of, employment. Statutory benefits prescribed by law include:

- Medical Treatment
- Temporary Disability Payments
- Permanent Disability Compensation
- Rehabilitation
- Death Benefits

Coverage is provided through three layers:

Banking Fund	$0 - $100,000
Shared Risk	$100,001 - $500,000
Excess Coverage	$500,001 – Statutory Limit (Workers' Comp) $500,001 - $5,000,000 (Employer's Liability)

Property Program

This year NCCSIF renewed coverage through the Alliant Property Insurance Program. The program provides replacement cost coverage for all building and contents, subject to a $1 billion limit per occurrence and a $5,000 deductible per claim.

Physical Damage Program

This program designed especially for public agencies and rural cities, provides vehicle and mobile equipment protection. It replaces property on a like kind and quality basis. The Town covers vehicles still obligated under lease purchase agreements, fire engines and equipment and other large and expensive vehicles and equipment.

Crime Program

The NCCSIF Crime Program provides for coverage of employee theft through the National Union Insurance Company, A.M. Best Rated A++ XV. It covers theft, forgery and computer fraud up to $1,000,000 and has a $5,000 deductible.

Employee Assistance Program

An Employee Assistance Program (EAP) is a worksite-based program designed to assist City employees in identifying and resolving personal concerns, including, but not

limited to, health, marital, family, financial, alcohol, drug, legal, emotional, stress, or other personal issues that may affect job performance.

Identity Fraud Protection

New this year is a program to protect Member employees from the impact of identity fraud. Employees have access to $25,000 worth of coverage to reimburse for the costs and expenses related to identity recovery, including lost wages and attorney fees.

Discussion:

NCCSIF is a well managed and fiscally conservative JPA. For several years the JPA released over $15 million in dividends to members to help ease the strain of the recession. The Town received over $1.1 million in dividends from 2008/09 through 2012/13. Even with such release of dividends, the JPA has maintained a healthy cash reserve and equity.

The Liability Program rates were at historic lows in 2012, and while still historically low are climbing due to decreases in payroll and increased claims. The program is currently in the process of rebuilding equity. The Board has voted not to approve any dividends from the program until equity is rebuilt.

The Workers' Compensation program is currently healthy with adequate equity. The rates are competitive and are actually a little less than the State Fund. The rates and payroll went down for several years in alignment with the recession, but are now climbing back up. Fortunately, unlike traditional insurance coverage, the Town has the opportunity to build equity, earn interest on its banking layers, and to receive dividends.

Fiscal Analysis:

There is no fiscal impact to receiving this report.

NCCSIF
Northern California Cities Self Insurance Fund
A Joint Powers Authority

2016 Annual Report

NCCSIF Program Administrators

Alliant

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Sacramento, California 95815
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Corporate License No. 0C36861

www.nccsif.org

NCCSIF 2016 Annual Report
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Letter to Our Members

Dear Members,

I am pleased to present the 2016 NCCSIF Annual Report at a time when the group is seeing improved results because of a renewed focus on risk management practices.

Over the last three years NCCSIF has focused on expanding the Risk Management services and training programs available to Members. This began with a baseline assessment of each Member's operations and continues with customized service plans to meet their needs. The Police Risk Management Committee has seen increased participation and ideas for training and equipment, including funding for body-worn cameras that have reduced the frequency and severity of claims, paying dividends almost immediately after their use.

These changes have contributed to NCCSIF's ability to return over $1.5 million to members in the last year, and almost $3 million the last two years. Assets increased to over $51 million and the Net Position increased by $800,000, prior to dividends.

While NCCSIF continues to be financially strong, the Liability Program experienced a number of large losses in the 2011 year that decreased reserves in the Shared Risk Layer. Members responded by reducing the Self-Insured Retention from $1,000,000 to $500,000 and providing additional funding to replenish reserves. Losses have since been trending down.

The Workers' Compensation Program has seen claims frequency stabilize and severity has improved since 2012's historically bad year. However, medical costs continue to rise in spite of Member efforts to control them, and an increase in disability rates has contributed to continued pressure on rates. Members' continued focus on risk management techniques, including return to work and ergonomic programs, have kept rate increases modest.

NCCSIF Members will continue to face challenges in managing their operations. NCCSIF has proven itself a valuable partner and resource by combining resources and pooling risks, enabling each Member to access broader coverage, lower rates, and more risk management services than they could receive on their own. I am proud to serve as NCCSIF President to support the continued success of the group through pooling and sound risk management practices.

Sincerely,

Russell Hildebrand
NCCSIF President
City Attorney - City of Rocklin

Mission Statement

The Northern California Cities Self Insurance Fund (NCCSIF) is an association of municipalities joined together in 1979 to protect Member resources by stabilizing risk costs in a reliable, economical and beneficial manner while providing members with broad coverage and quality services in risk management and claims management.

History of the JPA

The Northern California Cities Workers' Compensation Fund, a Joint Powers Authority, was formed in early 1979. It is one of the first pooled municipal insurance programs in the State. The JPA's original purpose was to provide medium-sized Northern California cities a mechanism to self-insure most of their Workers' Compensation benefits and obtain the advantages of group purchasing excess insurance for the rest.

In 1981, a number of members formed the Liability Program to apply the same concepts of pooling to coverage for General Liability, Automobile Liability, Errors and Omissions, and Employment Practices Liability. Since then the group has grown to twenty-two cities that pool coverage to a limit of $500,000 for both Workers' Compensation and Liability.

Where originally the JPA relied upon excess coverage from the Commercial Insurance Marketplace, the excess coverage for both Workers' Compensation and Liability are now provided by excess Joint Powers Authorities. These are Joint Powers Authorities and larger individual entities grouped together to pool coverages and reduce the need for commercial coverage.

In 1987, the name of the Joint Powers Authority was changed to Northern California Cities Self Insurance Fund (NCCSIF). The same year, NCCSIF began offering group purchase of Property and Crime coverage and an Employee Assistance Program. These are insurance programs since the cost to group purchase coverage continues to be less than self-insurance.

In 2008, NCCSIF started providing Wellness services to Members. During 2009, NCCSIF enhanced its risk management services through partnerships with Target Safety and Risk Management Solutions to provide online loss prevention services to the membership.

In 2012, NCCSIF hired Bickmore Risk Services as their Risk Control Services Vendor and expanded the number of risk management resources available to members.

In 2013, the City of Elk Grove joined NCCSIF's Workers' Compensation program, bringing the total number of members in the JPA to twenty-two.

In 2014, the Police Risk Management Committee recommended the use of body-worn cameras, and NCCSIF grant funds were provided for their purchase. Members realized the benefits of the cameras through fewer claims, so additional grants were approved by the Board for 2015/16.

In 2015, the members implemented a Scorecard system to effectively assess their risk control efforts, and the pool is continuing to expand and update the Risk Management Policies and Procedures to keep pace with current risk exposures.

Northern California Cities Self Insurance Fund

NCCSIF Historical Timeline

1979	1980	1981	1982	1983	1984	1985
The Northern California Cities Workers' Compensation Fund, a Joint Powers Authority, was formed in early 1979. It is one of the oldest pooled municipal insurance programs in the State. Members who joined the pool: Anderson, Corning, Folsom, Galt, Jackson, Placerville, Rio Vista and Willows	Additional members join the WC JPA: Gridley Rocklin	A number of the member cities desired to apply the same concepts of pooling to Automobile and General Liability coverage. LIABILITY Anderson Corning Folsom Galt Gridley Rocklin Willows WC Auburn	City of Nevada City joins the WC JPA	Additional members join the WC JPA: Dixon Red Bluff	City of Lincoln joins the WC JPA	A number of the member cities join the Liability JPA: Lincoln Oroville Paradise Rio Vista
1986	**1987**	**1988**	**1990**	**1991**	**1992**	**1993**
Additional members join the Liability JPA: Auburn Red Bluff	The name of the Joint Powers Authority was changed to Northern California Cities Self Insurance Fund (NCCSIF). NCCSIF offers group purchase of Property, Crime & EAP programs. The following members joined the JPA: LIABILITY City of Jackson WC - Town of Paradise	Additional members join the Liability JPA: Colusa Dixon	The City of Oroville joins the WC JPA	The City of Marysville joins the Liability JPA NCCSIF begins shared risk program for Liability and Workers' Compensation NCCSIF begins a Risk Management Committee Alliant - Marylin Kelley joins and becomes Program Administrator	The City of Yuba City joins the Liability JPA Additional members join the WC JPA: Colusa Marysville Yuba City	NCCSIF is one of the first JPAs to achieve CAJPA Accreditation with Excellence
1996	**2003**	**2007**	**2008**	**2009**	**2010-2013**	**2014-2015**
NCCSIF joins CJPRMA for Excess Liability Coverage	NCCSIF joins CPEIA for Excess Workers' Compensation Coverage	NCCSIF's Shared Risk Liability Layer changes from $500,000 to $1,000,000. NCCSIF joins CSAC-EIA for Excess Workers' Compensation Coverage	NCCSIF Revises its Dividend Formula and Distributes $6M to Members Multiple risk management services are paid for by an administrative surplus: BackSafe for Fire and Public Works, Wellness Programs, Lexipol Daily Training Bulletin for PDs	NCCSIF is once again awarded the CAJPA Accreditation with Excellence Online risk management services are enhanced through partnerships with TargetSafety and Risk Control Online.	**2010** City of Ione joins Liability and Workers' Compensation JPA **2013** City of Elk Grove joins Workers' Compensation JPA	**2014** Identity Fraud Coverage **2015** CAJPA Accreditation with Excellence Review and Revision of Policies and Procedures

Board of Directors

The Board of Directors of NCCSIF is composed of a representative appointed by the City Council of each member agency. An Alternate Member is also appointed to serve in the absence of the appointed representative. Only the Board Member - or in the Board Member's absence the Alternate Member - has voting authority.

Current Members are as follows:

Member	Board Director	Alternate	Member	Board Director	Alternate
City of Anderson*	Jeff Kiser	Liz Cottrell	City of Lincoln	Astrida Trupovnieks	Sheila VanZandt
City of Auburn	Shari Harris	Tim Rundel	City of Marysville	Satwant Takhar	Walter Muncheimer
City of Colusa	Toni Benson	*Vacant*	City of Nevada City	Corey Shaver	Catrina Olson
City of Corning*	Kristina Miller	Tom Watson	City of Oroville	Liz Ehrenstrom	*Vacant*
City of Dixon	Michelle Pellegrino	Kim Stalie	City of Placerville*	Dave Warren	Cleve Morris
City of Elk Grove	Brad Koehn	Jonathan Hobbs	City of Red Bluff	Sandy Ryan	Cheryl Smith
City of Folsom*	Bruce Cline	Elaine Andersen	City of Rio Vista*	Donna Lee	Marni Rittburg
City of Galt*	Paula Islas	*Vacant*	City of Rocklin	Russell Hildebrand	Kimberly Sarkovich
City of Gridley	Matt Michaelis	Elisa Arteaga	City of Willows*	Tim Sailsbery	Scott Taylor
City of Ione	Jon Hanken	Anna Daneri	City of Yuba City	Natalie Springer	Robin Bertagna
City of Jackson*	Michael Daly	Dalacie Blankenship	Town of Paradise	Gina Will	Crystal Peters

**Founding Members*

Executive Committee

The Executive Committee is a standing committee of the Board that acts as a steering committee for overall operation of the Joint Powers Authority and has been delegated certain duties as enumerated in the Bylaws. The Committee is composed of seven-to-nine voting members and two non-voting members, all selected by the Board. The President of the Board serves as the Chair of the Committee, while the Vice President and the Secretary are voting members of the Committee. Remaining voting seats are selected on a rotating geographical basis. The Treasurer and CJPRMA Board Representative are non-voting members of the Committee.

Members are as follows:

January 1, 2015		January 1, 2016	
City of Dixon	Michelle Pellegrino, *Secretary*	City of Colusa	Toni Benson
City of Elk Grove	Brad Koehn	City of Folsom	Bruce Cline
City of Folsom	Bruce Cline, *Vice President*	City of Ione	Jon Hanken
City of Galt	Paula Islas, *CJPRMA Representative*	City of Jackson	Michael Daly
City of Ione	Jon Hanken	City of Marysville	Satwant Takhar
City of Jackson	Michael Daly	City of Nevada City	Corey Shaver, *Secretary*
City of Placerville	Dave Warren	City of Placerville	Dave Warren, *Vice President*
City of Rio Vista	Tim Chapa	City of Rocklin	Russell Hildebrand, *President*
City of Rocklin	Russell Hildebrand, *President*	City of Yuba City	Natalie Springer

Non-Voting Members:

Treasurer	Tim Sailsbery, City of Willows
CJPRMA Representative	Paula Islas, City of Galt

Claims Committee

The Claims Committee reviews claims in the Shared Risk Layer, authorizes settlements and makes determinations on coverage. Authority is granted to the Executive Committee to act as or appoint members of the Claims Committee. All claims are reported to the Claims Administrator regardless of the claim values. The Claims Committee meets as necessary to review all open reported claims likely to involve the Authority's shared risk portion of the Liability and Workers' Compensation Programs.

NCCSIF has retained York Risk Services Group, Inc. as Claims Administrator, and they are responsible for managing claims to conclusion, including investigation, negotiation, assignment of legal counsel, and litigation management. They also provide reports regarding claim status, reserves, and settlement recommendations to the Claims Committee.

Members have authority to settle claims in their Banking Layer up to $50,000 ($100,000 for Folsom) for Liability and $100,000 for Workers' Compensation. The Claims Committee has authority up to $250,000. The Board of Directors has authority to settle claims over $250,000 up to the SIR of $500,000 for both Liability and Workers' Compensation. The Claims Committee is also granted authority to deny claims and to refer claims to counsel for coverage opinions.

NCCSIF hires an independent claims auditor to perform an audit for the Liability Program every odd-numbered year and an audit for the Workers' Compensation Program every even-numbered year.

Claims Committee members are selected from the Executive Committee annually at the spring meeting.

Finance Committee

The NCCSIF Board of Directors has delegated financial investment authority and other duties to the Executive Committee. The Executive Committee delegates these duties to the Finance Committee on an as-needed basis. Finance Committee members are appointed by the Executive Committee as follows:

> *The Treasurer and other Board members or Alternates are appointed by the Executive Committee. It is desired that one member of the committee shall be a finance or assistant finance director of an NCCSIF member.*

A Treasurer is annually elected by the Board of Directors and serves as the Chair of the Finance Committee.

Finance Committee Chair & Treasurer:
Tim Sailsbery, City of Willows

Duties delegated to the Finance Committee may include:

1. Discuss strategies with the Investment Advisors in accordance with the Investment Policy and direct overall investment strategy.
2. Review cash management requirements on an annual basis and give direction to the accountant to make adjustments.
3. Review the independent auditor's proposed audit scope and approach.
4. Review the performance of the independent auditor.
5. Recommend the appointment to the Executive Committee of the independent auditor and review audit fees.
6. At the direction of the Board or the Executive Committee, review with counsel any legal matters that could have significant impact on the financial statements.
7. Review and make recommendations to the Board or the Executive Committee to maintain or change the Investment Policy in accordance with California Government Code.
8. Advise the Board and the Executive Committee on other financial matters.

Risk Management Committee

NCCSIF established a formal Risk Management Committee in 1991. The Committee is comprised of one member from each City, and over the years it has been enriched by participation from employees from Public Works, Finance, Human Resources, Police, Fire, and City Management who have all worked to provide a broad range of ideas and risk management services to the members.

It is the JPA's philosophy that the consideration of worker safety, and the safety of the general public, bears as high a priority as the decision to commit funds or to complete a task. Our goal is to foster loss control programs to guard against all types of accidents and incidents wherever possible.

Recognizing the above goal, the Committee annually recommends and administers a Risk Management Budget as approved by the Board of Directors. That budget represents 50% of the total program administration expenses, not including claims management. These services include:

Contract Risk Management Services

NCCSIF hired Bickmore in 2012 as their Risk Control Services provider to perform a Hazard and Risk Assessment for each member and recommend policies, procedures, and training to address their individual needs. As a result, members are receiving more direct assistance in managing their operations in ways that reduce the frequency and severity of claims.

Consulting by Bickmore Risk Services includes:

- Hotline Services – one of the most popular services provided
- Hazard & Safety Assessments
- Program/Policy Development
- On-site Training
- Safety Materials
- Webinars – WC and Liability Risk Management Topics
- Training Matrix

Safety Library
On-line Video Libraries are available through the Bickmore website, riskcontrol.brsrisk.com as well as the CSAC- EIA website, csac-eia.org.

Conference Attendance
Sponsorship of members for attendance at the Annual PARMA or CAJPA Risk Management Conference.

Seminars and Training Sessions

Selection of topics determined annually by the Committee including:

- Bickmore: on-site sessions covering employment issues such as Harassment, Skills for Supervisors, and e-mail communications
- TargetSolutions: online training services on a variety of topics including OSHA Compliance and Employment Practices
- My Safety Officer and Risk Control Online: online programs to assist in the management and employment and safety training requirements for employees
- Wastewater Services Safety: updates wastewater safety policies at the City level on an as needed basis
- Regional Workshops: NCCSIF conducts regional workshops on pertinent safety topics. Topics for 2016 consisted of AB 1825: Prevention of Sexual Harassment & Abusive Conduct Training, Traffic Control/Flagger & Excavation Competent Person.

Website

NCCSIF website maintenance, including a "Risk Management" tab where members can access Risk Management information.

Additionally, the Committee has adopted and frequently reviews policies and procedures on various topics:

P & P NUMBER	SUBJECT	LAST REVISION	TYPE
RM-1	Compliance with Risk Management Standards	06/14/1996	Mandatory
RM-2	Driving Standards	04/24/2009	Mandatory
RM-3	Sidewalk Inspection and Maintenance	11/19/2015	Advisory
RM-4	Use of Public Facilities	01/11/2008	Advisory
RM-5	Unlawful Harassment Policy	04/15/2010	Mandatory
RM-6	Approval of Coverage for Skateboard Parks	12/19/2008	Mandatory
RM-7	Pool Operation (*Aquatics Programs - under review*)	01/14/2010	Advisory
RM-8	Development and Operation of Bicycle Parks	10/24/2003	Mandatory
RM-9	Sewer Overflow and Backup Response	11/19/2015	Advisory
RM-10	Risk Management Committee Composition & Duties	09/02/2010	Mandatory
RM-11	Review of Member Risk Assessments	06/23/2011	Mandatory
RM-12	Risk Management Reserve program	11/19/2015	Optional
RM-13	ADA Compliance and Transition Plans	11/19/2015	Mandatory
RM-14	Urban Forest Management (*Draft form – currently under review*)	*Pending*	

Police Risk Management Committee

The Police Risk Management Committee (PRMC) is a subcommittee of the Risk Management Committee. Given the importance of managing public safety risks and the unique nature of their operations, members agreed to form a separate Risk Management Committee for police departments.

All members who have police departments are encouraged to participate in the Police Risk Management Committee. One of their first recommendations upon formation was to contract with Lexipol to develop and annually update member police procedure manuals. Lexipol also provides interested police departments with their Daily Training Bulletin, an online service developed to keep officers apprised of their department's various policies and procedures.

The Police Risk Management Committee is working with Bickmore to coordinate and organize training seminars by leading law enforcement professionals, designed to reduce the various risk exposures generated by the performance of police duties in the current legal environment.

A training session is held at each Police Risk Management Committee meeting. Topics for 2015 included:

- Wellness and Fitness in Law Enforcement: The Tactical Athlete
- Critical Incident Command: Leading in the Edge of Chaos
- 21st Century Policing – Lessons Learned: The Case for Change
- Managing Your Message Social Media Style

The Committee also reviews major claims for risk management practices that can be shared or improved and evaluates equipment that can prevent or minimize losses.

In 2014 participating members began using body-worn cameras to reduce the frequency and severity of police claims.

In 2015 the Board continued their commitment to the PRMC by authorizing another $50,000 in grant funds to meet the ongoing risk management needs of the members including:

- Body Cameras
- Storage Solutions
- Fitness Programs

Liability Program

The Liability Program provides coverage for losses Member Entities become legally obligated to pay as damages because of bodily injury, property damage, employment practices liability, personal injury and public officials' errors or omissions. Coverage is included for the Member Entity and its commissions, agencies, districts, authorities, boards, or similar entities coming under the Member Entity's direction or control. There are nineteen (19) members in the Liability Program.

The total limit of liability provided under the Liability Program is $40,000,000 per occurrence, with a sublimit of $10,000 for employment practices liability. The program is divided into three separate coverage layers - Banking, Shared Risk and Excess Coverage - as noted below:

Excess Layer Excess Insurance: $5,000,000 to $40,000,000 CJPRMA Members: $500,000 to $5,000,000
Shared Risk Layer Member Banking Layer Limit to $500,000
Banking Layer Folsom: $0 to $100,000 All Other Members: $0 to $50,000

All three coverage layers include self-insurance. The Banking Layer is funded to pay for each Member's own claims, similar to a deductible. The Shared Risk Layer is funded to pay for claims that are shared by all NCCSIF Members. The Excess Layer is funded through the California Joint Powers Risk Management Authority (CJPRMA). Since 1994 NCCSIF has participated in CJPRMA, which shares risk up to $5,000,000 with three other JPAs and 17 larger individual cities. CJPRMA purchases excess reinsurance for total limits of $40,000,000 inclusive of NCCSIF's retained limit of $500,000 per occurrence.

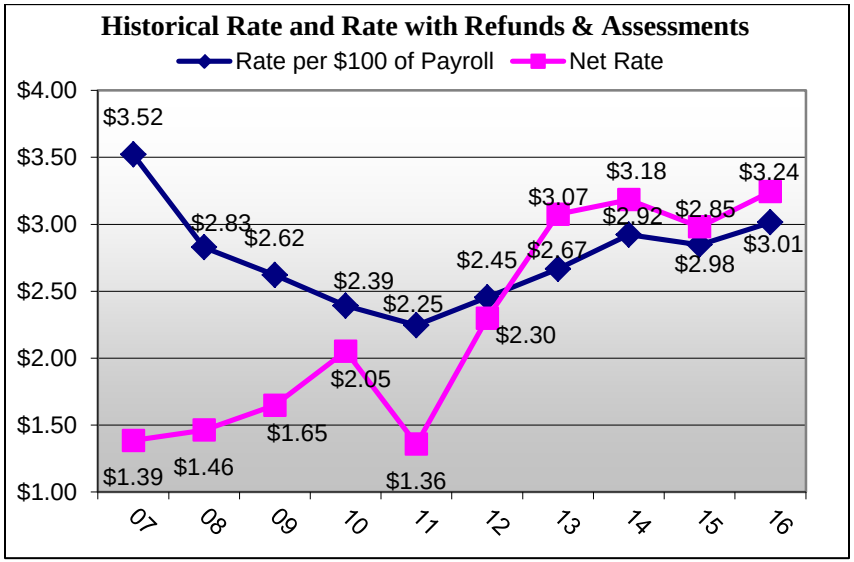
As a result of sharing risk to $5,000,000, CJPRMA is largely removed from the impact of insurance market conditions. In addition, members share in dividends declared when CJPRMA exceeds its funding goals. In 2015 NCCSIF received dividends from CJPRMA of $251,186 which were credited to the liability shared risk assessments.

Total funding for the Liability Program in 2015/16 is $4,598,242. This represents a 7.5% increase, though at a higher funding confidence level from the prior year. The Banking Fund returned $99,287 to Members who exceeded their target funding levels. The Shared Risk Layer Fund was assessed $348,814 this year after application of the CJPRMA refund.

Northern California Cities Self Insurance Fund

The members increased the funding confidence level from 65% to 67.5% with a goal of funding at a 70% confidence level in the future.

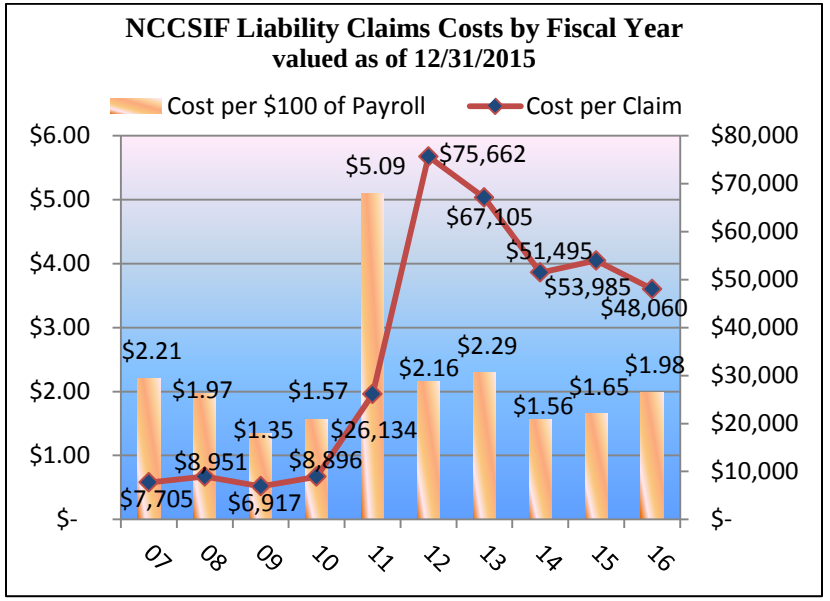
The Board of Directors annually reviews the Banking and Shared Risk financial status to evaluate the appropriateness of declaring either a refund or an assessment. The following chart shows the historical rates with and without the impact of refunds and assessments.



Eight years ago the Liability Program net rates reached historic lows due to large dividends that continued for several years. The gross rate hit a low of $2.26 in 2012 before climbing the last three years, due to an increase in anticipated losses and decreases in payroll. The increase in the net rate is due to the Shared Risk Layer Assessments for the last three years.

Due to the fact that NCCSIF doubled the size of the Shared Risk Layer from $500,000 to $1,000,000, the claims cost obligations for that layer have increased since 2007. Due to unfavorable claims development in 2012, NCCSIF made the decision to lower the Shared Risk Layer from $1,000,000 back to $500,000.

The following chart shows historical claims performance and illustrates that liability claims tend to be volatile.



Workers' Compensation

California Workers' Compensation laws require every employer to provide benefits to employees for injury and/or illness arising out of, or in the course of, employment. Statutory benefits prescribed by law include:

- Medical Treatment
- Temporary Disability Payments
- Permanent Disability Compensation
- Rehabilitation
- Death Benefits

The total amount of benefits provided under the Workers' Compensation Program is limited only by State Law, also known as Statutory Limits, with a $5,000,000 limit for Employers' Liability. The program is divided into three separate coverage layers, Banking, Shared Risk (which are self-funded) and Excess Coverage as illustrated in the chart below:

Excess Coverage
$500,000 – Statutory/Workers' Compensation $500,000 - $5,000,000 – Employer's Liability
Shared Risk Layer
Banking Layer Limit to $500,000
Banking Layer
$0 to $100,000

This program has seen a reduction in the number of claims from a high of 458 in 2003 to 378 in 2015. Average claim costs have gone from a high of $21,346 in 2012 to $14,034 in 2014. Part of this reduction is due to the fact that the severity of claims in 2012 was well above average, but this also reflects a reduction in the number of employees, legislative reforms and more proactive claims management.

In spite of these reductions there is still an increase in claims medical costs. The CPI index for Medical costs continues to outpace the CPI index as whole. This means that medical costs will continue to have a major impact on total NCCSIF loss costs. They currently represent 39% of total paid claims for 2015.

The total cost of the program for 2015 was $9,958,106, before dividends, an increase of 7.8% over the prior year. The rate remained steady with the increase attributable to increase in confidence level from 65% to 67.5% and increase in payroll.

All twenty-two members participate in the program. The following chart on the next page shows the historical Workers'

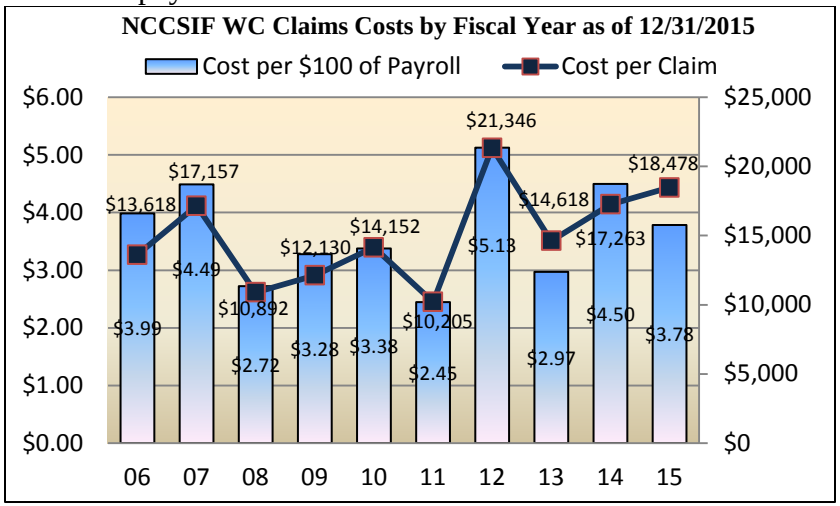
Northern California Cities Self Insurance Fund

Compensation payrolls and reflects the addition of Elk Grove in FYE 2014.

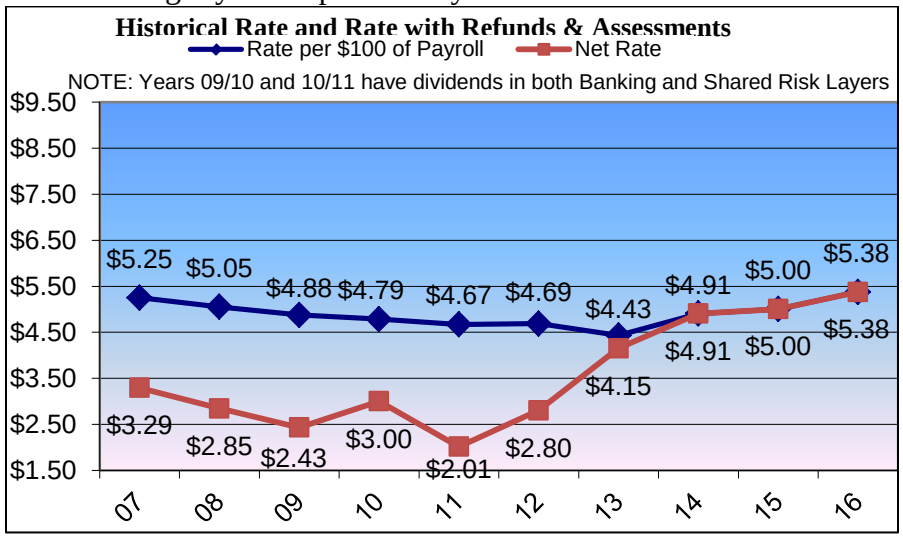
The Excess Coverage is provided through a joint powers authority, the CSAC Excess Insurance Authority (EIA). Since joining this group in 2003, the cost of Excess Insurance has stabilized, though rates increased in 2015 due to the impact of above average losses in 2010 and 2012.

Annually, the Board of Directors reviews the Program's financial status to evaluate the appropriateness of declaring either a refund or an assessment. In spring of 2015, NCCSIF returned $566,413 in Shared Layer dividends to its members and $365,738 dividends in the Banking Layer.

The following chart shows Workers' Compensation costs by claim and payroll.



The following chart shows the historical rates with and without the impact of refunds and assessments. The rates were decreasing beginning 2006 until 2014 however, the rates increased slightly in the past three years.



These excellent financial results are due to a combination of NCCSIF cost containment strategies, including encouraging return to work modified duty placement for injured workers, increased loss control training for the members, and quality claims management from York Risk Services.

The York claims examiner is responsible for advising the member on the merits of each claim and the appropriate action to be taken, as well as providing for necessary investigation of claims and oversight of legal defense.

Property Program

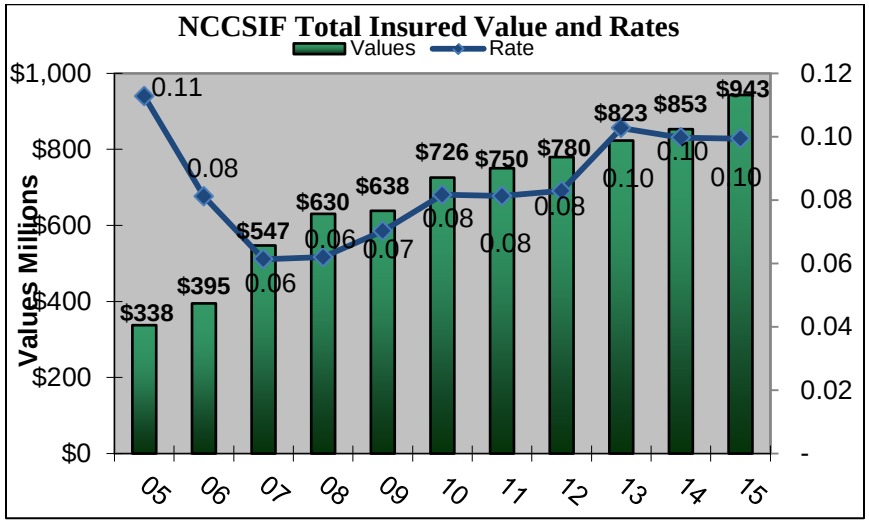
This year NCCSIF renewed coverage through the Alliant Property Insurance Program (APIP). This Program provides broad replacement cost coverage for all buildings and contents, subject to a $1 billion limit per occurrence and a $5,000 deductible per claim. NCCSIF members purchase Boiler & Machinery Coverage at a $100,000,000 limit per occurrence at a $2,500 deductible per claim. Selected members also insure for auto physical damage and flood coverage through the program excess of a flood deductible of $100,000 or $250,000 for Flood Zones A & V.

The Property Program also includes a number of coverages tailored to NCCSIF members, including Pollution Liability, Cyber Liability, Course of Construction, and Rental Income and Tax Interruption. The coverage also provides sub-limits for unscheduled property, new acquisitions, and Increased Cost of Construction.

NCCSIF continues to approve funding for property appraisals to be completed for its members as needed to maintain accurate valuations.

NCCSIF increased the total values insured from $852 million in 2014 to $984 million in 2015, while the rate decreased from $0.10 to $0.075 per $100 in values.

The chart below shows the Total Insured Values in the program along with the coverage rate per $100 of values.



Membership in APIP has grown to fifteen NCCSIF members. Program participants are: Cities of Anderson, Auburn, Colusa, Dixon, Folsom, Galt, Gridley, Ione, Lincoln, Marysville, Oroville, Red Bluff, Rocklin, Yuba City and Town of Paradise.

Physical Damage Program

Selected Members are enrolled in the Alliant Physical Damage Program. The program was initially designed specifically for public agencies – including rural cities, sanitation districts, and wastewater districts – with a limited number of higher-valued vehicles. The program has expanded to include other types of vehicles and mobile equipment.

It provides an All Risk Equipment Floater including earthquake and flood for scheduled equipment on file with the Company through AGCS Marine Insurance Services, Inc. Claims valuation is on a replacement cost basis if desired for vehicles or equipment less than four years old, otherwise the policy will pay to replace damaged property on a like kind and quality basis (not new for old).

Currently eleven of the twenty-two NCCSIF Members are enrolled in this program. The deductible varies for each member as selected annually and covers all risks of direct physical loss or damage from any external cause, including general average and salvage charges, except perils excluded.

Crime Program

The NCCSIF Crime Program provides for coverage of employee theft through the National Union Insurance Company, A.M. Best Rated A++ XV.

Fifteen of the twenty-two NCCSIF members participate in the Crime program. The per-occurrence limit was increased to $1,000,000 in 2007. Coverage is subject to a $5,000 deductible.

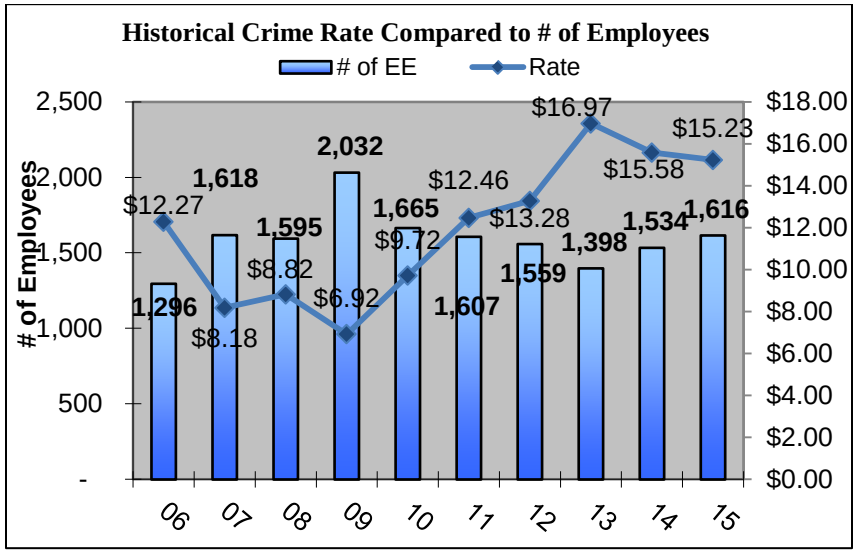
Program 15 participants are Cities of Anderson, Auburn, Colusa, Corning, Dixon, Galt, Gridley, Ione, Lincoln, Marysville, Oroville, Red Bluff, Rocklin, Yuba City and Town of Paradise.

Program Highlights:

- Includes volunteer workers other than fund solicitors as employees
- Includes specified directors and trustees on committees as employees
- Includes chairperson and members of committees as employees
- Deletes Treasurer/Tax Collector and Bonded Employees exclusions
- Includes specified non-compensated officers as employees
- Specified City Officials Coverage Endorsement (for cities that are required by their city charter to individually bond certain employee or officer positions)

Insuring Agreements	Limits of Insurance
Employee Theft – Per Loss Coverage Including Faithful Performance of Duty	$1,000,000
Forgery or Alteration including Credit, Debit or Charge Card Forgery	$1,000,000
Computer Fraud	$1,000,000
Investigative Expenses	$50,000

Limits of Insurance are subject to a $5,000 Deductible



Other Programs

Employee Assistance Program (EAP)

Eighteen NCCSIF members participate in the group purchase of an Employee Assistance Program. An Employee Assistance Program (EAP) is a worksite-based program designed to assist City employees in identifying and resolving personal concerns, including, but not limited to, health, marital, family, financial, alcohol, drug, legal, emotional, stress, or other personal issues that may affect job performance.

NCCSIF's current EAP carrier, ACI, has provided services for NCCSIF's participating cities since 2002. ACI Specialty Benefits offers EAP, Work life and Wellness models. The program NCCSIF participates in features an unlimited EAP benefit package which includes consultation, training, (Critical Incident Stress Debriefing (CISD) response, childcare, and eldercare, legal and financial consultation. ACI's EAP always includes employees and ALL of their family members – whether or no they live in the home.

In 2008 NCCSIF's Risk Management Committee approved free participation for all interested members in ACI's AppleCore Wellness program. Members recently participated in Walking Challenges as part of the Wellness Program.

Identity Fraud Protection

New this year is a program to protect Member employees from the impact of identity fraud. Identity Fraud Reimbursement Coverage and Resolution Services are offered through Travelers Insurance Company, with a limit of up to $25,000 to reimburse many of the costs and expenses associated with identity recovery, including lost wages, attorney fees, and document replacement fees.

Employees have access to a fraud specialist who will provide unlimited assistance to restore a victim's identity. They also have access to exclusive online educational resources providing tips, information and steps to avoid becoming a victim of identity theft.

Financial Overview

The following report reflects on the financial condition of Northern California Cities Self Insurance Fund (NCCSIF) for the fiscal year ended June 30, 2015. It is provided to highlight the information in the financial audit and should be reviewed in concert with that report.

NCCSIF Statements of Revenue, Expenses, and Changes in Net Assets

	2015	2014	Percentage Change	2014	2013	Percentage Change
Operating Revenues	$ 15,802,553	$ 15,798,109	0%	$ 15,798,109	$ 13,099,676	21%
Provisions for Claims	10,879,465	7,773,183	40%	7,773,183	10,464,233	-26%
Dividends	1,506,568	1,445,334	4%	1,445,334	4,236,073	-66%
Insurance Premiums	2,654,843	2,735,852	-3%	2,735,852	2,042,806	34%
Administration	2,089,957	1,950,718	7%	1,950,718	2,056,880	-5%
Total Expenses	17,130,833	13,905,087	23%	13,905,087	18,799,992	-26%
Non-operating:						
Investment Income	644,473	777,402	-17%	777,402	(70,118)	1209%
Net Income (Loss)	(683,807)	2,670,424	-126%	2,670,424	(5,770,434)	146%
Beginning Net Assets	10,063,932	7,393,508	36%	7,393,508	13,163,942	-44%
Ending Net Assets	$ 9,380,125	$ 10,063,932	-7%	$ 10,063,932	$ 7,393,508	36%

Financial Highlights, FYE June 30, 2014 and 2015

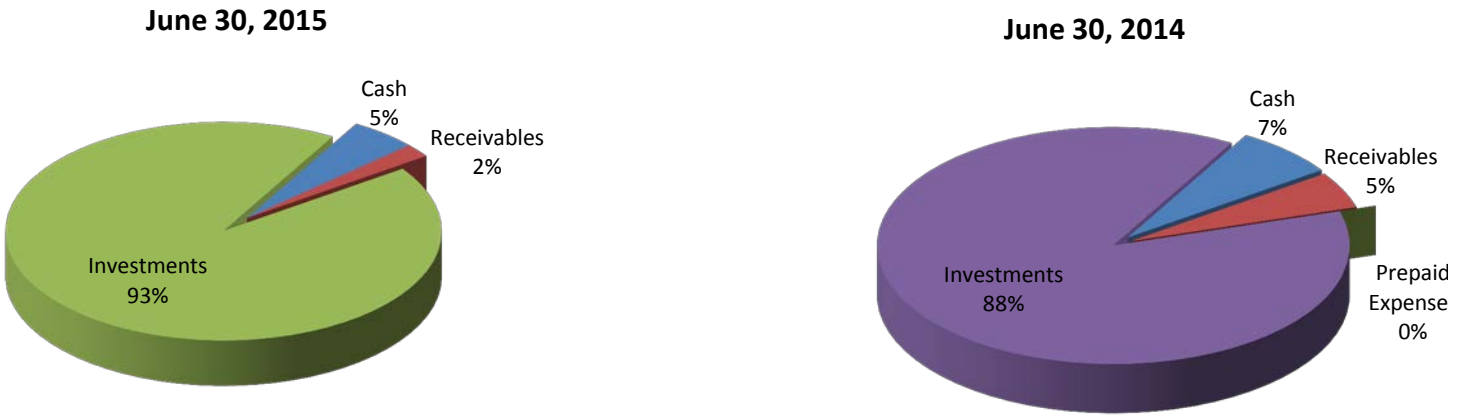
- The net loss for the fiscal year ending 2015 was $683,807. Expenses during the year included dividends to members totaling $1,506,568. Without the dividend to members the program would have shown change in net position of $822,761.
- The change in net position for the fiscal year ending 2014 was $2,670,424. A decrease in prior years' claims liabilities for the workers' compensation fund totaled $2,141,057, due principally to a change in management's estimate of ultimate losses in that program. Expenses during the year included dividends to members totaling $1,445,334. Without the dividends to members the program would have shown an increase in net position of $4,115,758.
- Total operating revenues for fiscal year ending 2015 were $15,802,553, net of dividends, an increase of 0.03%, or $4,444, as compared to fiscal year 2014.
- Total operating revenues for fiscal year ending 2014 were $15,798,109, net of dividends, an increase of 21%, or $2,698,433, as compared to fiscal year 2013. This increase is primarily due to the City of Elk Grove joining NCCSIF during 2013 and an increase in excess insurance premiums.
- Non-operating revenues increased from ($70,118) in 2013 to $777,402 in 2004. The increase was related to market value adjustments. Non-operating revenues decreased by $132,929 in fiscal year 2015, to $644,473.
- Operating expenses increased in 2015 by $3.2 million from the total of $17,130,833 in 2014. This increase resulted from increases to the provisions for claims for the 2015 fiscal year.
- Operating expenses, including the provision for claims, decreased by 26% in 2014 to $13,905,087. This decrease was due to lower dividends and a decrease in claims expenses related to a change in management's method for estimating total losses in the workers' compensation program.

Northern California Cities Self Insurance Fund

Pool-Wide Financial Analysis

	June 30, 2015	Percent	June 30, 2014	Percent	June 30, 2013	Percent
Current Assets	$ 8,038,589	16%	$ 10,237,879	28%	$ 10,237,879	23%
Noncurrent Assets	42,988,439	84%	33,984,221	72%	34,380,597	78%
Total Assets	51,027,028	100%	46,940,001	100%	44,618,476	100%
Current Liabilities	900,740	2%	448,980	1%	1,763,450	4%
Claim Liabilities	40,746,163	80%	36,427,089	78%	35,461,518	79%
Total Liabilities	41,646,903	82%	36,876,069	79%	37,224,968	83%
Net Position	9,380,125	18%	10,063,932	21%	7,393,508	17%
Total Liabilities and Net Position	51,027,028	100%	46,940,001	100%	44,618,476	100%

Total Assets by Type at June 30, 2014 and June 30, 2015

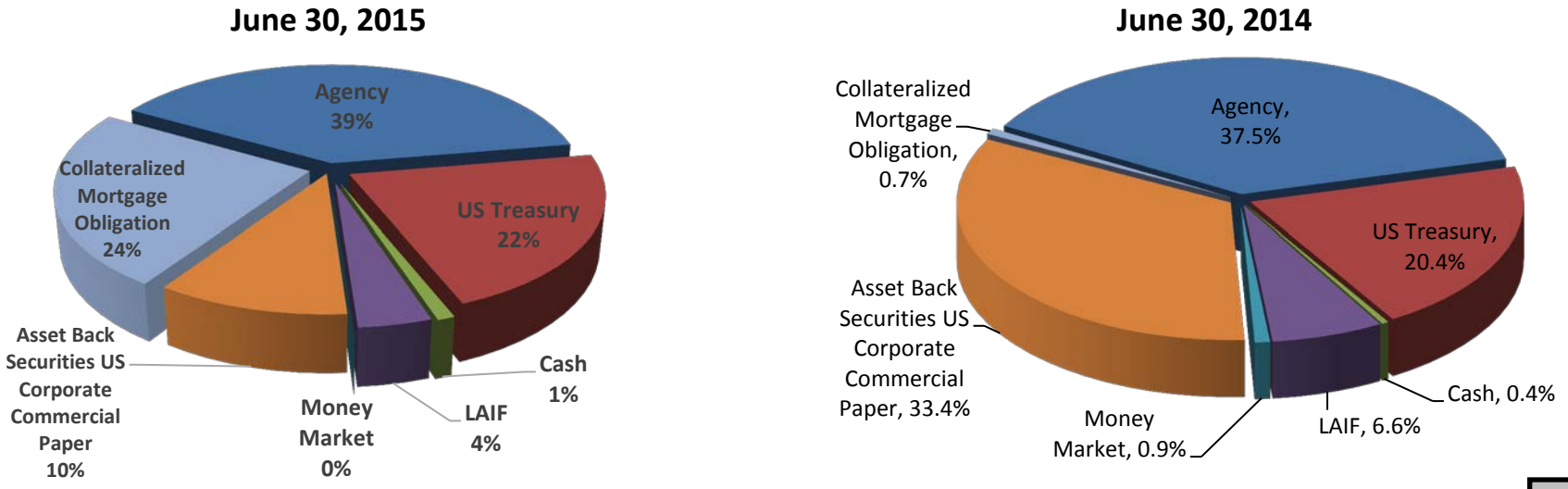


Northern California Cities Self Insurance Fund

Investment revenues are used to offset program costs wherever possible and reduce the required member contributions. The overall investments of the pool increased in 2015 from $41,302,609 to $47,284,612. NCCSIF invests funds not immediately necessary for the payment of claims in order to optimize the rate of return. Funds are invested in a manner that will protect principal, allow for cash flow needs and optimize returns, in conformity with all federal, state, and local statutes governing investment of public funds. The assets needed for current operations are maintained by the Local Agency Investment Fund (LAIF), administered by the State Treasurer's Office.

Interest rates have remained low the last three years, for example, the average rate of return for funds invested in LAIF during the fiscal year 2013 was 0.298%, in 2014 it was 0.243%, and in 2015 it was 0.316%. However, the effective rate of return for the JPA investment portfolio increased to 1.94% for the short-term fund and 3.86% for the long-term fund. The ability of these funds to earn investment income has a direct effect on program rates, as this income is used to discount future liabilities. When investments fall short of projections, additional funding may be required to meet actuarial estimates.

Components of NCCSIF Portfolio at June 30, 2014 and June 30, 2015



Service Providers and Consultants

PROGRAM ADMINISTRATORS:

Alliant Insurance Services, Inc.
Michael Simmons, Vice Chair (Peer Review)
Marcus Beverly, First-Vice President
Raychelle Maranan, Account Representative
Joan Crossley, Account Executive

ACCOUNTING SERVICE PROVIDER:

James Marta & Company
Jim Marta, CPA, ARM
Alana, Theiss, CPA

THIRD PARTY CLAIMS ADMINISTRATION:

York Risk Services Group, Inc.
Dori Zumwalt, Account Manager
Cameron Dewey, Claims Manager - GL
Ben Burg, Claims Manager - WC

INVESTMENT CONSULTANTS:

Chandler Asset Management, Inc.
Kay Chandler, CFA, President and CEO
Martin Cassell, CFA, EVP and Chief Investment Officer
Scott Prickett, CFA, SVP, Portfolio Strategist

INDEPENDENT FINANCIAL AUDITING SERVICES:

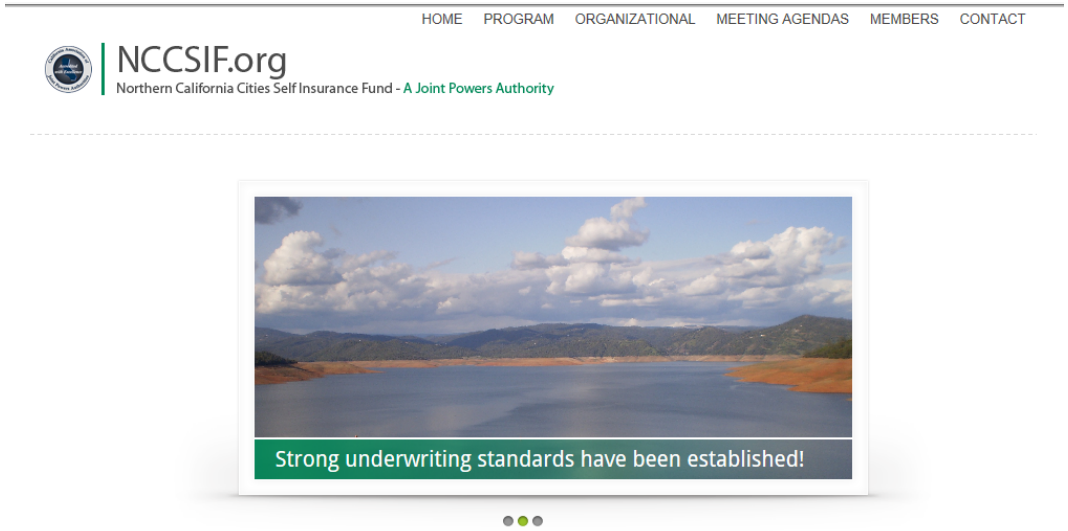
Crowe Horwath LLP
Matthew Nethaway, Financial Audit

RISK CONTROL AND ACTUARIAL SERVICES:

Bickmore Risk Services
Henri Castro, Risk Control Consultant
Tom Kline, Risk Control Consultant
Jeff Johnston, Director, Risk Control Services
Mike Harrington, Director, Property & Casualty Actuarial Services

Northern California Cities Self Insurance Fund

Please see our website at www.nccsif.org



NCCSIF

Northern California Cities Self Insurance Fund
A Joint Powers Authority

The Northern California Cities Self Insurance Fund (NCCSIF) is an association of municipalities joined together in 1979 to protect Member resources by stabilizing risk costs in a reliable, economical and beneficial manner while providing members with broad coverage and quality services in risk management and claims management.

TOWN OF PARADISE
Council Agenda Summary
April 12, 2016

AGENDA NO. 2(f)

ORIGINATED BY: David Hawks, Division Chief

REVIEWED BY: Lauren Gill, Town Manager

SUBJECT: Sale of 1989 Pierce Dash Fire Engine (E-281)

COUNCIL ACTION REQUESTED: Adopt a resolution declaring the 1989 Pierce Dash fire engine (E-281) as surplus property and authorizing sale of the vehicle by the Town Manager to either 1) the Butte College Fire Academy at a cost of not less than $8,000 or, 2) sell the 1989 Pierce Dash fire engine (E-281) on the fire apparatus open market.

BACKGROUND:

The Paradise Fire Department has declared the 1989 Pierce Dash fire engine (E-281) to be excess to the Department's needs. In April of 2013 the Town sold the sister engine to E-281 on the open market for $8,200.

DISCUSSION

The Fire Department has been in contact with Butte College and they have verbally expressed an interest in purchasing the engine for the Butte College Fire Academy. The Department is requesting that the Council authorize Town staff to negotiate the sale of the engine to the Butte College Fire Academy at a cost not less than $8,000. If an agreement with the college cannot be reached, the Department requests that the Council approve seeking bids relating to the purchase of the engine on the fire apparatus open market. The Department also requests that funds received from the sale of the engine be placed in to a fire apparatus replacement fund designated to the future purchase of fire apparatus for the Department.

FISCAL IMPACT: Additional funding to the fire apparatus fund for future needs of the Fire Department.

TOWN OF PARADISE
RESOLUTION NO. 16-__

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF PARADISE DECLARING A CERTAIN FIRE VEHICLE TO BE SURPLUS PROPERTY AND AUTHORIZING SALE OF THE FIRE ENGINE

WHEREAS, the Town of Paradise wishes to dispose of a certain fire department vehicle that is no longer functional or necessary to the Town's operations through public auction, internet sale, salvage or other legal method.

NOW, THEREFORE, BE IT RESOLVED by the Town Council of the Town of Paradise as follows:

Section l. Pursuant to Paradise Municipal Code Section 2.45.130, the Town hereby declares the following vehicle as surplus property:

- 1989 Pierce Dash Fire Engine (E-281) VIN: 1P9CT01D7KA040763

Section 2. Pursuant to Paradise Municipal Code Section 2.45.130, the Town Manager is hereby authorized to dispose of the property set forth in Section 1 through sale to Butte College for the Fire Academy for not less than $8,000. If Butte College does not agree to the purchase, the Town Manager is authorized to seek bids to sell the fire apparatus on the open market.

PASSED AND ADOPTED by the Town Council of the Town of Paradise this 12th day of April, 2016, by the following votes:

AYES:
NOES:
ABSENT:
NOT VOTING:

_____
Jody Jones, Mayor

ATTEST:

BY: _____
Joanna Gutierrez, CMC, Town Clerk

APPROVED AS TO FORM:

BY: _____
Dwight L. Moore, Town Attorney

Town of Paradise
Council Agenda Summary **Agenda Item: 2(g)**
Date: April 12, 2016

Originated by: Crystal Peters, Human Resources & Risk Manager

Reviewed by: Lauren Gill, Town Manager

Subject: Job Description Update and Position Control Amendment

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Council Action Requested:

1. Review and approve amended job description for the Building/Onsite Permit Technician; and,
2. Amend position control and budget appropriation for Building/Onsite Permit Technician position as attached to this agenda summary; or,

Alternatives:

Refer the matter back to staff for further development and consideration.

Background:

We have two employees performing substantially similar tasks, interacting with the same customers, backing each other up during set office hours, yet the current salary schedule has the two positions with significant discrepancy in pay, as exemplified in the A step to A step illustration below.

- Building / Onsite permit Technician A Step 13.50
- Environmental Services Specialist A Step 15.53

We have been aware of this issue and desired to resolve it, but with the most recent resignation from the Building / Onsite Permit Technician, it has become evident that we must expedite the request for resolution on this item.

Discussion:

Staff proposes increasing the Building/Onsite Permit Technician position to an equivalent salary pay plan level as the only other counter staff position, Environmental Services Specialist.

Fiscal Impact Analysis:

This recommended proposal adds no expense to the general fund. The total cost is minimal, estimated full FY16/17 cost would be $216 to the Building Safety and Waste Management Fund due to placement on the salary pay plan.

JOB TITLE:	Building/Onsite Permit Technician
DEPARTMENT:	Building Safety & Waste Management
DIVISION:	Building
REVISION DATE:	April 12, 2016
HOURS:	Full-Time (40 hrs per wk)
CLASSIFICATION:	Non-exempt
UNIT:	General Employees
REPORTS TO:	Building Official / Fire Marshal
WORKS WITH:	Citizens, Contractors, Town Staff
SUPERVISES:	None

BASIC PURPOSE:

Under supervision of the Building Official / Fire Marshal, performs technical assistance concerning the receipt, tracking, and processing of various land use, land development and sanitation permit applications, in accordance with the Paradise Municipal Code and town adopted development standards; provides information of a general and technical nature to interested parties; and performs a wide variety of clerical work.

EXAMPLES OF DUTIES, INCLUDING ESSENTIAL DUTIES:

Depending upon assignment, duties may include, but are not limited to: Receive, review and track processing of community development and land use applications such as building permits, encroachment permits, home occupations, signs, landscape plans, lot mergers, use permits, variances, site plan reviews, lot line adjustments, land divisions, zone changes; calculate required fees and issue permits; provide information on the permit application process and requirements; discuss problems and answer questions with parties involved; maintain a variety of records and files on current permit applications; prepare written correspondence; check permit applications for required information; confer with builders, contractors, architects, engineers, realtors, land surveyors, and the general public concerning Paradise Municipal Code and permit requirements; act as liaison between divisions; design development information and permit application forms, and perform related duties as assigned.

KNOWLEDGE OF:

Standard clerical experience, computers, modern office procedures, equipment, related software applications; community development regulations, standards, and development permit processing procedures; engineering maps and records; methods and techniques of problem resolution and public contact; basic organization and services of local government; procedures regarding the receiving and recording of cash payments.

ABILITY TO:

Communicate clearly and concisely, both orally and in writing; deal effectively with builders, contractors, engineers, etc., and the general public; read and interpret maps and site development drawings; learn and apply a variety of land use and land development requirements and municipal code provisions; type at a rate of speed sufficient to meet the needs of the position; maintain confidential information; and respond tactfully to a variety of questions, inquiries and complaints. Employee must understand the purpose and functioning of a community development department, and must understand the structure and importance of local policies, ordinances and regulations associated with development.

EXPERIENCE:

Minimum of two years of public contact experience / customer service, *preferably* gained while working in the capacity of technical or responsible clerical support in building, sanitation and/or land development industries.

EDUCATION:

Graduation from high school or equivalent. Additional college level courses in map reading, building, construction, engineering, business, and/or office management is highly desirable.

LICENSE:

Valid Class C California Driver's License in conformance with established Town employee driving standards.

PHYSICAL DEMANDS:

Must possess ability to work in a standard office setting and to use standard office equipment, including a computer and ability to communicate clearly in person and over the telephone. The following lists physical demands an employee will perform on a regular basis: Standing at counter, sitting, viewing a computer monitor, typing/keyboarding, handwriting, reading, calculator/10-Key, on the phone.

The following lists physical demands an employee may perform on an occasional basis: lifting; average weight: 15 lbs. (large binders), walking, standing, stoop, kneel, crouch or crawl, reach with hands and arms. 95% of duties are performed inside with climate control.

This position requires being able to work at close vision (clear vision at 20 inches or less) and to adjust focus (ability to adjust the eye to bring an object into sharp focus) for the purpose of data entry.

The typical noise level in the work environment of this position is of moderate notice (examples: business office with computers, printers and light traffic.)

TOWN OF PARADISE
FY 2015/16

Position Title	Hours/ Week		A Step	B Step	C Step	D Step	E Step	F Step
BUILDING / ON-SITE PERMIT TECHNICIAN								
	HOURLY	40		16.30	17.12	17.98	18.88	19.82
	BIWEEKLY		80	1,304.00	1,369.60	1,438.40	1,510.40	1,585.60
	MONTHLY		173.33	2,825.33	2,967.47	3,116.53	3,272.53	3,435.47
	ANNUAL		2080	33,904.00	35,609.60	37,398.40	39,270.40	41,225.60

TOWN OF PARADISE
Council Agenda Summary
Date: April 12, 2016

Agenda No. 2(h)

ORIGINATED BY: Craig Baker, Community Development Director

REVIEWED BY: Lauren Gill, Town Manager

SUBJECT: Adoption of Town Ordinance No. 560

COUNCIL ACTION REQUESTED: Adopt a **MOTION TO**:

1. Waive second reading of the entire Town Ordinance No. 560 and approve reading by title only (roll call vote); **AND**

2. Adopt Town Ordinance No. 560, "An Ordinance of the Town of Paradise Amending Section 1.09.050 Relating to Administrative Civil Citations "

BACKGROUND: On March 8, 2016, the Town Council introduced the above-noted Town ordinance for purposes of eventual adoption. The intent of the proposed ordinance is to shorten the warning period for Paradise Municipal Code (PMC) violations related to zoning and building codes from 15 to 3 days in order to provide for a more expedient approach to seeking abatement on serious, dangerous or time-sensitive PMC violations (cultivation of medical marijuana, fire/ life safety, etc.).

DISCUSSION: Town staff recommends that the Town Council waive the second reading of this entire ordinance; read it by title only; and formally adopt Town Ordinance No. 560 (copy attached). Once adopted, the provisions of this ordinance will be effective thirty days thereafter.

FINANCIAL IMPACT: A nominal cost for publication of the ordinance within the local newspaper and for codification will be borne by the Town of Paradise.

Attachment

TOWN OF PARADISE
ORDINANCE NO. 560

AN ORDINANCE OF THE TOWN OF PARADISE AMENDING SECTION 1.09.050 RELATING TO ADMINISTRATIVE CIVIL CITATIONS

The Town Council of the Town of Paradise, State of California, does **ORDAIN AS FOLLOWS**:

SECTION 1. Paradise Municipal Code section 1.09.050 is hereby amended to read as follows:

1.09.050 - Procedures of Issuance of Administrative Citations.

(a) After a three (3) day written warning for a continuous zoning or building violation, the enforcement officer may issue an administrative citation to the violator or property owner for any violation of this Code, in the manner prescribed in this Chapter. The administrative citation shall be issued on a form prescribed by the Town Manager.

(b) The enforcement officer shall identify the responsible party. Once the person responsible for the violation is identified, the enforcement officer may obtain the signature of that person on the administrative citation for the purpose of establishing personal service of the citation. The failure to obtain the signature of the responsible party on the administrative citation shall in no way affect the validity of the citation and proceedings taken thereunder.

(c) If the enforcement officer is unable to locate the responsible party, or the responsible party refuses or otherwise fails to sign the administrative citation, the administrative citation shall be served on the responsible party as follows:

(1) Personal delivery of the administrative citation without the violator's signature.

(2) A copy of the administrative citation shall be mailed to the responsible party by first class U.S. mail, postage prepaid, addressed to the responsible party at his or her last known mailing address, together with a copy of a declaration of service signed under penalty of perjury by the person mailing such documents.

(3) The declaration of service shall show the date and manner of service by mail and shall recite the name and address of the person to whom it is addressed.

(4) When so mailed as set forth above, the administrative citation shall be deemed received on the date it is deposited in the U.S. mail. The failure of any responsible party to receive an administrative citation that is mailed in accordance with the provisions of this Chapter shall not affect the validity of any proceeding taken under this Chapter.

SECTION 3. This ordinance shall take effect thirty (30) days after the date of its passage. Before the expiration of fifteen (15) days after its passage, this ordinance or a summary thereof shall be published in a newspaper of general circulation published and circulated within the Town of Paradise along with the names of the members of the Town Council of Paradise voting for and against same.

PASSED AND ADOPTED by the Town Council of the Town of Paradise, County of Butte, State of California, on this 12th day of April, 2016, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

_____
Jody Jones, Mayor

ATTEST:

_____
Joanna Gutierrez, Town Clerk

APPROVED AS TO FORM:

_____
Dwight L. Moore, Town Attorney

Town of Paradise
Council Agenda Summary **Agenda Item: 6(a)**
Date: April 12, 2016

Originated by: Colette Curtis, Administrative Analyst

Reviewed by: Lauren Gill, Town Manager

Subject: **Community Development Block Grant Program (CDBG) Approval of Annual Action Plan and Subrecipient Funding Recommendations**

Council Action Requested:

1. Adopt the 2016-17 Subrecipient funding recommendations regarding grant funding for local organizations; and
2. Adopt the FINAL 2016-2017 Annual Plan as submitted; or
3. Revise the FINAL 2016-2017 Annual Plan; and
4. Authorize staff to submit the adopted 2016-2017 Annual Plan to the U.S. Department of Housing and Urban Development.

Background:

On February 9, 2016 Council held the second of two public hearings on the 2016-2017 Annual Action Plan. The Annual Action Plan has been available for public comment during a mandatory 30-day public notice period from February 9 through March 8, 2016. The Action Plan was available for viewing and comment at Town Hall, The Family Resource Center, the Public Library and the Senior Center, and posted on the Town's website for comment. Residents were encouraged to participate in the plan's development through the public hearing process or by submitting comments to staff by the end of the Council meeting on March 8, 2016. Today's meeting is the final approval of the Annual Plan. Staff will submit the plan to the U.S. Department of Housing and Urban Development for review and approval before the next funding cycle begins July 1, 2016.

This year the Town has been allocated $172,295, a slight decrease from our allocation last year.

Subrecipient Funding:

In January, non-profit organizations doing business in Paradise were given 30-days to submit applications for grant funding to the Town. Eight applications were submitted and scheduled to interview with the subrecipient funding sub-committee. The funding Committee, consisting of Councilmember's Rawlings and Culleton, along with the Administrative Analyst, met with each of the applicants on February 24, 2016.

Although all of the organizations that submitted applications were deserving of the funding, the Town's allotment was much smaller than the requests for funding. The Town will receive $25,844 this program year. The sub-committee's recommendation to Council is depicted in the funding chart below.

Applicant Name	Requested Amount	Final Recommendation	Proposed Program
Butte Baby Steps	$1,500	$0	Provides baby proofing equipment for low income residents.
Boys and Girls Club	$5,000	$3,000	Provide weekly workforce readiness program services and support. Help at risk teens develop their leadership skills and strive for academic achievement and a future career path.
Catalyst	$10,000	$8,000	Provides services to meet the needs of domestic violence victims and children, provide shelters, hotlines, counseling and restraining orders.
Paradise Junior Football	$7,250	$0	Provide scholarships for low income youth to participate in football /cheerleading programs.
PRPD	$4,000	$3,000	Provide scholarships for low income youth to participate in PRPD sports programs.
Salvation Army	$4,000	$2,000	Provide short-term rental assistance for low income residents.
SHOR	$2,467	$844	Provide bus passes and case management services for ridge homeless.
Youth 4 Change	$10,000	$9,000	Assistance to low income families to pay for emergency needs and bills.
Total Requested	**$44,217**	$25,844.00	
Funds Available	**$25,844**		

In forming its recommendation, the Committee focused on funding organizations that served those in need of critical emergency services. The Committee also voted to support organizations that were requesting initial funding to assist them in growing and sustaining programs and services for at risk youth.

Annual Plan 2016-17 Proposed Funding Allocation:

This year, the Town will continue to support low and moderate income homeowners who need repairs to their home, and low income first-time homebuyers who are seeking down-payment assistance to purchase a home. The reinstated Small Business Assistance Program will offer loans to qualifying low income business owners. The town will also be allocating funding for public services through our subrecipient funding process and allocate funds for the program's planning and administrative activities.

2016-2017 Staff Recommended Funding Breakdown:

Program Administration	$34,459
Housing	$71,992
Small Business Assistance	$40,000
Public Services	$25,844
TOTAL:	**$172,295**

Financial Impact:

The impact of this agenda item and subsequent actions related to the CDBG Program is positive, as it will result in the award of $172,295 in federal funds. There is no impact to the General Fund.

Staff Recommendation:

Adopt the 2016-2017 Subrecipient funding recommendations regarding grant funding for local organizations and adopt the 2016-2017 Annual Action Plan. Authorize staff to submit the adopted 2016-2017 Annual Plan to the U.S. Department of Housing and Urban Development.

Executive Summary

AP-05 Executive Summary - 24 CFR 91.200(c), 91.220(b)

1. Introduction

The Town of Paradise, through its Community Development Block Grant (CDBG) program, has developed a strategy that focuses on cultivating Paradise as a viable community by providing decent housing, a suitable living environment, and by expanding economic opportunities, principally for low and moderate income persons.

This year, the Town will continue to support low and moderate income homeowners who need repairs to their home, and low income first-time homebuyers who are seeking down payment assistance to purchase a home. Loans for small, low income businesses will be offered tihs year as well. The Town will continue funding public services through our subrecipient funding process and allocate funds for the program's planning and administrative activities.

2. Summarize the objectives and outcomes identified in the Plan

This could be a restatement of items or a table listed elsewhere in the plan or a reference to another location. It may also contain any essential items from the housing and homeless needs assessment, the housing market analysis or the strategic plan.

The objectives for the 2016-17 program year are as follows:

1. Housing Assistance - Continue First Time Home Buyer Loans and Owner Occupied Rehabilitation Loans

2. Code Enforcement - Continue proactive code enforcement activities in deteriorating and deteriorated areas

3. Business Assistance - Renew program offering low income business owners loans to start or improve their business (code corrections, facade improvements, septic etc).

4. Public Services - Continue offering grants to non-profit community groups to provide services to the community. Previously funded programs include: Services for battered women and children, emergency overnight shelter to prevent homelessness, work training programs for at risk youth, college preparation for at risk youth, sesrvices for low income families, scholarships for low income youth to participate in sports.

3. Evaluation of past performance

This is an evaluation of past performance that helped lead the grantee to choose its goals or projects.

The Town's past experience with CDBG funds has shown a great need in our community for affordable housing and services for low income residents. As a result, the Town continues to provide low income first time home buyers with assistance. The Town also continues to provide help to low income homeowners who need assistance with repairs and code corrections. Our past experience with subrecipients has also shown that there is a great need in our community for services for battered women, children, the elderly and low income families. The funding we grant to subrecipients is focused on providing for these needs.

4. Summary of Citizen Participation Process and consultation process

Summary from citizen participation section of plan.

A public notice was published in the Paradise Post on December 26, 2015 outlining the noticing requirements of the Citizen Participation Plan and Annual Plan. The public notice announced the two public hearings that allowed citizens the opportunity to comment and make suggestions on the development of the 2016-2017 Annual Action Plan.

- **1st Public Hearing**: Tuesday, January 12, 2016 at 6:00 p.m. This public hearing was used to solicit suggestions and/or comments from the public regarding the 2016-2017 Annual Plan funding priorities.
- **2nd Public Hearing:** Tuesday, February 9, 2016 at 6:00 p.m., in the Town Hall Council Chambers at 5555 Skyway, Paradise, California. The Draft Consolidated Plan and Draft Annual Action plan was available for review by the Council and the public. This public hearing initiated a 30-day public comment period.
- **30-Day Public Comment Period:** February 9th-March 8th, 2016. The Draft Consolidated Plan and Annual Action Plan was available for public review at the following locations, Paradise Public Library, Senior Center, Family Resource Center, Paradise Chamber of Commerce, Town Hall and could be downloaded via the Town's website.
- **Council Meeting**: Tuesday, April 12th, 2016, at 6:00 p.m., in the Town Hall Council Chambers at 5555 Skyway, Paradise, California. The Council reviewed the final draft of the 2016-2017 Annual Plan. Council adopted the drafts and approved submission of the documents to HUD.

5. Summary of public comments

This could be a brief narrative summary or reference an attached document from the Citizen Participation section of the Con Plan.

No public comments were received for the 2016-2017 plan.

6. Summary of comments or views not accepted and the reasons for not accepting them

NA

7. Summary

The Town posted the public hearing notice in the Paradise Post and made it available on the Town's website. Community Service organizations were given information about the Annual Plan process and were encouraged to discuss these projects with individuals who visit their organizations. The draft plan was made available for review at the above mentioned locations, all of which are accessible to persons with disabilities.

PR-05 Lead & Responsible Agencies – 91.200(b)

1. Agency/entity responsible for preparing/administering the Consolidated Plan

Describe the agency/entity responsible for preparing the Consolidated Plan and those responsible for administration of each grant program and funding source.

Agency Role	Name	Department/Agency
CDBG Administrator		Town of Paradise

Table 1 – Responsible Agencies

Narrative (optional)

Consolidated Plan Public Contact Information

Colette Curtis

Administrative Analyst

5555 Skyway

Paradise CA 95969

(530) 872-6291 ext 112

ccurtis@townofparadise.com

AP-10 Consultation – 91.100, 91.200(b), 91.215(l)

1. Introduction

Provide a concise summary of the jurisdiction's activities to enhance coordination between public and assisted housing providers and private and governmental health, mental health and service agencies (91.215(l))

Describe coordination with the Continuum of Care and efforts to address the needs of homeless persons (particularly chronically homeless individuals and families, families with children, veterans, and unaccompanied youth) and persons at risk of homelessness.

The town's involvement with the Butte County Continuum of Care (CoC), which compiles an annual survey of the homeless population in Paradise, has provided the town with actual data regarding homelessness in the Town. The survey report which was provided to the town only counted the actual surveys filled out by homeless persons.

The Town provides assistance to non-profit organizations, which provide services to the homeless population. Through CDBG funding, the Town assists these organizations to find solutions and additional funding that can support this population. The town is working on a rental assistance program to assist individuals who are unable to rent on their own.

Describe consultation with the Continuum(s) of Care that serves the jurisdiction's area in determining how to allocate ESG funds, develop performance standards for and evaluate outcomes of projects and activities assisted by ESG funds, and develop funding, policies and procedures for the operation and administration of HMIS

NA

2. Describe Agencies, groups, organizations and others who participated in the process and describe the jurisdiction's consultations with housing, social service agencies and other entities

Table 2 – Agencies, groups, organizations who participated

1	**Agency/Group/Organization**	Butte County Continuum of Care
	Agency/Group/Organization Type	Services-Children Services-Elderly Persons Services-Persons with Disabilities Services-Persons with HIV/AIDS Services-homeless Services-Health
	What section of the Plan was addressed by Consultation?	Housing Need Assessment Public Housing Needs Homeless Needs - Chronically homeless Homeless Needs - Families with children Homelessness Needs - Veterans Homelessness Needs - Unaccompanied youth Homelessness Strategy
	Briefly describe how the Agency/Group/Organization was consulted. What are the anticipated outcomes of the consultation or areas for improved coordination?	

Identify any Agency Types not consulted and provide rationale for not consulting

Other local/regional/state/federal planning efforts considered when preparing the Plan

Name of Plan	Lead Organization	How do the goals of your Strategic Plan overlap with the goals of each plan?
Continuum of Care		

Table 3 – Other local / regional / federal planning efforts

Narrative (optional)

AP-12 Participation – 91.105, 91.200(c)

1. Summary of citizen participation process/Efforts made to broaden citizen participation

Summarize citizen participation process and how it impacted goal-setting

The Town held two public hearings to solicit public comment on goals for the 2016-17 plan. Town staff also met with community groups to discuss the Town's goals and needs of the community.

Citizen Participation Outreach

Sort Order	Mode of Outreach	Target of Outreach	Summary of response/attendance	Summary of comments received	Summary of comments not accepted and reasons	URL (If applicable)
1	Public Meeting	Non-targeted/broad community	A public hearing was held during a formally noticed Council Meeting on two separate dates. Attendance was moderate.	There were no public comments received.	NA	
2	Newspaper Ad	Non-targeted/broad community	Public Notice published in the Paradise Post Newspaper with public participation process and dates for comments.	No comments were received.	NA	

Table 4 – Citizen Participation Outreach

Expected Resources

AP-15 Expected Resources – 91.220(c) (1, 2)

Introduction

Based on last year's allocation, we expect to receive approximately $175,000. Approximately $95,000 from the 2015-16 year will be carried over to the 2016-17 year, These funds are budged for Housing Assistance and Code Enforcement.

Priority Table

Program	Source of Funds	Uses of Funds	Expected Amount Available Year 1				Expected Amount Available Reminder of ConPlan $	Narrative Description
			Annual Allocation: $	Program Income: $	Prior Year Resources: $	Total: $		
CDBG	public - federal	Acquisition Admin and Planning Economic Development Housing Public Improvements Public Services	172,295	0	95,000	267,295	0	
Other	public - federal	Housing	0	0	0	0	0	

Table 5 - Expected Resources – Priority Table

Explain how federal funds will leverage those additional resources (private, state and local funds), including a description of how matching requirements will be satisfied

If appropriate, describe publically owned land or property located within the jurisdiction that may be used to address the needs identified in the plan

Discussion

Annual Goals and Objectives

AP-20 Annual Goals and Objectives - 91.420, 91.220(c)(3)&(e)

Goals Summary Information

No Goals Found

Sort Order	Goal Name	Start Year	End Year	Category	Geographic Area	Needs Addressed	Funding	Goal Outcome Indicator
1	Public Services	2015	2020	Homeless Non-Homeless Special Needs Non-Housing Community Development			CDBG: $26,250	
2	Code Enforcement	2015	2020	Code Enforcement				
3	Housing Assistance	2015	2020	Affordable Housing			CDBG: $73,750	Homeowner Housing Rehabilitated: 10 Household Housing Unit Direct Financial Assistance to Homebuyers: 10 Households Assisted

Table 6 – Goals Summary

Goal Descriptions

1	**Goal Name**	Public Services
	Goal Description	The Town of Paradise will continue to offer grants to community groups to offer public services to the community. Examples of previously awarded programs inlcude services for victims of domestic violence, emergency overnight shelter to prevent homelessness, services for senior citizens, a community garden located at an elementary school, services for low income children and families.
2	**Goal Name**	Code Enforcement
	Goal Description	The Town of Paradise will continue it's Code Enforcement Program in conjunction with the Rehabilitation Program for low income homeowners.
3	**Goal Name**	Housing Assistance
	Goal Description	The Town of Paradise will continue to offer assistance to low income individuals and families through two housing programs: First Time Home Buyer Assistance and Owner-Occupied Rehabilitation.

Table 7 – Goal Descriptions

Estimate the number of extremely low-income, low-income, and moderate-income families to whom the jurisdiction will provide affordable housing as defined by HOME 91.215(b):

It is estimated we will assist 20 families in the 2016-17 year.

AP-35 Projects – 91.220(d)

Introduction

#	Project Name

Table 8 – Project Information

Describe the reasons for allocation priorities and any obstacles to addressing underserved needs

Projects

AP-38 Projects Summary

Project Summary Information

Table 9 – Project Summary

AP-50 Geographic Distribution – 91.220(f)

Description of the geographic areas of the entitlement (including areas of low-income and minority concentration) where assistance will be directed

Geographic Distribution

Target Area	Percentage of Funds
Paradise	100

Table 10 - Geographic Distribution

Rationale for the priorities for allocating investments geographically

Discussion

Affordable Housing

AP-55 Affordable Housing – 91.220(g)

Introduction

The Town of Paradise worked with local non-profits to complete the first stage of the Paradise Community Village housing development. This development which was completed in 2013 provides 36 affordable housing rental units.

Along with the affordable rental housing component, the Paradise Community Village project is a shared vision of a developed multi-use educational, recreational and community facility for the Ridge communities that meet the individual and collective mission and needs of the project's partners. Agencies involved in the planning and construction of this project include: Boys & Girls Club of the North Valley, Ridge Family Resource Center, Town of Paradise, Paradise Recreation and Park District, Paradise Unified School District, Paradise Charter Middle School, Paradise Ridge Youth Soccer Club.

One Year Goals for the Number of Households to be Supported	
Homeless	4
Non-Homeless	20
Special-Needs	0
Total	24

Table 11 - One Year Goals for Affordable Housing by Support Requirement

One Year Goals for the Number of Households Supported Through	
Rental Assistance	0
The Production of New Units	0
Rehab of Existing Units	10
Acquisition of Existing Units	0
Total	10

Table 12 - One Year Goals for Affordable Housing by Support Type

Discussion

AP-60 Public Housing – 91.220(h)

Introduction

Actions planned during the next year to address the needs to public housing

Actions to encourage public housing residents to become more involved in management and participate in homeownership

If the PHA is designated as troubled, describe the manner in which financial assistance will be provided or other assistance

Discussion

AP-65 Homeless and Other Special Needs Activities – 91.220(i)

Introduction

Although the Town has approximately 27,000 residents, it is by no means an urban center in the North state, and with the lack of efficient public transportation, Paradise has not become a destination for homeless individuals such as other communities in our area- as seen in Chico and Oroville. The lack of social services and shelters, coupled with the fact that these services have been available in neighboring cities has lessened both the homeless population and urgency to address these needs in Paradise.

The Butte County Housing Authority is working with the Butte Continuum of Care, which is a conglomeration of public agencies and local nonprofits, who work together to hold an annual census of homelessness in Butte County. This survey was completed on January 30, 2013. The data is a point in time survey which makes it very hard to assess the actual homeless count, since it is only a one-day juncture and may not capture the whole picture or actual homelessness in Paradise. These parameters of the survey were kept in mind as the Town decided among priority needs in this category.

Describe the jurisdictions one-year goals and actions for reducing and ending homelessness including

Reaching out to homeless persons (especially unsheltered persons) and assessing their individual needs

2013 Homeless Survey (Completed by Continuum of Care staff and volunteers)

The 2013 survey data was complied, and the following information, provides us with an overview of homelessness in Paradise. Over 1,553 surveys were given out in Butte County, 89 or 6% were completed in Paradise. The survey results show that 29% of respondents from Paradise were adults, 38% were adults in families and 29% were children. The report did state that approximately 10% of homeless youth are or have been part of the foster care system. The high number of homeless youth that came out of the survey could be justified because Paradise has a very high number of foster care youth and youth in group homes. HUD does not current define foster youth as 'chronically homeless.'

Table – 9 Homeless Demographics

Source: Butte County Homeless Continuum of Care, 2013

The report cited that 9 or 18% of the homeless individuals in Paradise fell under HUD's definition of 'chronically homeless." 19% of the respondents in Paradise stated that employment/financial reasons were the common reason why they were currently homeless and 25% stated that family problems were the reason why they were homeless (Butte County Homeless Continuum of Care, 2013).

The racial breakdown for homelessness in Paradise shows that 67% of the homeless population is white, 31% are multi-racial, 1% unknown, and no respondents were Black/African American, Native Hawaiian/other Pacific Islander, American Indian/Alaskan Native, or Asian. After reviewing this data, it is determined that there is not a high incidence of minority individuals who are homeless in Paradise (Butte County Homeless Continuum of Care, 2013).

Addressing the emergency shelter and transitional housing needs of homeless persons

The Town will continue to work with local non-profits and the homeless shelter in Chico (Torres Shelter) to make sure that the chronically homeless population in Paradise will be able to seek out services from these agencies and to also make sure that agencies are able to service this population. The Torres shelter accepts individuals from around the area, and Paradise homeless individuals are encouraged to seek shelter there if needed. Sojourner House on the Ridge (SHOR) operates a nomadic shelter in Paradise with churches providing rotating shelter for homeless in the winter. There is no central location other than an intake center, and individuals are then transported to the rotating shelter for the night. There are non-profits in town that provide hot meals to residents of Paradise and they also help with emergency shelters if needed.

Helping homeless persons (especially chronically homeless individuals and families, families with children, veterans and their families, and unaccompanied youth) make the transition to permanent housing and independent living, including shortening the period of time that individuals and families experience homelessness, facilitating access for homeless individuals and families to affordable housing units, and preventing individuals and families who were recently homeless from becoming homeless again

The town currently works with the local Continuum of Care program to prevent chronic homelessness within our jurisdiction. The Family Resource Center also provides services to homeless individuals and youth in foster and group homes. These programs focus on transitioning individuals from homelessness to permanent housing and independent living. The FRC also has partnered with Butte County to provide rental apartments for young adults who grew up in foster care and youth homes. This program provides young adults with assistance and guidance to becoming self sufficient and able to find a job, go to school and live on their own. The town will continue funding organizations that provide case management and credit counseling services to the homeless population to encourage and teach them how to be successful in their jobs and living situation.

Helping low-income individuals and families avoid becoming homeless, especially extremely low-income individuals and families and those who are: being discharged from publicly funded institutions and systems of care (such as health care facilities, mental health facilities, foster care and other youth facilities, and corrections programs and institutions); or, receiving assistance from public or private agencies that address housing, health, social services, employment, education, or youth needs.

Discussion

One year goals for the number of households to be provided housing through the use of HOPWA for:
Short-term rent, mortgage, and utility assistance to prevent homelessness of the individual or family
Tenant-based rental assistance
Units provided in housing facilities (transitional or permanent) that are being developed, leased, or operated
Units provided in transitional short-term housing facilities developed, leased, or operated with HOPWA funds
Total

AP-75 Barriers to affordable housing – 91.220(j)

Introduction

The Town encourages the development of affordable housing by initiating the following goals. The goals are used as incentives to assist with options of affordable housing construction. These bonuses and incentives are intended to contribute to the economic feasibility of affordable housing in developments proposed within the town.

- Softened the zoning requirements associated with secondary housing units to encourage development.
- The Paradise Zoning Ordinance Chapter 17.44 includes provisions about affordable housing incentives and residential density bonuses (Paradise Housing Element, 2014).

Actions it planned to remove or ameliorate the negative effects of public policies that serve as barriers to affordable housing such as land use controls, tax policies affecting land, zoning ordinances, building codes, fees and charges, growth limitations, and policies affecting the return on residential investment

The Town of has an adopted Fair Housing Impediments Analysis that provides an overview of the public policies which are in place to serve as barriers to affordable housing.

One of the barriers to affordable housing is the Town of Paradise's lack of a municipal wastewater treatment facility. Typical septic tanks and leach lines are adequate for single family development but this is not a viable alternative for new housing developments which are at higher densities. Typically, affordable housing units are built in clusters and would require a more advanced wastewater treatment system, which typically is very expensive and may lead to costs being passed on to the developer or whomever is financing the project.

The Town is currently exploring options for a sewer to service the more developed areas of Town.

Discussion

AP-85 Other Actions – 91.220(k)

Introduction

Actions planned to address obstacles to meeting underserved needs

Actions planned to foster and maintain affordable housing

Actions planned to reduce lead-based paint hazards

Actions planned to reduce the number of poverty-level families

Actions planned to develop institutional structure

Actions planned to enhance coordination between public and private housing and social service agencies

Discussion

Program Specific Requirements

AP-90 Program Specific Requirements – 91.220(l)(1,2,4)

Introduction

Community Development Block Grant Program (CDBG)
Reference 24 CFR 91.220(l)(1)

Projects planned with all CDBG funds expected to be available during the year are identified in the Projects Table. The following identifies program income that is available for use that is included in projects to be carried out.

1. The total amount of program income that will have been received before the start of the next program year and that has not yet been reprogrammed
2. The amount of proceeds from section 108 loan guarantees that will be used during the year to address the priority needs and specific objectives identified in the grantee's strategic plan
3. The amount of surplus funds from urban renewal settlements
4. The amount of any grant funds returned to the line of credit for which the planned use has not been included in a prior statement or plan.
5. The amount of income from float-funded activities

Total Program Income

Other CDBG Requirements

1. The amount of urgent need activities

Discussion

TOWN OF PARADISE
Council Agenda Summary
Date: April 12, 2016

Agenda No. 6(b)

ORIGINATED BY: Marc Mattox, Public Works Director / Town Engineer

REVIEWED BY: Lauren Gill, Town Manager

SUBJECT: Paradise Sewer Project Consultant Contract Award

COUNCIL ACTION REQUESTED:

1. Concur with staff's recommendation of Bennett Engineering Services to perform Alternatives Analysis, Feasibility Report and Special District Formation Services for the Paradise Sewer Project, and
2. Approve the attached Professional Services Agreement with Bennett Engineering Services and authorize the Town Manager and Town Mayor to execute, and
3. Authorize the Town Manager to execute additional work orders up to 15% of the contract amount.

Background:

The Town of Paradise currently relies upon over 11,000 individual septic systems to treat and disperse wastewater generated by residential and commercial land uses. The degree and intensity of use for each property in the community is limited to the capacity to safely dispose of wastewater on site.

As the Town has grown and evolved, the need for a better means of wastewater collection and treatment, especially in the commercial areas, has become more urgent. This is particularly true within the Town's more developed downtown and other commercial areas where septic system failures are increasing and available land for replacement leach fields is constrained, or non-existent.

The lack of a sewer system in the downtown has a twofold impact—both are very important local/regional drivers. The first is an impact on the area's economy and the second is on the environment.

If the economy in Paradise suffers, the regional economy suffers as well. Regional economic hubs, like the City of Chico, depend upon profitable local economies to be successful. Even in a healthy economy, many of the businesses in Paradise cannot afford the high cost of septic system repairs or replacement. There are many limitations imposed on businesses that affect their ability to increase their bottom line or create jobs. The creation of jobs provides regional cash flow and the potential for a better quality of life for area residents.

The lack of a viable sewer infrastructure is not only a detriment to the local and regional economy, but also poses an environmental threat to ground water-- another precious regional resource.

Over the last four decades - even before the Town's incorporation - the effects of wastewater from the Town's onsite septic systems have been studied as to their impacts on local streams. The early reports indicated that when carefully monitored and repaired onsite septic systems may represent a permanent solution for residential wastewater needs, but for the Town's more

densely populated areas onsite septic systems would because severe limitations and negatively affect streams. Several independent studies and reports have supported these claims and set the foundation for current and ongoing wastewater treatment and disposal solutions.

Based on these past reports and updated information, the Paradise Town Council considered three primary conceptual options for providing a community wastewater system for the downtown area and other commercial corridors within the Town of Paradise. The main purpose was to identify the most preferable wastewater solution and provide direction to staff regarding additional research and identification of steps toward the eventual establishment of a community wastewater system.

The economic recession and all of its ancillary effects deferred all progress on the proposed project. With economic indicators improving, and the Town's septic situation continually worsening, the Town has no choice but to move ahead with a wastewater solution for a special district.

On January 13, 2016, staff issued a Request for Proposals (RFP) utilizing formal consultant selection procedures per the California Government Code. The RFP state the scope of work for the Alternatives Analysis, Feasibility Report and Special District Formation Services which are needed, summarized below:

- Extensive public outreach efforts
- Formation of a Technical Advisory Committee
- Alternatives Analysis for the following potential wastewater solution
    - Option A – Localized wastewater treatment plant(s)
    - Option B – Surface water discharge location(s)
    - Option C – Direct Connection to the City of Chico Water Pollution Control Plant (WPCP)
    - Option D – Beneficial Reuse/Innovative Technology Solution
    - Option E – No Project
- Prepare a final feasibility report with extensive details on a preferred alternative, to be determined
- Assist the Town of Paradise in preparing a Special Assessment District
- Assist the Town of Paradise in securing funding for the environmental, design and construction of the preferred alternative

A full listing of the scope of work is included in the proposed Professional Services Agreement attached to this staff report.

Analysis:

By 4:00 PM on March 15, 2016, Town staff had received two responses to the RFP. The proposers and their sub-consultants are listed below:

1. Bennett Engineering Services
    a. Circlepoint – Public Outreach
    b. Holdrege & Kull – Geotechnical
    c. ICF – Environmental Services
    d. Cascade Economics – Socio-Economic Study
    e. Public Financial Management – District Formation and Financial Planning
    f. Jones Hall – Municipal Finance

2. Provost & Pritchard
    a. NorthStar Engineering
    b. Kearns & West – Public Outreach

c. Strategy Driver – Public Outreach
d. Holdrege & Kull – Geotechnical
e. Bartle Wells – District Formation and Financial Planning
f. CSU, Chico GIC – Geographic Information Systems
g. Carollo – City of Chico WPCP Capacity Analysis

Proposals received included cost estimates in a separate, sealed envelope to allow for a fair and objective evaluation of the submittals. A five-member evaluation committee was formed with to evaluate the proposals, including the following members:

Jody Jones, Town of Paradise, Town Mayor
Steve Culleton, Town of Paradise, Town Councilmember
Lauren Gill, Town of Paradise, Town Manager
Marc Mattox, Town of Paradise, Town Engineer
Ray Leftwich, City of Lincoln, City Engineer

The Committee received and ranked the proposals according to the criteria provided in the RFP and shown in Table 1, below.

Table 1: Criteria Weighting Table

No.	Evaluation Criteria	Total
1	Completeness of Response	Pass/Fail
2	Qualifications & Experience	75
3	Organization & Approach	75
4	Project Understanding	75
4	Scope of Services to be Provided	175
5	Detailed Schedule of Work	100
6	Conflict of Interest Statement	Pass/Fail
7	Contract Agreement	Pass/Fail
8	Cost Estimate (Separately Sealed)	Pass/Fail
9	Interviews	100
	TOTAL	**600**

Committee review of the proposals was performed independently. Average of the five proposal rankings are shown in Table 2.

Table 2: Average Proposal Scores

No.	Evaluation Criteria	Bennett Engineering	Provost & Pritchard
1	Completeness of Response	Pass/Fail	Pass/Fail
2	Qualifications & Experience	75	67.5
3	Organization & Approach	75	55.5
4	Project Understanding	72	69
5	Scope of Services to be Provided	157.5	161
6	Detailed Schedule of Work	88	96
7	Conflict of Interest Statement	Pass/Fail	Pass/Fail
8	Contract Agreement	Pass/Fail	Pass/Fail
9	Interviews	97.4	82.6
	TOTAL	**564.9**	**531.6**

After deliberations, the Evaluation Committee came to a consensus selection of Bennett Engineering Services for the proposed scope of work.

Cost proposals were unsealed with the following results:

Bennett Engineering Services	$299,158
Provost & Pritchard Consulting Group	$449,620

Evaluation of the cost proposals further justified the Committee's selection of Bennett Engineering Services. Their approach to the project perfectly aligns with the intention and objectives of the scope of work.

Following selection, staff negotiated an optional Project Implementation Plan with Bennett Engineering Services. This plan will further position the Town to advance whichever alternative is selected to the next phase of development. The final negotiated contract amount is $325,050.

Staff recommends Council consider awarding the contract, Attachment A, to Bennett Engineering Services to perform the specified Alternatives Analysis, Feasibility Report and Special District Formation Services.

Financial Impact:

Funding for this contract will be provided by a Small Community Wastewater Grant from the State Water Resources Control Board. Proposition 1, or the Water Quality, Supply, and Infrastructure Improvement Act of 2014 authorized $7.545 billion in general obligation bonds for water projects. The State Water Board administers Prop 1 funds for programs including wastewater. The Town has been awarded a grant of up to $500,000 for the Alternatives Analysis, Feasibility Report and Special District Formation services to be provided by our selected contractor. The proposed contract amount is $325,050 and staff recommends budgeting a 15% contingency for the contract to address potential changes and scope needs. The total contract plus contingency for this project is $373,807.

Since this is 100% grant funded, there will be no direct impact to the General Fund. Timing of reimbursements will be managed closely to minimize impacts to available resources.

Attachments:

1. Contract 16-09, Bennett Engineering Services Professional Services Agreement

THIS AGREEMENT (the "Agreement") is made and entered into this 13th day of April 2016, by and between the TOWN OF PARADISE (herein "Town"), a municipal corporation and Bennett Engineering Services ("Consultant"). The parties hereto agree as follows:

1.0 SERVICES OF CONSULTANT

1.1 Scope of Services. In compliance with all terms and conditions of this Agreement, the Consultant shall provide those services specified in the "Scope of Services" attached hereto as Exhibit "A" and incorporated herein by this reference. As a material inducement to the Town entering into this Agreement, Consultant represents and warrants that Consultant is a provider of first-class work and services and that Consultant is experienced in performing all the professional services set forth in the Scope of Services and the environmental review work and services contemplated herein as required by the California Environmental Quality Act (Pub Res. Code §21000-21178.1) ("CEQA"). Consultant covenants that it shall use its best efforts in performing the work and services required hereunder and that all work product will be of good quality, fit for the purpose intended.

1.2 Consultant's Proposal. The Scope of Services shall include Consultant's proposal ("Proposal") which shall be incorporated herein by this reference as though fully set forth herein. In the event of any inconsistency between the terms of the Proposal and this Agreement, the terms of this Agreement shall govern.

1.3 Compliance with Law. All Consultant's services rendered under this Agreement shall be provided in accordance with all ordinances, resolutions, statutes, rules and regulations of the Town and any federal, state, or local governmental agency having jurisdiction in effect at the time service is performed.

1.4 Licenses, Permits, Fees & Assessment. Consultant and its subconsultants shall obtain at their sole cost and expense any licenses, permits, and approvals as may be required by law for the performance of the services required by this Agreement. Consultant and its subconsultants shall have the sole obligation to pay for any fees, assessments and taxes, plus applicable penalties and interest, which may be imposed by law and arise from or are necessary for their performance of the services required by this Agreement. Consultant shall indemnify, defend and hold harmless the Town against any such fees, assessments, taxes, penalties, or interest levied, assessed, or imposed against Town.

1.5 Familiarity with Work. By executing this Agreement, Consultant warrants that Consultant (a) has thoroughly investigated and considered the Scope of Services, (b) has carefully considered how the services should be performed, and (c) fully understands the scope of the activities necessary to provide the services under this Agreement for the proposed Paradise Sewer Project ("Project"). Consultant warrants that Consultant will investigate the locations of the proposed Project and is or will be fully acquainted with the existing conditions of such locations as necessary for the services under this Agreement. Should Consultant discover any latent or unknown conditions, which will materially affect the performance of the services under this Agreement, Consultant shall immediately inform the Town of such fact and shall not proceed, except at Consultant's risk until written instructions are received from the Town Engineer and the Town Manager.

1.6 Further Responsibilities of Parties. Both parties agree to use reasonable care and diligence to perform their respective obligations under this Agreement. Both parties agree to use their best efforts to execute all instruments, prepare all documents, and take all actions as may be reasonably necessary to carry out the purposes of this Agreement. Unless hereafter specified, neither party shall be responsible for the services of the other.

1.7 Additional Services. The Town shall have the right at any time during the Consultant's performance of the services, without invalidating this Agreement, to order extra work or make changes by altering, adding to or deducting from Consultant's services. No such extra work may be undertaken unless a written order is first given by the Public Works Director/Town Engineer and the Town Manager to the Consultant, incorporating therein any adjustment in (i) the Contract Sum, and/or (ii) the time to perform this Agreement, which said adjustments are subject to the written approval of the Consultant. Any change in compensation of the Contract Sum, or in the time to perform, shall be first approved in writing by the Town Manager. It is expressly understood by Consultant that the provisions of this section shall not apply to services specifically set forth in the Scope of Services or reasonably contemplated therein. Consultant hereby acknowledges that it accepts the risk that the services to be provided pursuant to the Scope of Services may be more costly or time consuming than Consultant anticipates and that Consultant shall not be entitled to additional compensation therefor except for additional meetings at Town's request.

2.0 COMPENSATION.

2.1 Contract Sum. For the services rendered pursuant to this Agreement, the Consultant shall be compensated in accordance with the "Schedule of Compensation" attached hereto as Exhibit "B" and incorporated herein by this reference. Total compensation of Consultant shall not exceed three hundred twenty-five thousand fifty dollars ($325,050.00) (the "Contract Sum"), except as provided in Section 1.7.

Consultant's compensation and its subconsultants' compensation shall not exceed the amounts set forth in Exhibit "B" for each task. Consultant shall submit a monthly status report and billing to Public Works Director/Town Engineer.

3.0 PERFORMANCE SCHEDULE

3.1 Time of Essence. Time is of the essence in the performance of this Agreement.

3.2 Schedule of Performance. Consultant shall commence the services pursuant to this Agreement upon receipt of a written notice to proceed from the Town and shall perform all services within the time period(s) established in the "Schedule of Performance" attached hereto as Exhibit "C" and incorporated herein by this reference.

3.3 Force Majeure. The time period(s) specified in the Schedule of Performance for performance of the services rendered pursuant to this Agreement shall be extended as a result of any delays due to unforeseeable causes beyond the control and without the fault or negligence of the Consultant, including, but not restricted to, acts of God or nature or of the public enemy, fires, earthquakes, floods, epidemics, quarantine restrictions, riots, wars, litigation, and/or acts of any governmental agency, including Town only if Consultant shall within ten (10) days of the commencement of such delay notify Town in writing of the causes of the delay. Town shall ascertain the facts and the extent of delay, and extend the time for performing the services for the period of the enforced delay when and if in the reasonable judgment of Town such delay is justified. Town's determination shall be fi

and conclusive upon the parties to this Agreement. In no event shall Consultant be entitled to recover damages against Town for any delay in the performance of this Agreement, however caused, Consultant's sole remedy being extension of the Agreement pursuant to this Section 3.3.

3.4 Term. Unless earlier terminated in accordance with Section 7.6 of this Agreement, this Agreement shall continue in full force and effect until completion of the services, but in no event exceeding two (2) years from the date of this Agreement.

4.0 COORDINATION OF WORK

4.1 Representative of Consultant. Only the persons or entities designated in Exhibit "A" shall perform the services described with their names. The foregoing persons or entities shall not be replaced by Consultant without the prior written approval of Town.

4.2 Contract Officers. The Contract Officers shall be the Public Works Director/Town Engineer and the Town Manager. It shall be Consultant's responsibility to assure that the Contract Officers are kept informed of the progress of the performance of the services, and Consultant shall refer any decisions which must be made by Town to the Contract Officers.

4.3 Prohibition Against Subcontracting or Assignment. The experience, knowledge, capability, and reputation of Consultant, its principals, and employees and subconsultants were a substantial inducement for Town to enter into this Agreement. Therefore, Consultant shall not contract with any other person or entity, other than those shown in Exhibit "A", to perform in whole or in part the services required under this Agreement without the prior written approval of Town. In addition, neither this Agreement nor any interest herein may be transferred, assigned, conveyed, hypothecated, or encumbered voluntarily or by operation of law, whether for the benefit of creditors or otherwise, without the prior written approval of Town. Transfers restricted hereunder shall include the transfer to any person or group of persons acting in concert of more than twenty-five percent (25%) of the present ownership and/or control of Consultant, taking all transfers into account on a cumulative basis. In the event of any such unapproved transfer, including any bankruptcy proceeding, this Agreement shall, at Town's sole election, be void. No approved transfer shall release Consultant of any liability hereunder without the prior written approval of Town.

4.4 Independent Consultant. Consultant shall perform all services required herein as an independent contractor of Town and shall remain at all times as to Town an independent contractor with only such obligations as are consistent with that role. Consultant shall not at any time or in any manner represent that it or any of its agents, employees or subconsultants are agents or employees of Town. Town shall not in any way or for any purpose become or be deemed to be a partner of Consultant in its business or otherwise or a joint venturer or a member of any joint enterprise with Consultant.

5.0 INSURANCE, INDEMNIFICATION AND BONDS

5.1 Insurance. In accordance with Exhibit "D" Insurance Requirements, Consultant shall procure and maintain insurance, at its sole cost and expense, in a form and content satisfactory to Town, during the entire term of this Agreement.

5.2 Indemnification. Consultant agrees to indemnify Town, its officers, volunteers, agents, and employees against, and shall hold them and each of them harmless from any and all actions, suits, claims, damages to persons or property, losses, costs, penalties, obligations, errors, omissions, or liabilities (herein "claims or liabilities") that may be asserted or claimed by any person, firm, or en

arising out of or in connection with the negligent performance of the work, services, operations, or activities of Consultant, its agents, employees, subconsultants, or invitees relating to this Agreement, or arising from the misconduct, negligent acts or omissions of Consultant hereunder, or arising from Consultant's negligent performance of or failure to perform any term, provision, covenant, or condition of this Agreement, whether or not there is concurrent passive negligence of Town, its officers, agents or employees, who are directly responsible to Town and in connection with such indemnification:

(a) Consultant shall defend any legal action or actions filed in connection with any of such claims or liabilities and shall pay all costs and expenses, including legal costs and attorneys' fees incurred in connection with such defense.

(b) Consultant shall promptly pay any court judgment against Town, its officers, agents, or employees for any such claims or liabilities arising out of or in connection with the negligent performance of or failure to perform such work, operations, or activities of Consultant hereunder; and Consultant agrees to save and hold Town, its officers, agents, and employees harmless therefrom.

(c) In the event Town, its officers, agents, or employees are made a party to any action or proceeding filed or prosecuted against Consultant for such damages or other claims arising out of or in connection with the negligent performance of or failure to perform the work operation, or activities of Consultant hereunder, Consultant agrees to pay to Town, its officers, agents or employees any and all costs and expenses incurred by Town, its officers or employees in such action or proceeding.

(d) Although Town has a duty to the public to independently review any consultant prepared negative declaration or environmental impact report (EIR), that duty to the public, or the breach thereof, shall not relieve Consultant of the duties under this section nor of the warranties set forth in Section 1.1.

5.3 Sufficiency of Insurer. Insurance required by this Agreement shall be satisfactory only if issued by companies qualified to do business in California, rated "A" or better in the most recent edition of Best Rating Guide, the Key Rating Guide or in the Federal Register and only if they are of a financial category Class VII or better.

6.0 RECORDS AND REPORTS

6.1 Reports. Consultant shall prepare and submit to the Contract Officers a monthly report concerning the performance of the services required by this Agreement or more often if the Contract Officers deem it necessary. Consultant acknowledges that the Town is greatly concerned about the cost of work and services to be performed pursuant to this Agreement. For this reason, Consultant agrees that if Consultant becomes aware of any facts, circumstances, techniques, or events that may or will materially increase or decrease the cost of the work or services under this Agreement, Consultant shall promptly notify the Contract Officers in writing of such fact, circumstance, technique or event.

6.2 Records. Consultant shall keep, and require subconsultants to keep, such books and records as shall be necessary to perform the services required by this Agreement and enable the Contract Officers to evaluate the performance of such services. The Contract Officers shall have full and free access to such books and records at all times during normal business hours of Town, including the right to inspect, copy, audit, and make records and transcripts from such records. Such records shall be maintained for a period of three (3) years following completion of the services hereunder, and the Town shall have access to such records in the event any audit is required.

6.3 Ownership of Documents. All studies, drawings, specifications, reports, records, documents and other materials prepared by Consultant, Consultant's employees, subconsultants, and agents in the performance of this Agreement shall be the property of Town and shall be delivered to Town upon request of the Consultant Officers or upon the termination of this Agreement, and Consultant shall have no claim for further employment or additional compensation as a result of the exercise by Town of its full rights of ownership of the documents and materials hereunder. Any use of such complete documents for other projects and/or use of uncompleted documents without specific written authorization by the Consultant shall be at Town's sole risk and without liability to Consultant. Consultant and Consultant's subconsultants may retain copies of such documents for their own use. Consultant shall have an unrestricted right to use the concepts embodied therein. All subconsultants shall provide for assignment to Town of any documents or materials prepared by them, and in the event Consultant fails to secure such assignment, Consultant shall indemnify Town for all damages resulting therefrom.

6.4 Release of Documents. The studies, drawings, specifications, reports, records, documents, and other materials prepared by Consultant in the performance of services under this Agreement shall not be released publicly without the prior written approval of the Contract Officers.

7.0 ENFORCEMENT OF AGREEMENT

7.1 California Law. This Agreement shall be construed and interpreted both as to validity and to performance of the parties in accordance with the laws of the State of California. Legal actions concerning any dispute, claim, or matter arising out of or in relation to this Agreement shall be instituted in the Superior Court of the County of Butte, State of California, or another appropriate court in such county, and Consultant covenants and agrees to submit to the personal jurisdiction of such court in the event of such action.

7.2 Retention of Funds. Consultant hereby authorizes Town to retain from any amount payable to Consultant (whether or not arising out of this Agreement) (i) any amounts the payment of which may be in dispute hereunder or which are necessary to compensate Town for any losses, costs, liabilities, or damages suffered by Town, and (ii) all amounts for which Town may be liable to third parties, by reason of Consultant's acts or omissions in performing or failing to perform Consultant's obligation under this Agreement. In the event that any claim is made by third party, the amount or validity of which is disputed by Consultant, or any indebtedness shall exist which shall appear to be the basis for a claim of lien, Town may withhold from any payment due, without liability for interest because of such withholding, an amount sufficient to cover such claim. The failure of Town to exercise such right to retain or to withhold shall not, however, affect the obligations of the Consultant to insure, indemnify, and protect Town as elsewhere provided herein.

7.3 Waiver. No delay or omission in the exercise of the right or remedy by a non-defaulting party on any default shall impair such right or remedy or be construed as a waiver. Any waiver by either party of any default shall be in writing and shall not be a waiver of any other default concerning the same and any other provision of this Agreement.

7.4 Rights and Remedies are Cumulative. Except with respect to rights and remedies expressly declared to be exclusive in this Agreement, the rights and remedies of the parties are cumulative and the exercise by either party of one or more of such rights and remedies shall not preclude the exercise by it, at the same or different times, of any other rights or remedies for the same default or any other default by the other party.

7.5 Legal Action. In addition to any other rights or remedies, either party may take legal action, in law or in equity, to cure, correct, or remedy any default, to recover damages for any default, to compel specific performance of this Agreement, to obtain declaratory or injunctive relief, or to obtain any other remedy consistent with the purposes of this Agreement.

7.6 Termination Prior to Expiration of Term. This section shall govern any termination of this Agreement except as specifically provided in the following section for termination for cause. Town reserves the right to terminate this Agreement at any time, with or without cause, upon thirty (30) days written notice to Consultant, except that where termination is due to the fault of the Consultant, the period of notice may be such shorter time as may be determined by the Contract Officers. Upon receipt of any notice of termination Consultant shall immediately cease all services hereunder, except such as may be specifically approved by the Contract Officers. Consultant shall be entitled to compensation for all services rendered prior to receipt of the notice of termination and for any services authorized by the Contract Officers thereafter in accordance with the Schedule of Compensation or such as may be approved by the Contract Officers, except as provided in Section 7.2.

7.7 Termination for Default of Consultant. If termination of this Agreement is due to the failure of the Consultant to fulfill its obligations under this Agreement, Town may take over the work and perform the same to completion by contract or otherwise, and the Consultant shall be liable to the extent that the total cost for completion of the services required hereunder exceeds the compensation herein stipulated (provided that the Town shall use reasonable efforts to mitigate such damages), and Town may withhold any payments to the Consultant for the purpose of setoff or partial payment of the amounts owed Town.

7.8 Attorneys' Fees. If either party to this Agreement is required to initiate or defend or is made a party to any action or proceeding in any way connected with this Agreement, the prevailing party in such action or proceeding, in addition to any other relief which may be granted, whether legal or equitable, shall be entitled to reasonable attorneys' fees. Attorneys' fees shall include attorneys' fees on any appeal, and in addition a party entitled to attorney's fees shall be entitled to all other reasonable costs for investigating such action, taking depositions and discovery, and all other necessary costs the court allows which are incurred in such litigation. All such fees shall be deemed to have accrued on commencement of such action and shall be enforceable whether or not such action is prosecuted to judgment.

8.0 TOWN OFFICERS AND EMPLOYEES: NON-DISCRIMINATION

8.1 Non-Liability of Town Officers and Employees. No officer or employee of the Town shall be personally liable to the Consultant, or any successor in interest, in the event of any default or breach by the Town or for any amount that may become due to the Consultant or to its successor, or for breach of any obligation of the terms of this Agreement.

8.2 Conflict of Interest. No officer or employee of the Town shall have any financial interest, direct or indirect, in this Agreement nor shall any such officer or employee participate in any decision relating to the Agreement which effects his or her financial interest or the financial interest of any corporation, partnership or association in which he or she is, directly or indirectly, interested, in violation of any state statute or regulation. The Consultant warrants that it has not paid or given and will not pay or give any third party any money or other consideration for obtaining this Agreement.

9.0 MISCELLANEOUS PROVISIONS

9.1 Notice. Any notice, demand, request, document, consent, approval, or communication either party desires or is required to give to the other party or any other person shall be in writing and either served personally or sent by prepaid, first class mail, in the case of Town, to the Public Works Director/Town Engineer, Town of Paradise, 5555 Skyway, Paradise, CA 95969, phone number (530) 872-6291, and in the case of Consultant to Trin Campos, Bennett Engineering Services, 1082 Sunrise Avenue, Suite 100, Roseville, CA 95661. Either party shall notify the other party of any change of address in writing. Notice shall be deemed communicated at the time personally delivered or in seventy-two (72) hours from the time of mailing if mailed as provided in this Section.

9.2 Interpretation. The terms of this Agreement shall be construed in accordance with the meaning of the language used and shall not be construed for or against either party by reason of the authorship of this Agreement or any other rule of construction which might otherwise apply.

9.3 Integration: Amendment. It is understood that there are no oral agreements between the parties hereto affecting this Agreement and this Agreement supersedes and cancels any and all previous negotiations, arrangements, agreements, and understandings, if any, between the parties, and none shall be used to interpret this Agreement. This Agreement may be amended at any time by the mutual consent of the parties by an instrument in writing.

9.4 Severability. In the event that any one or more of the phrases, sentences, clauses, paragraphs, or sections contained in this Agreement shall be declared invalid or unenforceable by a valid judgment or decree of a court of competent jurisdiction, such invalidity or unenforceability shall not affect any of the remaining phrases, sentences, clauses, paragraphs or sections of this Agreement which are hereby declared as severable and shall be interpreted to carry out the intent of the parties hereunder unless the invalid provision is so material that its validity deprives either party of the basic benefit of their bargain or renders this Agreement meaningless.

9.5 Corporate Authority. The persons executing this Agreement on behalf of the parties hereto warrant that (i) such party is duly organized and existing, (ii) they are duly authorized to execute and deliver this Agreement on behalf of such party, (iii) by so executing this Agreement, such party is formally bound to the provisions of this Agreement, and (iv) the entering into this Agreement does not violate any provision of any other Agreement to which such party is bound.

IN WITNESS WHEREOF, the parties have executed and entered into this Agreement as the date first written above.

CONSULTANT	**TOWN OF PARADISE**
By: _____	By:_____ Lauren M. Gill, Town Manager
Title:_____	
Address: _____	
_____	

APPROVED AS TO FORM: **ATTEST:**

By:_____ By:_____
Dwight L. Moore, Town Attorney Joanna Gutierrez, Town Clerk
:

EXHIBIT “A” SCOPE OF SERVICES

EXHIBIT A: Scope of Services

To: **AGREEMENT BETWEEN CLIENT AND CONSULTANT**

Client:	Town of Paradise
Consultant:	Bennett Engineering Services Inc
Project:	Paradise Sewer Project – Alternatives Analysis, Feasibility Report, and Special District Formation Services
Date:	April 5, 2016

BEN|EN
TRUSTED ENGINEERING ADVISORS
Bennett Engineering Services
1082 Sunrise Avenue, Suite 100
Roseville, California 95661
T 916.783.4100
F 916.783.4110
www.ben-en.com

Services to be provided:

BEN|EN will provide all services to complete Alternatives Analysis, Feasibility Report, and Special District Formation Services for the Paradise Sewer Project.

Key Assumptions:

1. A Technical Advisory Committee will be formed with Town Staff assistance.

TASK 1. Project Management / Administration

Subtask 1.1. Project Development Team and Workplan

BEN|EN, in coordination with Town Project Manager, will develop the Project Development Team (PDT) with representatives from sub-consultants and appropriate Town staff. The PDT will finalize the scope of work, schedule (MS Project) and budget (Excel) workplan based on feedback from the Town Project Manager. The workplan will identify all work tasks, staffing plan, and budget assigned by task. We will identify and manage the critical path elements to keep project delivery on schedule.

Deliverables:

- *Project workplan – Project scope of work, staffing plan, budget plan, and schedule*

Subtask 1.2. Project Team Coordination Meetings

BEN|EN's Project Manager will hold regular project team coordination and status meetings, prepare agenda, prepare meeting summary and summarize action items. Meetings will be held once a month and team phone conferences as needed. Assume total of ten (10) meetings at the Town office.

Deliverables:

- *Meeting notices, agendas, minutes, and sign-in-sheets.*

Subtask 1.3. Monthly Invoices and Schedule

A draft invoice will be submitted for Town approval prior to submittal of the first invoice. BEN|EN will prepare and submit monthly invoices to the Town. Invoices will include employee rates, expenses per task, and a copy of any sub-consultant invoices.

BEN|EN will provide a project schedule and updates, using Microsoft Project, showing the activities and milestones outlined in our project scope. The activities will show begin and end dates, duration and dependency on other tasks. The schedule will be refined and maintained on a regular basis and as decisions are made throughout the life of the project. We will discuss issues that may affect the project design, budget or schedule.

Deliverables:

- *Monthly Invoices and Microsoft Project Schedule & Updates (Assume 15 months duration)*

Subtask 1.4. Quality Control

BEN|EN will provide a quality control reviews and senior technical resources necessary to ensure that project deliverables are complete and meet the Town's requirements. QC reviews will be conducted by experienced senior staff and documented using a review form transmittal indicating the reviewer name, date of review, and the resolution of any comments. This task includes providing quality control reviews for all key deliverables, including Alternatives Assessment, Draft Report, Final Report, Assessment District Formation Memorandum, and Funding Analysis & Options Memorandum.

Deliverables:

- *Quality Control Reviews and Documentation*

TASK 2. Public Outreach / Technical Advisory Committee (TAC)

Subtask 2.1. Public Outreach Plan

Subtask 2.1.a Engagement Survey

BEN|EN and subconsultants will draft survey questions, Deploy Survey, and Summarize results for distribution.

Subtask 2.1.b Scoping Workshop

BEN|EN team will prepare agenda and attend a scoping workshop with the TAC. Two meetings assumed.

Subtask 2.1.c District Formation Meetings

BEN|EN team will prepare agenda and attend a scoping workshop with the TAC. Two meetings assumed.

Subtask 2.1.d Project Factsheets and Presentations

BEN|EN team will prepare project factsheets documenting options and progress for public distribution. (One Factsheet and 6 postcards assumed). BEN|EN team will prepare presentations in MS PowerPoint for Town Staff and attend City Council Meetings as required. Five presentation updates and council meeting attendance are assumed.

Subtask 2.1.e Bi-monthly Town Council Updates

Attendance and support for five Town Council updates are assumed.

Deliverables:

- *Engagement Survey Summary, Scoping Workshop Agenda/Notes, Special District Formation Agenda/Notes, Project Factsheets (1), Council Meeting Presentations (5)*

Subtask 2.2. Technical Advisory Council (TAC) Formation and Meetings

Subtask 2.2.a Assemble TAC Members

BEN|EN Team will work with Town Staff to contact and recruit members for the TAC and will coordinate meeting scheduling and review materials for comment. The team will also collect and document TAC feedback for the Project.

Subtask 2.2.b Monthly Committee Meetings

BEN|EN Team will support the monthly TAC Meetings. 10 meetings are assumed. These meetings will be open to the public, but public comment and feedback to the TAC and delivery team will only be documented at the informational public meetings and from the engagement survey.

Subtask 2.3. Informational Public Meetings

BEN|EN Team will coordinate venues and materials for Public Outreach Meetings and will document feedback received. 5 public meetings are assumed.

TASK 3. Alternatives Analysis

An Alternatives Analysis & Feasibility Report (Report) will be prepared and submitted for review. A Draft report will be prepared for review by the Town, Butte County, City of Chico and the State Regional Water Quality Control Board.

Subtask 3.1. Draft Alternative Analysis

BEN|EN will prepare a Draft Alternatives Analysis that will evaluate five options for Sewer Service for the Town of Paradise commercial corridors. Options will include:

A. Localized Wastewater Treatment Plant with effluent land application

B. Localized Wastewater Treatment Plant with surface water discharge location

C. Regional connection to the City of Chico Water Pollution Control Plant

D. Wastewater Treatment with beneficial reuse

E. No Project

TASK 4. Draft Feasibility Report

Subtask 4.1. Draft Feasibility Report and Options Screening

BEN|EN with prepare a Draft Report that includes a project introduction, executive summary, project planning area description including environmental resources, growth and population trends, economic and social factors, project need, flows and loads for treatment, waste discharge and treatment requirement. Project options will also include an assessment of greenhouse gas emissions, advantages and disadvantages, and cost estimates.

TASK 5. Final Draft Feasibility Report and Preferred Option

Subtask 5.1. Final Draft Feasibility Report and Preferred Option

BEN|EN will prepare the Final Draft Report that includes an Options Analyzed and Eliminated sub section. The Final Draft Report will contain the preferred option system layout, treatment process, total project cost estimate including contingencies, operation and maintenance costs, debt elements, reserves, capital improvement costs with future replacements, Proposition 218 requirements, options for fee collection (fee vs. assessment vs. both), discussion of commercial entities to be served, discussion of public involvement in the process, discussion of connection fees, discussion of inter-agency service agreements, and an implementation schedule. The final report will also include conclusions and recommendations for moving the preferred project forward.

TASK 6. Special Assessment District Formation

Subtask 6.1. Research and provide procedures for a Special Assessment Wastewater District

BEN|EN will define the district boundary and the wastewater flows and define individual owner costs. The BEN|EN Team will define the legal requirements and funding options for special assessment district formation. The BEN|EN Team will prepare initial documents, and notices for stakeholders as well as the engineer's report or costs for formation of the District.

TASK 7. Funding Analysis and Options

Subtask 7.1. Research Options for Project Funding

BEN|EN will evaluate the use of Grant Funds, SRF low-interest loans, and tax options for funding the preferred option with an emphasis on maximizing grants and SRF loans to

the extent possible. BEN|EN will define the next steps of the project for project definition, environmental permitting, and design.

TASK 8. Project Implementation Plan

The following tasks will be provided by the BEN|EN to outline the next steps and assist the Town of Paradise in moving the project to the next phase of forming the district and bringing funding options forward for design, construction, and start-up of the new sewer system. BEN|EN and the Town will re-evaluate this scope based on the preferred option. The work scope, schedule, and budget will be provided for the following subtasks will be provided.

Subtask 8.1. Grant and Loan Funding Application

BEN|EN will write a scope, schedule, and develop a level of effort and budget for the grant and loan funding applications that may be available to help the Town fund the preferred project.

Subtask 8.2. Assessment District Formation

BEN|EN, in association with Jones-Hall, will write a scope, schedule, and develop a level of effort and budget for an Assessment District Formation. BEN|EN will outline the steps required for moving forward with the District formation including the bond sale process. Note that the legal fees for the actual bond counsel and sales are based on a percentage basis of the total amount of bond value sold and not on a time and material basis.

Subtask 8.3. Environmental Documentation and Studies

BEN|EN, in association with ICF, will write a scope, schedule, and budget to develop the environmental permit applications (NEPA, CEQA) based on the feasibility report and the preferred project option. The scope will also outline the specific other permits that will likely be required for the preferred option to move into bid and construction.

Subtask 8.4. Preliminary and Final Design

BEN|EN will write a scope, schedule, and budget for design of the preferred option. The scope will include 30% design (to support environmental permitting), 60%, 90%, and bid package documents, as well as engineering services during construction.

Subtask 8.5. ROW definition and appraisal

This subtask will depend greatly on the nature of the preferred option. BEN|EN, in association with Bender-Rosenthal, will write a scope, schedule, and budget for the ROW acquisition process that will include the preparation of plats and legal descriptions, field survey, property valuation, and acquisition on behalf of the Town of Paradise Special Sewer District or Joint Powers Authority (as required).

DELIVERABLES:

Kick-off meeting agenda and minutes
Up to 10 project meeting agendas and minutes
Project Schedule
Monthly progress reports
Five copies and an electronic (PDF) version of the Draft Alternatives Analysis and Feasibility Report
Five copies and an electronic (PDF) version of the Final Alternatives Analysis and Feasibility Report
Presentations for up to 5 Town Council Meetings
Materials and feedback documentation for 5 public information meetings/workshops

ASSUMPTIONS:

- The Town's Bond Counsel effort will be paid directly by the Town

EXHIBIT “B” CONSULTANT COMPENSATION

Cost Estimate

Client: Town of Paradise

Consultant: Bennett Engineering Services Inc

Project: Paradise Sewer Project

Date: April 6, 2016

Fee Estimate	Principal Engineer 225 $/hr		Project Manager IV 198 $/hr		Engineer V 186 $/hr		Engineer IV 174 $/hr		Engineer III 162 $/hr		Engineering Tech II 114 $/hr		Engineering Intern 64 $/hr		CAD Designer III 138 $/hr		Administrative 70 $/hr		BEN|EN Subtotal		MISC. EXPENSES	Geotech - H&K	Public Outreach - Circlepoint	District Formation - Jones Hall	Finance - PFM	Environmental - ICF	ROW Bender Rosenthall	Economics - Cascade	TOTAL
	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost		Contract	Contract	Contract	Contract	Contract	Contract	Contract	
Task 1 Project Management/Administration																													
1.1 - PDT and Workplan	hrs	$0	4 hrs	$792	hrs	$0	hrs	$0	6 hrs	$972	hrs	$0	hrs	$0	hrs	$0	2 hrs	$140	12 hrs	$1,904	$100	$0	$0	$0	$0	$0	$0	$0	$2,004
1.2 - Project Team Coordination Meetings (10)	20 hrs	$4,500	10 hrs	$1,980	hrs	$0	hrs	$0	10 hrs	$1,620	hrs	$0	hrs	$0	hrs	$0	hrs	$0	40 hrs	$8,100	$410	$0	$0	$0	$0	$0	$0	$0	$8,510
1.3 - Monthly Invoices, Status Reports, and Schedule	hrs	$0	15 hrs	$2,970	hrs	$0	hrs	$0	30 hrs	$4,860	hrs	$0	hrs	$0	hrs	$0	30 hrs	$2,100	75 hrs	$9,930	$500	$0	$0	$0	$0	$0	$0	$0	$10,430
1.4 - Quality Control	hrs	$0	hrs	$0	32 hrs	$5,952	hrs	$0	hrs	$0	hrs	$0	hrs	$0	4 hrs	$552	hrs	$0	36 hrs	$6,504	$330	$0	$0	$0	$0	$0	$0	$0	$6,834
Subtotal	**20 hrs**	**$4,500**	**29 hrs**	**$5,742**	**32 hrs**	**$5,952**	**hrs**	**$0**	**46 hrs**	**$7,452**	**hrs**	**$0**	**hrs**	**$0**	**4 hrs**	**$552**	**32 hrs**	**$2,240**	**163 hrs**	**$26,438**	**$1,340**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$27,778**
Task 2 Public Outreach																													
2.1 - Public Outreach Plan	2 hrs	$450	hrs	$0	hrs	$0	hrs	$0	6 hrs	$972	hrs	$0	hrs	$0	hrs	$0	hrs	$0	8 hrs	$1,422	$70	$0	$73,025	$0	$0	$0	$0	$0	$74,517
2.2 - TAC (5 Meetings)	10 hrs	$2,250	4 hrs	$792	hrs	$0	hrs	$0	15 hrs	$2,430	5 hrs	$570	hrs	$0	hrs	$0	5 hrs	$350	39 hrs	$6,392	$320	$0	$2,300	$0	$0	$0	$0	$0	$9,012
2.3 - Informational Public Meetings (5)	6 hrs	$1,350	4 hrs	$792	hrs	$0	hrs	$0	15 hrs	$2,430	5 hrs	$570	hrs	$0	hrs	$0	5 hrs	$350	35 hrs	$5,492	$270	$0	$0	$0	$0	$0	$0	$0	$5,762
Subtotal	**18 hrs**	**$4,050**	**8 hrs**	**$1,584**	**hrs**	**$0**	**hrs**	**$0**	**36 hrs**	**$5,832**	**10 hrs**	**$1,140**	**hrs**	**$0**	**hrs**	**$0**	**10 hrs**	**$700**	**82 hrs**	**$13,306**	**$660**	**$0**	**$75,325**	**$0**	**$0**	**$0**	**$0**	**$0**	**$89,291**
Task 3 Alternatives Analysis																													
3.1 - Draft Alternatives Analysis	10 hrs	$2,250	hrs	$0	8 hrs	$1,488	hrs	$0	24 hrs	$3,888	60 hrs	$6,840	24 hrs	$1,536	8 hrs	$1,104	2 hrs	$140	136 hrs	$17,246	$860	$7,475	$0	$0	$0	$37,030	$0	$0	$62,611
Subtotal	**10 hrs**	**$2,250**	**hrs**	**$0**	**8 hrs**	**$1,488**	**hrs**	**$0**	**24 hrs**	**$3,888**	**60 hrs**	**$6,840**	**24 hrs**	**$1,536**	**8 hrs**	**$1,104**	**2 hrs**	**$140**	**136 hrs**	**$17,246**	**$860**	**$7,475**	**$0**	**$0**	**$0**	**$37,030**	**$0**	**$0**	**$62,611**
Task 4 Draft Feasability Report																													
4.1 - Draft Feasibility Report and Options Screening	12 hrs	$2,700	hrs	$0	6 hrs	$1,116	hrs	$0	32 hrs	$5,184	80 hrs	$9,120	hrs	$0	hrs	$0	4 hrs	$280	134 hrs	$18,400	$920	$0	$0	$0	$0	$0	$0	$10,350	$29,670
Subtotal	**12 hrs**	**$2,700**	**hrs**	**$0**	**6 hrs**	**$1,116**	**hrs**	**$0**	**32 hrs**	**$5,184**	**80 hrs**	**$9,120**	**hrs**	**$0**	**hrs**	**$0**	**4 hrs**	**$280**	**134 hrs**	**$18,400**	**$920**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$10,350**	**$29,670**
Task 5 Final Feasability / Reccomendations Report																													
5.1 - Final Draft Feasibility Report and Preferred Option	8 hrs	$1,800	hrs	$0	8 hrs	$1,488	16 hrs	$2,784	40 hrs	$6,480	80 hrs	$9,120	24 hrs	$1,536	32 hrs	$4,416	4 hrs	$280	212 hrs	$27,904	$1,400	$0	$0	$0	$0	$0	$0	$0	$29,304
Subtotal	**8 hrs**	**$1,800**	**hrs**	**$0**	**8 hrs**	**$1,488**	**16 hrs**	**$2,784**	**40 hrs**	**$6,480**	**80 hrs**	**$9,120**	**24 hrs**	**$1,536**	**32 hrs**	**$4,416**	**4 hrs**	**$280**	**212 hrs**	**$27,904**	**$1,400**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$29,304**
Task 6 Special Assessment District Formation																													
6.1 - Special Assessment Wastewater District	10 hrs	$2,250	hrs	$0	6 hrs	$1,116	hrs	$0	24 hrs	$3,888	32 hrs	$3,648	hrs	$0	hrs	$0	2 hrs	$140	74 hrs	$11,042	$550	$0	$0	$5,750	$0	$0	$0	$0	$17,342
Subtotal	**10 hrs**	**$2,250**	**hrs**	**$0**	**6 hrs**	**$1,116**	**hrs**	**$0**	**24 hrs**	**$3,888**	**32 hrs**	**$3,648**	**hrs**	**$0**	**hrs**	**$0**	**2 hrs**	**$140**	**74 hrs**	**$11,042**	**$550**	**$0**	**$0**	**$5,750**	**$0**	**$0**	**$0**	**$0**	**$17,342**
Task 7 - Funding Analysis & Options																													
7.1 - Research Options for Project Funding	4 hrs	$900	hrs	$0	6 hrs	$1,116	hrs	$0	32 hrs	$5,184	8 hrs	$912	hrs	$0	hrs	$0	2 hrs	$140	52 hrs	$8,252	$410	$0	$0	$0	$34,500	$0	$0	$0	$43,162
Subtotal	**4 hrs**	**$900**	**hrs**	**$0**	**6 hrs**	**$1,116**	**hrs**	**$0**	**32 hrs**	**$5,184**	**8 hrs**	**$912**	**hrs**	**$0**	**hrs**	**$0**	**2 hrs**	**$140**	**52 hrs**	**$8,252**	**$410**	**$0**	**$0**	**$0**	**$34,500**	**$0**	**$0**	**$0**	**$43,162**
Task 8 - Project Implementation Plan																													
8.1 - Grant and Loan Funding Application	2 hrs	$450	2 hrs	$396	hrs	$0	hrs	$0	20 hrs	$3,240	4 hrs	$456	hrs	$0	hrs	$0	2 hrs	$140	30 hrs	$4,682	$230	$0	$0	$0	$0	$0	$0	$0	$4,912
8.2 - Assessment District Formation	4 hrs	$900	2 hrs	$396	hrs	$0	hrs	$0	6 hrs	$972	2 hrs	$228	hrs	$0	hrs	$0	2 hrs	$140	16 hrs	$2,636	$130	$0	$0	$2,300	$1,150	$0	$0	$0	$6,216
8.3 - Environmental Documentation and Studies	1 hrs	$225	2 hrs	$396	4 hrs	$744	hrs	$0	hrs	$0	4 hrs	$456	hrs	$0	hrs	$0	2 hrs	$140	13 hrs	$1,961	$100	$0	$0	$0	$0	$2,875	$0	$0	$4,936
8.4 - Preliminary and Final Design	1 hrs	$225	2 hrs	$396	6 hrs	$1,116	hrs	$0	4 hrs	$648	4 hrs	$456	hrs	$0	hrs	$0	2 hrs	$140	19 hrs	$2,981	$150	$575	$345	$0	$0	$345	$0	$0	$4,396
8.5 - ROW definition and appraisal	4 hrs	$900	2 hrs	$396	hrs	$0	hrs	$0	hrs	$0	4 hrs	$456	hrs	$0	hrs	$0	2 hrs	$140	12 hrs	$1,892	$90	$0	$0	$0	$0	$0	$3,450	$0	$5,432
Subtotal	**12 hrs**	**$2,700**	**10 hrs**	**$1,980**	**10 hrs**	**$1,860**	**hrs**	**$0**	**30 hrs**	**$4,860**	**18 hrs**	**$2,052**	**hrs**	**$0**	**hrs**	**$0**	**10 hrs**	**$700**	**90 hrs**	**$14,152**	**$700**	**$575**	**$345**	**$2,300**	**$1,150**	**$3,220**	**$3,450**	**$0**	**$25,892**
PROJECT TOTAL	**94 hrs**	**$21,150**	**47 hrs**	**$9,306**	**76 hrs**	**$14,136**	**16 hrs**	**$2,784**	**264 hrs**	**$42,768**	**288 hrs**	**$32,832**	**48 hrs**	**$3,072**	**44 hrs**	**$6,072**	**66 hrs**	**$4,620**	**943 hrs**	**$136,740**	**$6,840**	**$8,050**	**$75,670**	**$8,050**	**$35,650**	**$40,250**	**$3,450**	**$10,350**	**$325,050**

Additional Fee Information

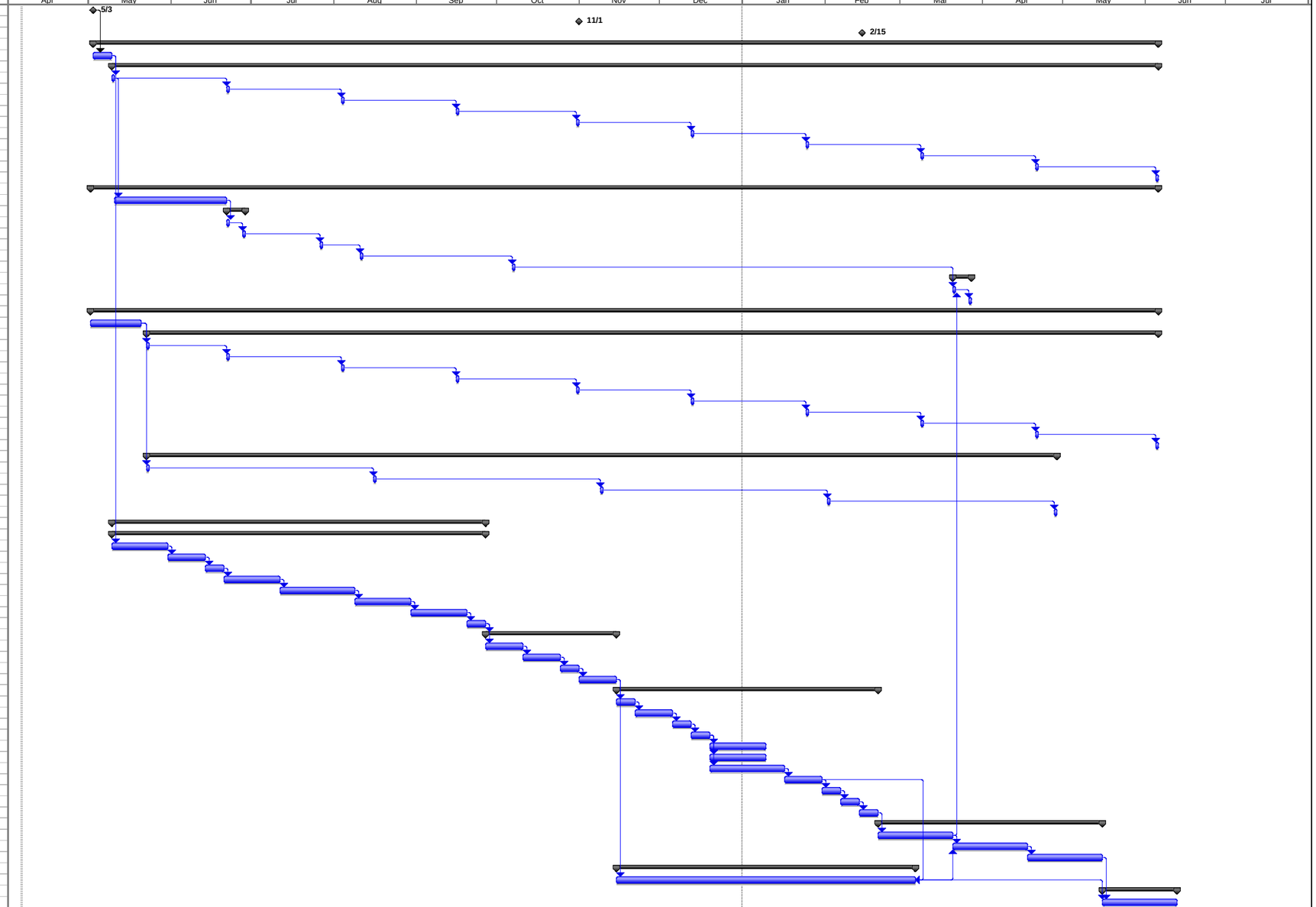
- This fee estimate is valid for 90 days.
- This fee estimate contains an abbreviated list of staff classifications and does not restrict BEN|EN to those classifications. The Standard Rate Schedule with a full list of staff classifications is available upon request.
- Standard hourly rates do not apply to a demand to perform work during an overtime period. Work required to be performed during an overtime period (as mandated by California law) will be charged at a 50% premium.
- Substantial changes in the required scope of work or schedule may result in the revision of the proposed fees and total contract amount.
- Unless expressly provided for within the contract, rates are subject to annual change as of 6/30/16.

EXHIBIT “C” SCHEDULE OF PERFORMANCE

Town of Paradise

Sewer Project Alternatives Analysis, Feasibility Report, and Specical District Formation - Schedule

ID	Task Name	Duration	Start	Finish	Predecessors
1	NTP	0 days	Tue 5/3/16	Tue 5/3/16	
2	Draft Alternative Analysis and Feasibility Report	0 days	Tue 11/1/16	Tue 11/1/16	
3	Final Alternative Analysis and Feasibility Report	0 days	Wed 2/15/17	Wed 2/15/17	
4	**Task 1 - Project Management/Administration**	**285 days?**	**Tue 5/3/16**	**Mon 6/5/17**	
5	Project Development Plan	5 days	Tue 5/3/16	Mon 5/9/16	1
6	**Coordination Meetings**	**280 days?**	**Tue 5/10/16**	**Mon 6/5/17**	
7	Meeting 1	1 day?	Tue 5/10/16	Tue 5/10/16	5
8	Meeting 2	1 day?	Wed 6/22/16	Wed 6/22/16	7FS+30 days
9	Meeting 3	1 day?	Thu 8/4/16	Thu 8/4/16	8FS+30 days
10	Meeting 4	1 day?	Fri 9/16/16	Fri 9/16/16	9FS+30 days
11	Meeting 5	1 day?	Mon 10/31/16	Mon 10/31/16	10FS+30 days
12	Meeting 6	1 day?	Tue 12/13/16	Tue 12/13/16	11FS+30 days
13	Meeting 7	1 day?	Wed 1/25/17	Wed 1/25/17	12FS+30 days
14	Meeting 8	1 day?	Thu 3/9/17	Thu 3/9/17	13FS+30 days
15	Meeting 9	1 day?	Fri 4/21/17	Fri 4/21/17	14FS+30 days
16	Meeting 10	1 day?	Mon 6/5/17	Mon 6/5/17	15FS+30 days
17	**Task 2 - Public Outreach**	**286 days?**	**Mon 5/2/16**	**Mon 6/5/17**	
18	Public Engagement Survey	30 days	Wed 5/11/16	Tue 6/21/16	7
19	**Scoping Workshop**	**5 days?**	**Wed 6/22/16**	**Tue 6/28/16**	
20	Daytime Wrkshp	1 day?	Wed 6/22/16	Wed 6/22/16	18
21	Evening Wrkshp	1 day?	Tue 6/28/16	Tue 6/28/16	20FS+3 days
22	Information Updates - Mailer	1 day?	Wed 7/27/16	Wed 7/27/16	21FS+1 mon
23	Public Information Meeting No. 1	1 day?	Thu 8/11/16	Thu 8/11/16	22FS+2 wks
24	Public Information Meeting No. 2	1 day?	Fri 10/7/16	Fri 10/7/16	23FS+2 mons
25	**District Formation Meetings**	**5 days?**	**Tue 3/21/17**	**Mon 3/27/17**	
26	Daytime Mtg	1 day?	Tue 3/21/17	Tue 3/21/17	75,24
27	Evening Mtg	1 day?	Mon 3/27/17	Mon 3/27/17	26FS+3 days
28	**Technical Advisory Committee**	**286 days?**	**Mon 5/2/16**	**Mon 6/5/17**	
29	TAC formation	15 days	Mon 5/2/16	Fri 5/20/16	
30	**TAC Meetings**	**271 days?**	**Mon 5/23/16**	**Mon 6/5/17**	
31	Meeting 1	1 day?	Mon 5/23/16	Mon 5/23/16	29
32	Meeting 2	1 day?	Wed 6/22/16	Wed 6/22/16	31FS+21 days
33	Meeting 3	1 day?	Thu 8/4/16	Thu 8/4/16	32FS+30 days
34	Meeting 4	1 day?	Fri 9/16/16	Fri 9/16/16	33FS+30 days
35	Meeting 5	1 day?	Mon 10/31/16	Mon 10/31/16	34FS+30 days
36	Meeting 6	1 day?	Tue 12/13/16	Tue 12/13/16	35FS+30 days
37	Meeting 7	1 day?	Wed 1/25/17	Wed 1/25/17	36FS+30 days
38	Meeting 8	1 day?	Thu 3/9/17	Thu 3/9/17	37FS+30 days
39	Meeting 9	1 day?	Fri 4/21/17	Fri 4/21/17	38FS+30 days
40	Meeting 10	1 day?	Mon 6/5/17	Mon 6/5/17	39FS+30 days
41	**City Council Updates**	**245 days?**	**Mon 5/23/16**	**Fri 4/28/17**	
42	Meeting 1	1 day?	Mon 5/23/16	Mon 5/23/16	29
43	Meeting 2	1 day?	Tue 8/16/16	Tue 8/16/16	42FS+60 days
44	Meeting 3	1 day?	Wed 11/9/16	Wed 11/9/16	43FS+60 days
45	Meeting 4	1 day?	Thu 2/2/17	Thu 2/2/17	44FS+60 days
46	Meeting 5	1 day?	Fri 4/28/17	Fri 4/28/17	45FS+60 days
47	**Task 3 - Alternatives Analysis**	**100 days?**	**Tue 5/10/16**	**Mon 9/26/16**	
48	**Draft Alternative Analysis**	**100 days?**	**Tue 5/10/16**	**Mon 9/26/16**	
49	Review Background Material and Reports	15 days	Tue 5/10/16	Mon 5/30/16	5
50	Project Objectives and Planning Area	10 days	Tue 5/31/16	Mon 6/13/16	49
51	Affirm Flows and Loads	5 days	Tue 6/14/16	Mon 6/20/16	50
52	Affirm Discharge and Treatment Requiremnts	15 days?	Tue 6/21/16	Mon 7/11/16	51
53	Development of Options	20 days	Tue 7/12/16	Mon 8/8/16	52
54	Cost Estimates	15 days	Tue 8/9/16	Mon 8/29/16	53
55	Financial Analysis	15 days	Tue 8/30/16	Mon 9/19/16	54
56	Screening of Options	5 days	Tue 9/20/16	Mon 9/26/16	55
57	**Task 4 - Draft Feasibility Report**	**35 days**	**Tue 9/27/16**	**Mon 11/14/16**	**56**
58	Report Writing and Assembly	10 days	Tue 9/27/16	Mon 10/10/16	56
59	QA/QC	10 days	Tue 10/11/16	Mon 10/24/16	58
60	Draft Report	5 days	Tue 10/25/16	Mon 10/31/16	59
61	TAC Review and Comment	10 days	Tue 11/1/16	Mon 11/14/16	60
62	**Task 5 - Final Draft Alternatives Analysis and Feasibilty Report**	**70 days**	**Tue 11/15/16**	**Mon 2/20/17**	
63	Incorporate TAC Comments	5 days	Tue 11/15/16	Mon 11/21/16	61
64	Update Recommended Option Design	10 days	Tue 11/22/16	Mon 12/5/16	63
65	Update Recommended Option Cost Estimates	5 days	Tue 12/6/16	Mon 12/12/16	64
66	Develop Long Term O&M	5 days	Tue 12/13/16	Mon 12/19/16	65
67	District Formation Elements	15 days	Tue 12/20/16	Mon 1/9/17	66
68	Develop Reserves and Financial Models	15 days	Tue 12/20/16	Mon 1/9/17	66
69	Economic Analysis and Benefits	20 days	Tue 12/20/16	Mon 1/16/17	66
70	Conclusions and Recommendations	10 days	Tue 1/17/17	Mon 1/30/17	69
71	Draft Report	5 days	Tue 1/31/17	Mon 2/6/17	70
72	QA/QC	5 days	Tue 2/7/17	Mon 2/13/17	71
73	Final Report and Presentation	5 days	Tue 2/14/17	Mon 2/20/17	72
74	**Task 6 - Special Assessment District Formation**	**60 days**	**Tue 2/21/17**	**Mon 5/15/17**	
75	District Defintion and Requirements	20 days	Tue 2/21/17	Mon 3/20/17	73
76	Draft Financial ProForma and Rates	20 days	Tue 3/21/17	Mon 4/17/17	75,79
77	Initial Documents	20 days	Tue 4/18/17	Mon 5/15/17	76
78	**Task 7 - Funding Analysis and Options**	**80 days**	**Tue 11/15/16**	**Mon 3/6/17**	
79	Evaluation of Funding - SRF and Bonds/Mello-Roos	80 days	Tue 11/15/16	Mon 3/6/17	61,70FF
80	**Task 8 Project Implementation Plan**	**20 days**	**Tue 5/16/17**	**Mon 6/12/17**	
81	Implementation Plan	20 days	Tue 5/16/17	Mon 6/12/17	79,77



Project: p16-200_Town of Paradise_ s
Date: Wed 4/6/16

Task | Split | Progress | Milestone | Summary | Project Summary | Tasks | External Milestone | Deadline

EXHIBIT “D” INSURANCE REQUIREMENTS

EXHIBIT "D" INSURANCE

Insurance Requirements for Consultant. The Consultant shall obtain and maintain for the duration of the contract, insurance against claims for injuries to persons or damages to property, which may arise from or in connection with the performance of the work hereunder by the Consultant, her agents, representatives, or employees.

Minimum Scope of Insurance
Coverage shall be at least as broad as:

1. Insurance Services Office Commercial General Liability coverage (occurrence Form CG 0001)
2. Insurance Services Office Form Number CA 0001 covering Automobile Liability, Code 1 (any auto)
3. Workers' Compensation insurance as required by the State of California and Employer's Liability Insurance for Consultant's employees, if any
4. Errors and Omissions liability insurance endorsed to include contractual liability

MINIMUM LIMITS OF INSURANCE

Consultant shall maintain limits no less than:

(1)	General Liability:	$2,000,000 per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit.
(2)	Automobile Liability:	$1,000,000 per accident for bodily injury and property damage
(3)	Employer's Liability:	$1,000,000 per accident for bodily injury or disease.
(4)	Errors and Omission Liability:	$1,000,000 per claim & $1,000,000 aggregate

Deductibles and Self-Insured Retentions

Any deductibles or self-insured retentions must be declared to and approved by the Town of Paradise. At the option of the Town, either: the insurer shall reduce or eliminate such deductibles or self insured retentions as respects the Town, its officers, officials, employees and volunteers; or the Consultant shall provide a financial guarantee satisfactory to the Town guaranteeing payment of losses and related investigations, claim administration and defense expenses.

The commercial general liability and automobile liability policies are to contain, or be endorsed to contain, the following provisions:

The Town, its officers, officials, employees and volunteers are to be covered as insureds as respects: liability arising out of work or operations performed by or on behalf of the Consultant; or automobiles

owned, leased, hired or borrowed by the Consultant.

For any claim related to this project Consultant insurance coverage shall be primary insurance as respects the Town, its officers, officials, employees and volunteers. Any insurance or self-insurance maintained by the town, its officers, officials, employees or volunteers shall be excess of Consultant's insurance and shall not contribute with it.

Each insurance policy required by this clause shall be endorsed to state that coverage shall not be canceled by either party, except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to the Town.

Coverage shall not extend to any indemnity coverage for the active negligence of the additional insured in any case where an agreement to indemnify the additional insured would be invalid under Subdivision (b) of Section 2782 of the Civil Code.

Acceptability of Insurers

Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A-VII unless otherwise acceptable to the Town.

Verification of Coverage

Consultant shall furnish the Town with original certificates and amendatory endorsements effecting coverage required by this clause. The endorsements should be on forms provided by the Town or on other than the Town's forms provided those endorsements conform to Town requirements. All certificates and endorsements are to be received and approved by the Town before work commences. The Town reserves the right to require complete, certified copies of all required insurance policies, including endorsements affecting the coverage required by these specifications at any time.

Town of Paradise
Council Agenda Summary **Agenda Item: 6(c)**
Date: April 12, 2016

Originated by: Gina S. Will, Finance Director/Town Treasurer

Reviewed by: Lauren Gill, Town Manager

Subject: Partial 2016-17 Temporary Transaction and Use Tax (Measure C) Budget

Council Action Requested:

Adopt a resolution of the Town Council of the Town of Paradise approving a partial budget for the Town of Paradise temporary transaction and use tax (Measure C) funds for the 2016-2017 fiscal year ending June 30, 2017; or

Alternatives:

Refer the matter back to staff for further development and consideration.

Background:

The 2016-17 Town of Paradise Operating and Capital Budget is currently in the process of being developed. Departments are still prioritizing their operating needs for the upcoming fiscal year and will work with Town management to develop a complete proposed budget for Town Council consideration and adoption by June 30, 2016.

Discussion:

Town of Paradise roads are deteriorating rapidly and the Town has little in the way of funding to address road rehabilitation. In the meantime, the price of road construction material has dropped considerably but it is poised to begin increasing in the near future.

The Town expects to receive about $1.1 million dollars from the temporary transaction and use tax (Measure C) during 2016-17. The Town can leverage the cost of road construction material into 10% - 30% savings to the cost of materials for a major road rehabilitation and striping project during 2016-17 if staff can advertise and award a contract before June 30, 2016.

Staff proposes and the Measure C Citizen Oversight Committee supports an apportionment of $500,000.00 of the Measure C funds in 2016-17 for a one-time road rehabilitation project that is further described in a separate agenda summary within the agenda package. Staff recommends Town Council approve a partial 2016-17 Measure C budget for the $500,000.00 appropriation and transfer so that savings can be realized for this project.

A complete Measure C and Town operating and capital budget for 2016-17 will be brought forward for Town Council consideration and adoption before June 30, 2016.

Fiscal Impact:

The 2016-17 partial Measure C budget will apportion and transfer $500,000.00 for use of doing a major road rehabilitation project in 2016-17.

TOWN OF PARADISE
RESOLUTION NO. 16-___

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF PARADISE, CALIFORNIA, APPROVING A PARTIAL BUDGET FOR THE TOWN OF PARADISE TEMPORARY TRANSACTION AND USE TAX (MEASURE C) FUNDS FOR THE 2016-2017 FISCALYEAR ENDING JUNE 30, 2017

WHEREAS**,** the Town Council understands that approximately $1.1 million will be received in 2016-17 as a result of the temporary transaction and use tax (Measure C); and

WHEREAS, prices of road construction materials are low enough to provide 10% - 30% savings major road rehabilitation projects for the Town of Paradise during 2016-17 fiscal year if staff is able to advertise and award a contract before June 30, 2016; and

WHEREAS, in order to maximize the amount of roadway improvements, it is necessary to approve a budget appropriations: and

WHEREAS, a complete budget for the 2016-17 fiscal year will be brought forward for Town Council adoption before June 30, 2016.

NOW, THEREFORE, be it resolved by the Town Council of the Town of Paradise as follows:

Section 1. The Town Council hereby approves the following partial budget appropriation and operating transfer for the 2016-17 fiscal year:

PARTIAL FISCAL YEAR APPROPRIATIONS AND TRANFERS FOR THE TEMPORARY TRANSACTION AND USE TAX (MEASURE C) FUNDS FOR FISCALYEAR ENDING JUNE 30, 2017.

Fund	**Description**	**Fiscal Year Appropriations**	**Operating Transfers In**	**Operating Transfers Out**
1010	Measure C Road Rehabilitation Project	0	0	(500,000)

PASSED AND ADOPTED by the Town Council of the Town of Paradise this 12th day of April, 2016, by the following vote:

AYES:
NOES:
ABSENT:
NOT VOTING:

Approved: _____
Jody Jones, Mayor

ATTEST:

BY: _____
Joanna Gutierrez, CMC, Town Clerk

APPROVED AS TO LEGAL FORM:

BY: _____
Dwight L. Moore, Town Attorney

TOWN OF PARADISE
Council Agenda Summary
Date: April 12, 2016

Agenda No. 6(d)

ORIGINATED BY: Marc Mattox, Public Works Director / Town Engineer

REVIEWED BY: Lauren Gill, Town Manager

SUBJECT: Measure C Road Rehabilitation Project 2016

COUNCIL ACTION REQUESTED:

1. Adopt Resolution No. 16-__, A Resolution rejecting bids dated April 5, 2016 and approving the revised plans and specifications for the Measure C Road Rehabilitation Project 2016 and authorizing re-advertisement for bids on the project.

Background:

On February 25, 2016, during a Paradise Town Council Priority Setting Meeting, Council concurred with staff recommendation to proceed preparing a road maintenance project for bid which helps maintain and extend the life of the Town's most critical roadways. The proposed project will apply a microsurfacing seal application which involves placing a thin layer composed of fine aggregate, asphalt emulsion, additives, water and cement. This microsurfacing will extend the life of the road and reduce future maintenance costs. The timing of this road project is especially critical for two reasons: (1) the age and deterioration of the Town's roadway network, and (2) the current cost climate for raw oil materials would be advantageous for such a project to be executed as soon as possible.

On March 8, 2016, Paradise Town Council approved the plans and specifications for the Measure C Road Rehabilitation Project 2016 and authorized advertisement for bids.

Analysis:

On April 5, seven bids were received by the Town Clerk and publicly opened. A list of bids received are shown in the table below:

Bid No.	Bidder's Name	Base Bid Amount	Total Base + Additive Alternate No. 1 Amount
1	Sierra Nevada Construction	$630,283.50	$708,007.00
2	Telfer Pavement Technologies	$738,885.60	$853,438.00
3	Intermountain Slurry Seal	$799,918.84	$929,929.00
4	VSS International	$702,000.00	$820,000.00
5	Pavement Coatings Company	$760,953.38	$881,785.00
6	Graham Contractors	$816,609.30	$951,195.80
7	California Pavement Maintenance Company	$771,729.03	$902,384.88
X	**Engineer's Estimate**	**$498,252.72**	**$631,093.89**

Bids came in on average 50% higher than estimated. Traffic control costs, striping, and micro-surfacing costs all exceeded project estimates. As the lowest bid was $130,000 more than current funding levels will allow, staff recommends rejecting all bids and re-advertising a reduced scope immediately. The original context of allocating $500,000 to the project still remains true as material prices will only continue to rise if this critical maintenance is deferred.

Using the average unit prices from each of the seven bids received, staff has scoped the project to fit the $500,000 budget. A revised scope listing is shown below, with project areas eliminates shown in strikethrough font.

Micro-Surface + New Striping & Recessed Markers

1. Skyway, Town Limits to Neal
2. Skyway, Bille to Wagstaff
3. Clark, Elliott to Bille
4. Wagstaff, Skyway to Clark
5. Bille, Skyway to Clark
6. Elliott, Skyway to Clark
7. ~~Pentz, Ponderosa to Pearson~~
8. ~~Bille, Clark to Pentz~~
9. ~~Sawmill, Pearson to Bille~~

~~New Recessed Markers~~

1. ~~Skyway, Neal to Pearson~~
2. ~~Skyway, Elliott to Bille~~
3. ~~Pearson, Skyway to Clark~~
4. ~~Clark, Pearson to Elliott~~

Areas which were proposed to receive new recessed markers only will be addressed by Public Works staff by installing above ground markers this summer. This will provide over $30,000 in project budget cost savings.

Public Works has prepared the revised plans, specifications, and cost estimate for Measure C Road Rehabilitation Project 2016. With Council approval of the plans and specifications and authorization to advertise for bids, staff proposes the following schedule:

Advertise for bid:	April-May 2016
Award Contract:	May 10, 2016
Construction:	July 2016

The plans and specifications for the project are on file in the Public Works office for review.

Financial Impact:

Funding for the Road Rehabilitation Project 2016 is proposed to come from local Measure C funds. The total estimated construction cost is $500,000 and a 10% contingency will be budgeted from local transportation/transit. A detailed project accounting description will be made available at the time of contract award.

TOWN OF PARADISE
RESOLUTION NO. 16-____

RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF PARADISE REJECTING BIDS DATED APRIL 5, 2016 AND APPROVING THE REVISED PLANS, SPECIFICATIONS AND ESTIMATES FOR MEASURE C ROAD REHABILITATION PROJECT 2016 AND AUTHORIZING RE-ADVERTISEMENT FOR BIDS ON THE PROJECT.

WHEREAS, staff has identified streets that should receive a surface treatment utilizing microsurfacing, a unique mixture of asphalt emulsion, cement, water aggregate and additives, the Measure C Road Rehabilitation Project 2016 (Project); and

WHEREAS, maintenance of the Town's critical roads in fair condition is imperative to reducing future construction costs; and

WHEREAS, Council concurred with staff recommendation to proceed with preparation of the Project at the special February 25, 2016 Town Council meeting.

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF PARADISE AS FOLLOWS:

Section 1. Pursuant to Public Contract code section 20166, the Town rejects the bids it received on April 5, 2016 for the Project.

Section 2. The revised design, plans, specifications and estimates for the Measure C Road Rehabilitation Project 2016 described in the Town Council Agenda Summary for this Resolution are hereby approved.

Section 3. The Public Works Department is authorized to re-advertise the Measure C Road Rehabilitation Project 2016.

Section 4. The Measure C Road Rehabilitation Project 2016 is exempt from the provisions of the California Environmental Quality Act pursuant to Title 14 California Code of Regulations Section 15301.

PASSED AND ADOPTED by the Town Council of the Town of Paradise on this 12th day of April, 2016, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

By:_____
Jody Jones, Mayor

ATTEST:

_____

Joanna Gutierrez, CMC, Town Clerk

APPROVED AS TO FORM:

_____

Dwight L. Moore, Town Attorney

TOWN OF PARADISE
Council Agenda Summary
Date: April 12, 2016

Agenda No. 6(e)

ORIGINATED BY: Marc Mattox, Public Works Director / Town Engineer

REVIEWED BY: Lauren Gill, Town Manager

SUBJECT: Measure "C" Pearson Rd Improvements Project

COUNCIL ACTION REQUESTED:

Adopt a resolution rejecting bid dated March 29, 2016 and approving the revised plans and specifications for the Measure "C" Pearson Rd Improvements Project and authorizing re-advertisement for bids on the Project.

Background:

On April 29, 2013, Caltrans announced Cycle 6 Call-for-Projects for the Highway Safety Improvement Program (HSIP). The purpose of this program is to achieve a significant reduction in traffic fatalities and serious injuries on all public roads. The HSIP requires a data-driven, strategic approach to improving highway safety on all public roads that focuses on performance.

The Town identified the Pearson Rd Shoulder Widening Project through a jurisdiction-wide collision analysis using the SafeTREC Transportation Injury Mapping System. From the analysis it was determined that 24 collisions took place on this section of Pearson Road in a period of five years. The amount of collisions that occurred in the five year span demonstrated the project to be one of the top safety priorities of the Town of Paradise.

The proposed project includes two countermeasures. The first countermeasure to reducing the accidents on Pearson Road is to widen the shoulders on the road, where feasible. Vehicle collisions can be prevented by providing space for a vehicle to pull over in case of an emergency and placing them out of the travel lane. Vehicles will also have the capability of pulling over for emergency vehicles to pass and preventing congestions. A wider shoulder will provide space to avoid potential crashes or reduce their severity.

The second countermeasure is to install bicycle lanes on both sides of the road. With the new improvements bicyclist's safety will increase by creating a separate space for bicyclists to travel and pull over in case of an emergency. Motorists will no longer have to travel onto the oncoming lane in order to pass bicyclists. More information regarding specific countermeasures and requirements can be found by reviewing the Caltrans Local Road Safety Manual.

By July 26, 2013, the Town of Paradise submitted the "Pearson Rd Shoulder Widening Project" application.

On November 14, 2013, Caltrans approved the "Pearson Rd Shoulder Widening Project" for Federal funding. This project was selected based upon the calculated high Benefit-Cost Ratio using actual collision data between 2006 and 2011 and implementation of safety countermeasures.

On April 1, 2014, the Federal Highway Administration approved the Town of Paradise to begin reimbursable Preliminary Engineering for the Pearson Rd Shoulder Widening Project.

On May 13, 2014, the Town Council for the Town of Paradise approved the Program Supplement Agreement No. 014-N to Administering Agency-State Agreement No. 03-5425R for Federal-Aid Project HSIPL-5425 (027) to assure receipt of preliminary engineering funds.

On May 12, 2015, the Town Council for the Town of Paradise awarded contract 14-04.PE to NorthStar Engineering of Chico, CA to prepare final plans, specifications and estimates for the subject project.

Through the FY 2015/2016 budget process, Town Council allocated additional local funds and $200,000 in Measure "C" funds to leverage the subject project beyond shoulder widening to include a full roadway rehabilitation effort and drainage improvements.

On January 25, 2016, Town Council approved the design, plans and specifications for the Measure C Pearson Rd Improvements Project and authorized advertisements for bid. The Engineer's Estimate for the Base Bid was $875,000. The project included two add-alternates for a pavement interlayer to extend the roadway life. Alternate 1 included a rubberized chip seal and had an estimated total project cost of $1,108,461. Alternate 2 included a Type III micro-surfacing interlayer and had an estimated total project cost of $974,960.

Analysis:

On March 29, 2016 Town of Paradise received only one bid for the subject project. Knife River Construction of Chico, CA provided a bid as shown below:

Base Bid	$1,402,146.10
Add-Alternate 1 + Base Bid	$1,686,946.10
Add-Alternate 2 + Base Bid	$1,591,271.10

After review of the bid received and the funding available, it is staff's recommendation to reject this bid and value engineer the project downward to still meet project objectives at a lower construction cost.

Two major factors contributed to the higher than expected bid –

(1) Knife River Construction is the only "local" contractor which has the capabilities to produce the specified rubberized hot mix asphalt. Staff was hopeful that out-of-area contractors would have interest and keep the project competitive, but this did not come to fruition.

(2) Several specified construction details in the project proved to be very cost prohibitive. For example, custom drainage channels in lieu of standard culverts exceeded expectations for cost, driveway conforms with the multiple asphalt lifts would be very challenging, and certain traffic control requirements added additional costs.

Moving forward, staff immediately began working with NorthStar Engineering to value engineer the project. First, the asphalt overlay thickness was reduced from 0.15' to 0.10' and modified to standard hot mix asphalt from rubberized asphalt. This will substantially reduce project costs and increase competition for area contractors. The elimination of rubberized hot mix asphalt will require the Town to decline a portion of the recently awarded Cal Recycle Rubberized Pavement Grant. This grant provided a $10/ton reimbursement for the use of rubberized hot mix

asphalt. The bid price per ton provided by Knife River Construction was $110/ton. Standard hot mix asphalt in today's economic climate is near $80/ton. In addition to the savings in asphalt costs, changes in construction details and open competition could yield a project which the Town can move forward.

Staff is requesting Council approval of the revised plans and specifications and authorization to advertise for bids, staff proposes the following schedule:

Approve PS&E:	April 12, 2016
Advertise for bid:	April 13, 2016
Open Bids:	May 3, 2016
Award Contract:	May 10, 2016
Construction:	June-July (Pending PID Utility Clearance)

The plans and specifications for the project are on file in the Public Works office for review. If approved, staff will advertise for bid immediately following Federal approval of the Construction Request for Authorization.

The proposed project will still have an "add-alternate" bid schedule provided for contractors to consider. This schedule calls for two varying road rehabilitation methods, described below:

> Add Alternate 1: Installation a stress absorbing membrane interlayer (SAMI-R) between existing roadway grade and base-scope 0.10' hot mix asphalt overlay. This alternative will perform better at preventing reflective cracking over time to the roadway surface.
>
> Add Alternate 2: Installation of Type III micro-surfacing interlayer between existing roadway grade and base-scope 0.10' hot mix asphalt overlay.

The Town of Paradise received Cal Recycle Grant for the use of rubberized hot mix asphalt ($44,288) and if Add Alternate 1 is selected, the SAMI-R ($14,756). Being the Town cannot afford the rubberized hot mix asphalt overlay, the $44,288 in $10/ton reimbursement will need to be declined. The Cal Recycle grant program essentially provides a 10% discount on the use of these materials. Add Alternate 1 is expected to have a higher base cost and will need consideration of actual bid prices and funding available prior to selection.

Financial Impact:

The total project cost, including estimated final costs for preliminary engineering, estimated construction costs using Add-Alternate 1, a 10% construction contingency and a 5% allocation for construction inspection is $1,350,000. The project is leveraged by $200,000 in Measure C funds, $534,000 in Highway Safety Improvement Program Funds, $14,756 in Cal Recycle grant funds, among other local funding sources. A detailed funding breakdown will be provided upon contract award.

TOWN OF PARADISE
RESOLUTION NO. 16-____

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF PARADISE REJECTING BID DATED MARCH 29, 2016 AND APPROVING THE REVISED DESIGN, PLANS, SPECIFICATIONS AND ESTIMATES FOR MEASURE "C" PEARSON RD IMPROVEMENTS PROJECT AND AUTHORIZING RE-ADVERTISEMENT FOR BIDS RELATING TO THE PROJECT.

WHEREAS, the Town of Paradise has received a $534,844 award of Highway Safety Improvement Program funds; and

WHEREAS, the purpose of this program is to achieve a significant reduction in traffic fatalities and serious injuries on all public roads; and

WHEREAS, the 2013 Caltrans grant award to the Town requires specific countermeasures to be implemented which address actual historical collision data and trends; and

WHEREAS, the Measure "C" Pearson Rd Improvements Project (Project) is consistent in scope with the approved grant award by widening shoulders and installing Class II Bicycle Lanes along Pearson Road between Pentz Road and Clark Road; and

WHEREAS, the Project is further leveraged by local and Measure "C" funds to complete extensive road and drainage rehabilitation efforts associated with the Project; and

WHEREAS, the Town received only one bid for the project on March 29, 2016.

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF PARADISE AS FOLLOWS:

Section 1. Pursuant to Public Contract code section 20166, the Town rejects the bid it received on March 29, 2016 for the Project.

Section 2. The revised design, plans, specifications and estimates for the Measure "C" Pearson Rd Improvements Project described in the Town Council Agenda Summary for this Resolution are hereby approved.

Section 3. The Town Public Works Department is authorized to re-advertise for bids the Measure "C" Pearson Rd Improvements Project.

PASSED AND ADOPTED by the Town Council of the Town of Paradise on this 12th day of April, 2016, by the following vote:

//
//
//
//

AYES:

NOES:

ABSENT:

ABSTAIN:

By:_____
Jody Jones, Mayor

ATTEST:

_____
Joanna Gutierrez, CMC, Town Clerk

APPROVED AS TO FORM:

_____
Dwight L. Moore, Town Attorney

TOWN OF PARADISE
Council Agenda Summary
Date: April 12, 2016

Agenda No. 6(f)

ORIGINATED BY: Marc Mattox, Public Works Director / Town Engineer

REVIEWED BY: Lauren Gill, Town Manager

SUBJECT: Skyway at Black Olive Signalization Project Grant Agreements

COUNCIL ACTION REQUESTED:

Adopt a Resolution to:

1. Approve the Program Supplement Agreement No. F016 to Administering Agency-State Agreement No. 03-5425F15 for Federal-Aid Project HSIPL-5425 (035) to assure receipt of $470,900 in federal funds and authorize the Town Manager to execute.
2. Approve Administering Agency-State Agreement for Federal-Aid Projects, Agreement No. 03-5425F15 and authorize the Town Manager to execute.

Background:

The intersection of Skyway at Black Olive has historically been a difficult intersection to navigate for safety reasons. Traffic volume data for the intersection shows that during peak hours, motorists actively avoid the intersection for the lack of adequate breaks to make turning movements. In early 2015, a signal warrant study was performed and concluded that a traffic signal was needed to mitigate multiple safety concerns at the intersection. Between May 2010 and May 2015, the intersection experienced 21 total collisions, including 8 injury collisions of varying degrees of severity.

In April 2015, Caltrans announced Cycle 6 Call-for-Projects for the Highway Safety Improvement Program (HSIP). The purpose of this program is to achieve a significant reduction in traffic fatalities and serious injuries on all public roads. The HSIP requires a data-driven, strategic approach to improving highway safety on all public roads that focuses on performance.

On November 12, 2015 the Approved HSIP Project List was released and included the Town of Paradise Skyway at Black Olive Signalization Project. This project was awarded $470,900 Federal funds to improve safety at the Skyway at Black Olive Drive intersection. The countermeasure awarded is the installation of a traffic signal.

Analysis:

On March 9, 2016, the Federal Highway Administration (FHWA) approved the Town of Paradise to begin reimbursable Preliminary Engineering for the HSIP project. This approval is transmitted via Agreement Summaries, also known as E-76's. Agreement Summaries must be received for each project phase before reimbursable work can be performed on the corresponding phase.

To remain eligible for the allocated grant funding, the Town of Paradise is required to adopt a resolution identifying the subject projects and an official authorized to execute the approved Program Supplement Agreements within sixty days of receipt of the Agreements. Program Supplement Agreement F016 is attached to this staff report for approval.

FHWA has also implemented new changes to the Master Agreement which governs all federally funded projects. This new Master Agreement, Agreement No. 03-5425F15, is attached to this staff report for approval.

Once these agreements are executed, staff proposes moving the project forward by completion of the following tasks:

1. Town Environmental Review – California Environmental Quality Act
2. Caltrans Environmental Review – National Environmental Policy Act
3. Field Work
4. 50%, 75% and 100% Plans, Specifications and Estimates
5. Caltrans & FHWA Authorization to Proceed with Construction
6. Council Approval of Plans, Specifications and Estimates
7. Advertise Project
8. Council Award Construction Contract
9. Construction
10. Project Close-Out

Staff anticipates the environmental review phase of the project to proceed quickly, allowing design to be complete as soon as early 2017. Construction is expected in summer 2017.

Financial Impact:

The Skyway at Black Olive Signalization project is 100% funded through the Highway Safety Improvement Program and all design, construction, and management costs will be reimbursed. The total grant amount for the project is $470,900 and can be represented by the project phases below:

Preliminary Engineering	$60,000
Construction	$380,900
Construction Engineering	$30,000
TOTAL	**$470,900**

Attachments:

1. Program Supplement Agreement F016
2. Master Agreement No. 03-5425F15

TOWN OF PARADISE
RESOLUTION NO. 16-____

RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF PARADISE AUTHORIZING THE TOWN MANAGER OF THE TOWN OF PARADISE OR HER DESIGNEE TO SIGN PROGRAM SUPPLEMENT AGREEMENT NO F016 TO THE ADMINISTERING AGENCY-STATE AGREEMENT FOR FEDERAL AID PROJECTS CORRESPONDING TO PROJECT NO. HSIPL 5425 (035).

WHEREAS, the Town of Paradise has received and will continue to receive federal funds for various transportation projects and has entered into an Agency-State Agreement for Federal-Aid Projects with the California Department of Transportation; and

WHEREAS, the State of California through its Department of Transportation (Caltrans) administers the Federal Highway Safety Improvement Program (HSIP) and selects projects for funding; and

WHEREAS, the Skyway at Black Olive Drive Signalization Project currently has $470,900 of Federal funds allocated to the Project; and

WHEREAS, Caltrans provides Program Supplement Agreements in accordance with Administering Agency-State Agreement for Federal-Aid Projects, Agreement No. 03-5425F15 (Master Agreement), which upon full execution enables the Town of Paradise to request and receive Federal funds for certain street projects; and

WHEREAS, Caltrans requires the Town of Paradise to execute the Program Supplement Agreement No. F016 for the Skyway at Black Olive Drive Signalization Project, in order to be eligible to receive Federal-Aid for eligible project costs; and

WHEREAS, these funds will require that they are managed in accordance with the Caltrans Local Assistance Procedures Manual; and

WHEREAS, the Town Council of the Town of Paradise has approved and agreed to this Program Supplement Agreement.

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF PARADISE AS FOLLOWS:

Section 1. That the Town Manager of the Town of Paradise, or her designee, is hereby authorized to sign Program Supplement Agreement No. F016 on behalf of the Town.

Section 2. The Town Clerk shall certify to the passage and adoption of this resolution.

PASSED AND ADOPTED by the Town Council of the Town of Paradise on this 12th day of April, 2016, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

By:_____
Jody Jones, Mayor

ATTEST:

_____
Joanna Gutierrez, CMC, Town Clerk

APPROVED AS TO FORM:

_____
Dwight L. Moore, Town Attorney

TOWN OF PARADISE
RESOLUTION NO. 16-_____

RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF PARADISE AUTHORIZING THE TOWN MANAGER OF THE TOWN OF PARADISE OR HER DESIGNEE TO SIGN ADMINISTERING AGENCY-STATE AGREEMENT FOR FEDERAL AID PROJECTS, AGREEMENT NO. 03-5425F15.

WHEREAS, the Town of Paradise is eligible to receive Federal and/or State funding for certain Transportation Projects, through the State of California, Department of Transportation,

WHEREAS, Master Agreements need to be executed with the State of California, Department of Transportation before such funds could be claimed; and

WHEREAS, the Town of Paradise desires to enter into an agreement with the State of California Department of Transportation, to allow the Town to make use of State administered funds for federal aid transportation projects.

WHEREAS, the Federal Highway Administration and State of California Department of Transportation have provided Agreement No. 03-5425F15 to govern new Federal-Aid projects, and,

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF PARADISE AS FOLLOWS:

Section 1. That the Town Manager of the Town of Paradise, or her designee, is hereby authorized to sign Agreement No. 03-5425F15 on behalf of the Town.

Section 2. The Town Clerk shall certify to the passage and adoption of this resolution.

PASSED AND ADOPTED by the Town Council of the Town of Paradise on this 12th day of April, 2016, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

By:_____
Jody Jones, Mayor

ATTEST:

_____
Joanna Gutierrez, CMC, Town Clerk

APPROVED AS TO FORM:

_____
Dwight L. Moore, Town Attorney

Attachment 1

PROGRAM SUPPLEMENT NO. F016
to
ADMINISTERING AGENCY-STATE AGREEMENT
FOR FEDERAL-AID PROJECTS NO 03-5425F15

Adv Project ID 0316000118
Date: March 10, 2016
Location: 03-BUT-0-PRDS
Project Number: HSIPL-5425(035)
E.A. Number:
Locode: 5425

This Program Supplement hereby adopts and incorporates the Administering Agency-State Agreement for Federal Aid which was entered into between the Administering Agency and the State on and is subject to all the terms and conditions thereof. This Program Supplement is executed in accordance with Article I of the aforementioned Master Agreement under authority of Resolution No. approved by the Administering Agency on (See copy attached).

The Administering Agency further stipulates that as a condition to the payment by the State of any funds derived from sources noted below obligated to this PROJECT, the Administering Agency accepts and will comply with the special covenants or remarks set forth on the following pages.

PROJECT LOCATION:

Skyway @ Black Olive Drive

TYPE OF WORK: Convert a four-leg intersection from 2-way stop control to fully signalized intersection

LENGTH: 0.0(MILES)

Estimated Cost	Federal Funds		Matching Funds		
	MS3E	$60,000.00	LOCAL		OTHER
$60,000.00			$0.00		$0.00

TOWN OF PARADISE

By _____

Title _____

Date _____

Attest _____

STATE OF CALIFORNIA
Department of Transportation

By _____
Chief, Office of Project Implementation
Division of Local Assistance

Date _____

I hereby certify upon my personal knowledge that budgeted funds are available for this encumbrance:

Accounting Officer _____ **Date** 3/10/16' $60,000.00

Chapter	Statutes	Item	Year	Program	BC	Category	Fund Source	AMOUNT

Attachment 1

STATE OF CALIFORNIA. DEPARTMENT OF TRANSPORTATION

PROGRAM SUPPLMENT AND CERTIFICATION FORM

PSCF (REV. 01/2010)

TO: **STATE CONTROLLER'S OFFICE**
Claims Audits
3301 "C" Street, Rm 404
Sacramento, CA 95816

3/10/2016 | **0316000118**

RQS 031600000495

Department of Transportation

SUBJECT:

Encumbrance Document

VENDOR / LOCAL AGENCY:

Town of Paradise

CONTRACT AMOUNT:

$60,000.00

Local Assistance

CHAPTER	STATUTES	ITEM	YEAR	PEC / PECT	TASK / SUBTASK	AMOUNT
10	2015	2660-102-0890	2016	20.30.010.550	2620/0420	$60,000.00

ADA Notice For individuals with sensory disabilities, this document is available in alternate formats. For information, call (915) 654-6410 of TDD (916) -3880 or write Records and Forms Management, 1120 N. Street, MS-89, Sacramento, CA 95814.

SPECIAL COVENANTS OR REMARKS

1. A. The ADMINISTERING AGENCY will advertise, award and administer this project in accordance with the current published Local Assistance Procedures Manual.

B. ADMINISTERING AGENCY agrees that it will only proceed with work authorized for specific phase(s) with an "Authorization to Proceed" and will not proceed with future phase(s) of this project prior to receiving an "Authorization to Proceed" from the STATE for that phase(s) unless no further State or Federal funds are needed for those future phase(s).

C. STATE and ADMINISTERING AGENCY agree that any additional funds which might be made available by future Federal obligations will be encumbered on this PROJECT by use of a STATE-approved "Authorization to Proceed" and Finance Letter. ADMINISTERING AGENCY agrees that Federal funds available for reimbursement will be limited to the amounts obligated by the Federal Highway Administration.

D. Award information shall be submitted by the ADMINISTERING AGENCY to the District Local Assistance Engineer within 60 days of project contract award and prior to the submittal of the ADMINISTERING AGENCY'S first invoice for the construction contract.

Failure to do so will cause a delay in the State processing invoices for the construction phase. Attention is directed to Section 15.7 "Award Package" of the Local Assistance Procedures Manual.

E. ADMINISTERING AGENCY agrees, as a minimum, to submit invoices at least once every six months commencing after the funds are encumbered for each phase by the execution of this Project Program Supplement Agreement, or by STATE's approval of an applicable Finance Letter. STATE reserves the right to suspend future authorizations/obligations for Federal aid projects, or encumbrances for State funded projects, as well as to suspend invoice payments for any on-going or future project by ADMINISTERING AGENCY if PROJECT costs have not been invoiced by ADMINISTERING AGENCY for a six-month period.

If no costs have been invoiced for a six-month period, ADMINISTERING AGENCY agrees to submit for each phase a written explanation of the absence of PROJECT activity along with target billing date and target billing amount.

ADMINISTERING AGENCY agrees to submit the final report documents that collectively constitute a "Report of Expenditures" within one hundred eighty (180) days of PROJECT completion. Failure of ADMINISTERING AGENCY to submit a "Final Report of Expenditures" within 180 days of PROJECT completion will result in STATE imposing sanctions upon ADMINISTERING AGENCY in accordance with the current Local Assistance Procedures Manual.

F. Administering Agency shall not discriminate on the basis of race, religion, age, disability, color, national origin, or sex in the award and performance of any Federal-

assisted contract or in the administration of its DBE Program Implementation Agreement. The Administering Agency shall take all necessary and reasonable steps under 49 CFR Part 26 to ensure nondiscrimination in the award and administration of Federal-assisted contracts. The Administering Agency's DBE Implementation Agreement is incorporated by reference in this Agreement. Implementation of the DBE Implementation Agreement, including but not limited to timely reporting of DBE commitments and utilization, is a legal obligation and failure to carry out its terms shall be treated as a violation of this Agreement. Upon notification to the Administering Agency of its failure to carry out its DBE Implementation Agreement, the State may impose sanctions as provided for under 49 CFR Part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1986 (31 U.S.C. 3801 et seq.).

G. Any State and Federal funds that may have been encumbered for this project are available for disbursement for limited periods of time. For each fund encumbrance the limited period is from the start of the fiscal year that the specific fund was appropriated within the State Budget Act to the applicable fund Reversion Date shown on the State approved project finance letter. Per Government Code Section 16304, all project funds not liquidated within these periods will revert unless an executed Cooperative Work Agreement extending these dates is requested by the ADMINISTERING AGENCY and approved by the California Department of Finance.

ADMINISTERING AGENCY should ensure that invoices are submitted to the District Local Assistance Engineer at least 75 days prior to the applicable fund Reversion Date to avoid the lapse of applicable funds. Pursuant to a directive from the State Controller's Office and the Department of Finance; in order for payment to be made, the last date the District Local Assistance Engineer can forward an invoice for payment to the Department's Local Programs Accounting Office for reimbursable work for funds that are going to revert at the end of a particular fiscal year is May 15th of the particular fiscal year. Notwithstanding the unliquidated sums of project specific State and Federal funding remaining and available to fund project work, any invoice for reimbursement involving applicable funds that is not received by the Department's Local Programs Accounting Office at least 45 days prior to the applicable fixed fund Reversion Date will not be paid. These unexpended funds will be irrevocably reverted by the Department's Division of Accounting on the applicable fund Reversion Date.

H. As a condition for receiving federal-aid highway funds for the PROJECT, the Administering Agency certifies that NO members of the elected board, council, or other key decision makers are on the Federal Government Exclusion List. Exclusions can be found at www.sam.gov.

2. A. ADMINISTERING AGENCY shall conform to all State statutes, regulations and procedures (including those set forth in the Local Assistance Procedures Manual and the Local Assistance Program Guidelines, hereafter collectively referred to as "LOCAL ASSISTANCE PROCEDURES") relating to the federal-aid program, all Title 23 Code of

SPECIAL COVENANTS OR REMARKS

Federal Regulation (CFR) and 2 CFR Part 200 federal requirements, and all applicable federal laws, regulations, and policy and procedural or instructional memoranda, unless otherwise specifically waived as designated in the executed project-specific PROGRAM SUPPLEMENT.

B. Invoices shall be submitted on ADMINISTERING AGENCY letterhead that includes the address of ADMINISTERING AGENCY and shall be formatted in accordance with LOCAL ASSISTANCE PROCEDURES.

C. ADMINISTERING AGENCY must have at least one copy of supporting backup documentation for costs incurred and claimed for reimbursement by ADMINISTERING AGENCY. ADMINISTERING AGENCY agrees to submit supporting backup documentation with invoices if requested by State. Acceptable backup documentation includes, but is not limited to, agency's progress payment to the contractors, copies of cancelled checks showing amounts made payable to vendors and contractors, and/or a computerized summary of PROJECT costs.

D. Indirect Cost Allocation Plan/Indirect Cost Rate Proposals (ICAP/ICRP), Central Service Cost Allocation Plans and related documentation are to be prepared and provided to STATE (Caltrans Audits & Investigations) for review and approval prior to ADMINISTERING AGENCY seeking reimbursement of indirect costs incurred within each fiscal year being claimed for State and federal reimbursement. ICAPs/ICRPs must be prepared in accordance with the requirements set forth in 2 CFR, Part 200, Chapter 5 of the Local Assistance Procedural Manual, and the ICAP/ICRP approval procedures established by STATE.

E. STATE will withhold the greater of either two (2) percent of the total of all federal funds encumbered for each PROGRAM SUPPLEMENT or $40,000 until ADMINISTERING AGENCY submits the Final Report of Expenditures for each completed PROGRAM SUPPLEMENT PROJECT.

F. Payments to ADMINISTERING AGENCY for PROJECT-related travel and subsistence (per diem) expenses of ADMINISTERING AGENCY forces and its contractors and subcontractors claimed for reimbursement or as local match credit shall not exceed rates authorized to be paid rank and file STATE employees under current State Department of Personnel Administration (DPA) rules. If the rates invoiced by ADMINISTERING AGENCY are in excess of DPA rates, ADMINISTERING AGENCY is responsible for the cost difference, and any overpayments inadvertently paid by STATE shall be reimbursed to STATE by ADMINISTERING AGENCY on demand within thirty (30) days of such invoice.

G. ADMINISTERING AGENCY agrees to comply with 2 CFR, Part 200, Uniform Administrative Requirements, Cost Principles and Audit Requirement for Federal Awards.

H. ADMINISTERING AGENCY agrees, and will assure that its contractors and subcontractors will be obligated to agree, that Contract Cost Principles and Procedures,

SPECIAL COVENANTS OR REMARKS

48 CFR, Federal Acquisition Regulations System, Chapter 1, Part 31, et seq., shall be used to determine the allowability of individual PROJECT cost items.

I. Every sub-recipient receiving PROJECT funds under this AGREEMENT shall comply with 2 CFR, Part 200, 23 CFR, 48 CFR Chapter 1, Part 31, Local Assistance Procedures, Public Contract Code (PCC) 10300-10334 (procurement of goods), PCC 10335-10381 (non-A&E services), and other applicable STATE and FEDERAL regulations.

J. Any PROJECT costs for which ADMINISTERING AGENCY has received payment or credit that are determined by subsequent audit to be unallowable under 2 CFR, Part 200, 23 CFR, 48 CFR, Chapter 1, Part 31, and other applicable STATE and FEDERAL regulations, are subject to repayment by ADMINISTERING AGENCY to STATE.

K. STATE reserves the right to conduct technical and financial audits of PROJECT WORK and records and ADMINISTERING AGENCY agrees, and shall require its contractors and subcontractors to agree, to cooperate with STATE by making all appropriate and relevant PROJECT records available for audit and copying as required by the following paragraph:

ADMINISTERING AGENCY, ADMINISTERING AGENCY'S contractors and subcontractors, and STATE shall each maintain and make available for inspection and audit by STATE, the California State Auditor, or any duly authorized representative of STATE or the United States all books, documents, papers, accounting records, and other evidence pertaining to the performance of such contracts, including, but not limited to, the costs of administering those various contracts and ADMINISTERING AGENCY shall furnish copies thereof if requested. All of the above referenced parties shall make such AGREEMENT, PROGRAM SUPPLEMENT, and contract materials available at their respective offices at all reasonable times during the entire PROJECT period and for three (3) years from the date of submission of the final expenditure report by the STATE to the FHWA.

L. ADMINISTERING AGENCY, its contractors and subcontractors shall establish and maintain a financial management system and records that properly accumulate and segregate reasonable, allowable, and allocable incurred PROJECT costs and matching funds by line item for the PROJECT. The financial management system of ADMINISTERING AGENCY, its contractors and all subcontractors shall conform to Generally Accepted Accounting Principles, enable the determination of incurred costs at interim points of completion, and provide support for reimbursement payment vouchers or invoices set to or paid by STATE.

M. ADMINISTERING AGENCY is required to have an audit in accordance with the Single Audit Act of 2 CFR 200 if it expends $750,000 or more in Federal Funds in a single fiscal year of the Catalogue of Federal Domestic Assistance.

N. ADMINISTERING AGENCY agrees to include all PROGRAM SUPPLEMENTS adopting the terms of this AGREEMENT in the schedule of projects to be examined in

SPECIAL COVENANTS OR REMARKS

ADMINISTERING AGENCY's annual audit and in the schedule of projects to be examined under its single audit prepared in accordance with 2 CFR, Part 200.

O. ADMINISTERING AGENCY shall not award a non-A&E contract over $5,000, construction contracts over $10,000, or other contracts over $25,000 [excluding professional service contracts of the type which are required to be procured in accordance with Government Code sections 4525 (d), (e) and (f)] on the basis of a noncompetitive negotiation for work to be performed under this AGREEMENT without the prior written approval of STATE. Contracts awarded by ADMINISTERING AGENCY, if intended as local match credit, must meet the requirements set forth in this AGREEMENT regarding local match funds.

P. Any subcontract entered into by ADMINISTERING AGENCY as a result of this AGREEMENT shall contain provisions B, C, F, H, I, K, and L under Section 2 of this agreement.

3. In the event that right of way acquisition for or construction of this project of the initial federal authorization for preliminary engineering is not started by the close of the tenth fiscal year following the fiscal year in which the project is authorized, the ADMINISTERING AGENCY shall repay the Federal Highway Administration through Caltrans the sum of Federal funds paid under the terms of this agreement.

Attachment 2

MASTER AGREEMENT
ADMINISTERING AGENCY-STATE AGREEMENT FOR
FEDERAL-AID PROJECTS

03	Town of Paradise
District	Administering Agency

Agreement No. 03-5425F15

This AGREEMENT, is entered into effective this _____ day of _____, 20 , by and between Town of Paradise, hereinafter referred to as "ADMINISTERING AGENCY," and the State of California, acting by and through its Department of Transportation (Caltrans), hereinafter referred to as "STATE", and together referred to as "PARTIES" or individually as a "PARTY."

RECITALS:

1. WHEREAS, the Congress of the United States has enacted the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 and subsequent Transportation Authorization Bills to fund transportation programs; and

2. WHEREAS, the Legislature of the State of California has enacted legislation by which certain federal-aid funds may be made available for use on local transportation related projects of public entities qualified to act as recipients of these federal-aid funds in accordance with the intent of federal law; and

3. WHEREAS, before federal funds will be made available for a specific program project, ADMINISTERING AGENCY and STATE are required to enter into an agreement to establish terms and conditions applicable to the ADMINISTERING AGENCY when receiving federal funds for a designated PROJECT facility and to the subsequent operation and maintenance of that completed facility.

NOW, THEREFORE, the PARTIES agree as follows:

ARTICLE I - PROJECT ADMINISTRATION

1. This AGREEMENT shall have no force or effect with respect to any program project unless and until a project-specific "Authorization/Agreement Summary", herein referred to as "E-76" document, is approved by STATE and the Federal Highway Administration (FHWA).

2. The term "PROJECT", as used herein, means that authorized transportation related project and related activities financed in part with federal-aid funds as more fully-described in an "Authorization/ Agreement Summary" or "Amendment/Modification Summary", herein referred to as "E-76" or "E-76 (AMOD)" document authorized by STATE and the Federal Highway Administration (FHWA).

3. The E-76/E-76 (AMOD) shall designate the party responsible for implementing PROJECT, type of work and location of PROJECT.

4. The PROGRAM SUPPLEMENT sets out special covenants as a condition for the ADMINISTERING AGENCY to receive federal-aid funds from/through STATE for designated PROJECT. The PROGRAM SUPPLEMENT shall also show these federal funds that have been initially encumbered for PROJECT along with the matching funds to be provided by ADMINISTERING AGENCY and/or others. Execution of PROGRAM SUPPLEMENT by the PARTIES shall cause ADMINISTERING AGENCY to adopt all of the terms of this AGREEMENT as though fully set forth therein in the PROGRAM SUPPLEMENT. Unless otherwise expressly delegated in a resolution by the governing body of ADMINISTERING AGENCY, and with written concurrence by STATE, the PROGRAM SUPPLEMENT shall be approved and managed by the governing body of ADMINISTERING AGENCY.

5. ADMINISTERING AGENCY agrees to execute and return each project-specific PROGRAM SUPPLEMENT within ninety (90) days of receipt. The PARTIES agree that STATE may suspend future authorizations/obligations and invoice payments for any on-going or future federal-aid project performed by ADMINISTERING AGENCY if any project-specific PROGRAM SUPPLEMENT is not returned within that ninety (90) day period unless otherwise agreed by STATE in writing.

6. ADMINISTERING AGENCY further agrees, as a condition to the release and payment of federal funds encumbered for the PROJECT described in each PROGRAM SUPPLEMENT, to comply with the terms and conditions of this AGREEMENT and all of the agreed-upon Special Covenants or Remarks incorporated within the PROGRAM SUPPLEMENT, and Cooperative/Contribution Agreement where appropriate, defining and identifying the nature of the specific PROJECT.

7. Federal, state and matching funds will not participate in PROJECT work performed in advance of the approval of the E-76 or E-76 (AMOD), unless otherwise stated in the executed project-specific PROGRAM SUPPLEMENT. ADMINISTERING AGENCY agrees that it will only proceed with the work authorized for that specific phase(s) on the project-specific E-76 or E-76 (AMOD). ADMINISTERING AGENCY further agrees to not proceed with future phases of PROJECT prior to receiving an E-76 (AMOD) from STATE for that phase(s) unless no further federal funds are needed or for those future phase(s).

8. That PROJECT or portions thereof, must be included in a federally approved Federal Statewide Transportation Improvement Program (FSTIP) prior to ADMINISTERING AGENCY submitting the "Request for Authorization".

9. ADMINISTERING AGENCY shall conform to all state statutes, regulations and procedures (including those set forth in the Local Assistance Procedures Manual and the Local Assistance Program Guidelines, hereafter collectively referred to as "LOCAL ASSISTANCE PROCEDURES") relating to the federal-aid program, all Title 23 Code of Federal Regulation (CFR) and 2 CFR part 200 federal requirements, and all applicable federal laws, regulations, and policy and procedural or instructional memoranda, unless otherwise specifically waived as designated in the executed project-specific PROGRAM SUPPLEMENT.

10. If PROJECT is not on STATE-owned right of way, PROJECT shall be constructed in accordance with LOCAL ASSISTANCE PROCEDURES that describes minimum statewide design standards for local agency streets and roads. LOCAL ASSISTANCE PROCEDURES for projects off the National Highway System (NHS) allow STATE to accept either the STATE's minimum statewide design standards or the approved geometric design standards of ADMINISTERING AGENCY. Additionally, for projects off the NHS, STATE will accept ADMINISTERING AGENCY-approved standard specifications, standard plans, materials sampling and testing quality assurance programs that meet the conditions described in the then current LOCAL ASSISTANCE PROCEDURES.

11. If PROJECT involves work within or partially within STATE-owned right-of-way, that PROJECT shall also be subject to compliance with the policies, procedures and standards of the STATE Project Development Procedures Manual and Highway Design Manual and, where appropriate, an executed Cooperative Agreement between STATE and ADMINISTERING AGENCY that outlines the PROJECT responsibilities and respective obligations of the PARTIES. ADMINISTERING AGENCY and its contractors shall each obtain an encroachment permit through STATE prior to commencing any work within STATE rights of way or work which affects STATE facilities.

12. When PROJECT is not on the State Highway System but includes work to be performed by a railroad, the contract for such work shall be prepared by ADMINISTERING AGENCY or by STATE, as the PARTIES may hereafter agree. In either event, ADMINISTERING AGENCY shall enter into an agreement with the railroad providing for future maintenance of protective devices or other facilities installed under the contract.

13. If PROJECT is using STATE funds, the Department of General Services, Division of the State Architect, or its designee, shall review the contract PS&E for the construction of buildings, structures, sidewalks, curbs and related facilities for accessibility and usability. ADMINISTERING AGENCY shall not award a PROJECT construction contract for these types of improvements until the State Architect has issued written approval stating that the PROJECT plans and specifications comply with the provisions of sections 4450 and 4454 of the California Government Code, if applicable. Further requirements and guidance are provided in Title 24 of the California Code of Regulations.

14. ADMINISTERING AGENCY will advertise, award and administer PROJECT in accordance with the current LOCAL ASSISTANCE PROCEDURES unless otherwise stated in the executed project-specific PROGRAM SUPPLEMENT.

15. ADMINISTERING AGENCY shall provide or arrange for adequate supervision and inspection of each PROJECT. While consultants may perform supervision and inspection work for PROJECT with a fully qualified and licensed engineer, ADMINISTERING AGENCY shall provide a full-time employee to be in responsible charge of each PROJECT who is not a consultant.

16. ADMINISTERING AGENCY shall submit PROJECT-specific contract award documents to STATE's District Local Assistance Engineer within sixty (60) days after contract award. A copy of the award documents shall also be included with the submittal of the first invoice for a construction contract by ADMINISTERING AGENCY.

17. ADMINISTERING AGENCY shall submit the final report documents that collectively constitute a "Report of Expenditures" within one hundred eighty (180) days of PROJECT completion. Failure by ADMINISTERING AGENCY to submit a "Report of Expenditures" within one hundred eighty (180) days of project completion will result in STATE imposing sanctions upon ADMINISTERING AGENCY in accordance with the current LOCAL ASSISTANCE PROCEDURES.

18. ADMINISTERING AGENCY shall comply with: (i) section 504 of the Rehabilitation Act of 1973 which prohibits discrimination on the basis of disability in federally assisted programs; (ii) the Americans with Disabilities Act (ADA) of 1990 which prohibits discrimination on the basis of disability irrespective of funding; and (iii) all applicable regulations and guidelines issued pursuant to both the Rehabilitation Act and the ADA.

19. The Congress of the United States, the Legislature of the State of California and the Governor of the State of California, each within their respective jurisdictions, have prescribed certain nondiscrimination requirements with respect to contract and other work financed with public funds. ADMINISTERING AGENCY agrees to comply with the requirements of the FAIR EMPLOYMENT PRACTICES ADDENDUM (Exhibit A attached hereto) and the NONDISCRIMINATION ASSURANCES (Exhibit B attached hereto). ADMINISTERING AGENCY further agrees that any agreement entered into by ADMINISTERING AGENCY with a third party for performance of PROJECT-related work shall incorporate Exhibits A and B (with third party's name replacing ADMINISTERING AGENCY) as essential parts of such agreement to be enforced by that third party as verified by ADMINISTERING AGENCY.

ARTICLE II - RIGHTS OF WAY

1. No contract for the construction of a federal-aid PROJECT shall be awarded until all necessary rights of way have been secured. Prior to the advertising for construction of PROJECT, ADMINISTERING AGENCY shall certify and, upon request, shall furnish STATE with evidence that all necessary rights of way are available for construction purposes or will be available by the time of award of the construction contract.

2. ADMINISTERING AGENCY agrees to indemnify and hold STATE harmless from any liability that may result in the event the right of way for a PROJECT, including, but not limited to, being clear as certified or if said right of way is found to contain hazardous materials requiring treatment or removal to remediate in accordance with Federal and State laws. The furnishing of right of way as provided for herein includes, in addition to all real property required for the PROJECT, title free and clear of obstructions and encumbrances affecting PROJECT and the payment, as required by applicable law, of relocation costs and damages to remainder real property not actually taken but injuriously affected by PROJECT. ADMINISTERING AGENCY shall pay, from its own non-matching funds, any costs which arise out of delays to the construction of PROJECT because utility facilities have not been timely removed or relocated, or because rights of way were not available to ADMINISTERING AGENCY for the orderly prosecution of PROJECT work.

3. Subject to STATE approval and such supervision as is required by LOCAL ASSISTANCE PROCEDURES over ADMINISTERING AGENCY's right of way acquisition procedures, ADMINISTERING AGENCY may claim reimbursement from federal funds for expenditures incurred in purchasing only the necessary rights of way needed for the PROJECT after crediting PROJECT with the fair market value of any excess property retained and not disposed of by ADMINISTERING AGENCY.

4. When real property rights are to be acquired by ADMINISTERING AGENCY for a PROJECT, said ADMINISTERING AGENCY must carry out that acquisition in compliance with all applicable State and Federal laws and regulations, in accordance with State procedures as published in State's current LOCAL ASSISTANCE PROCEDURES and STATE's Right-of-Way Manual, subject to STATE oversight to ensure that the completed work is acceptable under the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended.

5. Whether or not federal-aid is to be requested for right of way, should ADMINISTERING AGENCY, in acquiring right of way for PROJECT, displace an individual, family, business, farm operation, or non-profit organization, relocation payments and services will be provided as set forth in 49 CFR, Part 24. The public will be adequately informed of the relocation payments and services which will be available, and, to the greatest extent practicable, no person lawfully occupying real property shall be required to move from his/her dwelling or to move his/her business or farm operation without at least ninety (90) days written notice from ADMINISTERING AGENCY. ADMINISTERING AGENCY will provide STATE with specific assurances, on each portion of the PROJECT, that no person will be displaced until comparable decent, safe and sanitary replacement housing is available within a reasonable period of time prior to displacement, and that ADMINISTERING AGENCY's relocation program is realistic and adequate to provide orderly, timely and efficient relocation of PROJECT-displaced persons as provided in 49 CFR, Part 24.

6. ADMINISTERING AGENCY shall, along with recording the deed or instrument evidencing title in the name of the ADMINISTERING AGENCY or their assignee, also record an Agreement Declaring Restrictive Covenants (ADRC) as a separate document incorporating the assurances included within Exhibits A and B and Appendices A, B, C and D of this AGREEMENT, as appropriate.

ARTICLE III - MAINTENANCE AND MANAGEMENT

1. ADMINISTERING AGENCY will maintain and operate the property acquired, developed, constructed, rehabilitated, or restored by PROJECT for its intended public use until such time as the parties might amend this AGREEMENT to otherwise provide. With the approval of STATE, ADMINISTERING AGENCY or its successors in interest in the PROJECT property may transfer this obligation and responsibility to maintain and operate PROJECT property for that intended public purpose to another public entity.

2. Upon ADMINISTERING AGENCY's acceptance of the completed federal-aid construction contract or upon contractor being relieved of the responsibility for maintaining and protecting PROJECT, ADMINISTERING AGENCY will be responsible for the maintenance, ownership, liability, and the expense thereof, for PROJECT in a manner satisfactory to the authorized representatives of STATE and FHWA and if PROJECT falls within the jurisdictional limits of another Agency or Agencies, it is the duty of ADMINISTERING AGENCY to facilitate a separate maintenance agreement(s) between itself and the other jurisdictional Agency or Agencies providing for the operation, maintenance, ownership and liability of PROJECT. Until those agreements are executed, ADMINISTERING AGENCY will be responsible for all PROJECT operations, maintenance, ownership and liability in a manner satisfactory to the authorized representatives of STATE and FHWA. If, within ninety (90) days after receipt of notice from STATE that a PROJECT, or any portion thereof, is not being properly operated and maintained and ADMINISTERING AGENCY has not satisfactorily remedied the conditions complained of, the approval of future federal-aid projects of ADMINISTERING AGENCY will be withheld until the PROJECT shall have been put in a condition of operation and maintenance satisfactory to STATE and FHWA. The provisions of this section shall not apply to a PROJECT that has been vacated through due process of law with STATE's concurrence.

3. PROJECT and its facilities shall be maintained by an adequate and well-trained staff of engineers and/or such other professionals and technicians as PROJECT reasonably requires. Said operations and maintenance staff may be employees of ADMINISTERING AGENCY, another unit of government, or a contractor under agreement with ADMINISTERING AGENCY. All maintenance will be performed at regular intervals or as required for efficient operation of the complete PROJECT improvements.

ARTICLE IV - FISCAL PROVISIONS

1. All contractual obligations of STATE are subject to the appropriation of resources by the Legislature and the allocation of resources by the California Transportation Commission (CTC).

2. STATE'S financial commitment of federal funds will occur only upon the execution of this AGREEMENT, the authorization of the project-specific E-76 or E-76 (AMOD), the execution of each project-specific PROGRAM SUPPLEMENT, and STATE's approved finance letter.

3. ADMINISTERING AGENCY may submit signed invoices in arrears for reimbursement of participating PROJECT costs on a regular basis once the project-specific PROGRAM SUPPLEMENT has been executed by STATE.

4. ADMINISTERING AGENCY agrees, as a minimum, to submit invoices at least once every six (6) months commencing after the funds are encumbered on either the project-specific PROGRAM SUPPLEMENT or through a project-specific finance letter approved by STATE. STATE reserves the right to suspend future authorizations/obligations, and invoice payments for any on-going or future federal-aid project by ADMINISTERING AGENCY if PROJECT costs have not been invoiced by ADMINISTERING AGENCY for a six (6) month period.

5. Invoices shall be submitted on ADMINISTERING AGENCY letterhead that includes the address of ADMINISTERING AGENCY and shall be formatted in accordance with LOCAL ASSISTANCE PROCEDURES.

6. ADMINISTERING AGENCY must have at least one copy of supporting backup documentation for costs incurred and claimed for reimbursement by ADMINISTERING AGENCY. ADMINISTERING AGENCY agrees to submit supporting backup documentation with invoices if requested by State. Acceptable backup documentation includes, but is not limited to, agency's progress payment to the contractors, copies of cancelled checks showing amounts made payable to vendors and contractors, and/or a computerized summary of PROJECT costs.

7. Payments to ADMINISTERING AGENCY can only be released by STATE as reimbursement of actual allowable PROJECT costs already incurred and paid for by ADMINISTERING AGENCY.

8. Indirect Cost Allocation Plans/Indirect Cost Rate Proposals (ICAP/ICRP), Central Service Cost Allocation Plans and related documentation are to be prepared and provided to STATE (Caltrans Audits & Investigations) for review and approval prior to ADMINISTERING AGENCY seeking reimbursement of indirect costs incurred within each fiscal year being claimed for State and federal reimbursement. ICAPs/ICRPs must be prepared in accordance with the requirements set forth in 2 CFR, Part 200, Chapter 5 of the Local Assistance Procedural Manual, and the ICAP/ICRP approval procedures established by STATE.

9. Once PROJECT has been awarded, STATE reserves the right to de-obligate any excess federal funds from the construction phase of PROJECT if the contract award amount is less than the obligated amount, as shown on the PROJECT E-76 or E-76 (AMOD).

10. STATE will withhold the greater of either two (2) percent of the total of all federal funds encumbered for each PROGRAM SUPPLEMENT or $40,000 until ADMINISTERING AGENCY submits the Final Report of Expenditures for each completed PROGRAM SUPPLEMENT PROJECT.

11. The estimated total cost of PROJECT, the amount of federal funds obligated, and the required matching funds may be adjusted by mutual consent of the PARTIES hereto with a finance letter, a detailed estimate, if required, and approved E-76 (AMOD). Federal-aid funding may be increased to cover PROJECT cost increases only if such funds are available and FHWA concurs with that increase.

12. When additional federal-aid funds are not available, ADMINISTERING AGENCY agrees that the payment of federal funds will be limited to the amounts authorized on the PROJECT specific E-76 / E-76 (AMOD) and agrees that any increases in PROJECT costs must be defrayed with ADMINISTERING AGENCY's own funds.

13. ADMINISTERING AGENCY shall use its own non-federal funds to finance the local share of eligible costs and all expenditures or contract items ruled ineligible for financing with federal funds. STATE shall make the determination of ADMINISTERING AGENCY's cost eligibility for federal fund financing of PROJECT costs.

14. ADMINISTERING AGENCY will reimburse STATE for STATE's share of costs for work performed by STATE at the request of ADMINISTERING AGENCY. STATE's costs shall include overhead assessments in accordance with section 8755.1 of the State Administrative Manual.

15. Federal and state funds allocated from the State Transportation Improvement Program (STIP) are subject to the timely use of funds provisions enacted by Senate Bill 45, approved in 1997, and subsequent STIP Guidelines and State procedures approved by the CTC and STATE.

16. Federal funds encumbered for PROJECT are available for liquidation for a period of six (6) years from the beginning of the State fiscal year the funds were appropriated in the State Budget. State funds encumbered for PROJECT are available for liquidation only for six (6) years from the beginning of the State fiscal year the funds were appropriated in the State Budget. Federal or state funds not liquidated within these periods will be reverted unless a Cooperative Work Agreement (CWA) is submitted by ADMINISTERING AGENCY and approved by the California Department of Finance (per Government Code section 16304). The exact date of fund reversion will be reflected in the STATE signed finance letter for PROJECT.

17. Payments to ADMINISTERING AGENCY for PROJECT-related travel and subsistence (per diem) expenses of ADMINISTERING AGENCY forces and its contractors and subcontractors claimed for reimbursement or as local match credit shall not exceed rates authorized to be paid rank and file STATE employees under current State Department of Personnel Administration (DPA) rules. If the rates invoiced by ADMINISTERING AGENCY are in excess of DPA rates, ADMINISTERING AGENCY is responsible for the cost difference, and any overpayments inadvertently paid by STATE shall be reimbursed to STATE by ADMINISTERING AGENCY on demand within thirty (30) days of such invoice.

18. ADMINISTERING AGENCY agrees to comply with 2 CFR, Part 200, Uniform Administrative Requirements, Cost Principles and Audit Requirement for Federal Awards.

19. ADMINISTERING AGENCY agrees, and will assure that its contractors and subcontractors will be obligated to agree, that Contract Cost Principles and Procedures, 48 CFR, Federal Acquisition Regulations System, Chapter 1, Part 31, et seq., shall be used to determine the allowability of individual PROJECT cost items.

20. Every sub-recipient receiving PROJECT funds under this AGREEMENT shall comply with 2 CFR, Part 200, 23 CFR, 48 CFR Chapter 1, Part 31, Local Assistance Procedures, Public Contract Code (PCC) 10300-10334 (procurement of goods), PCC 10335-10381 (non-A&E services), and other applicable STATE and FEDERAL regulations.

21. Any PROJECT costs for which ADMINISTERING AGENCY has received payment or credit that are determined by subsequent audit to be unallowable under 2 CFR, Part 200, 23 CFR, 48 CFR, Chapter 1, Part 31, and other applicable STATE and FEDERAL regulations, are subject to repayment by ADMINISTERING AGENCY to STATE.

22. Should ADMINISTERING AGENCY fail to refund any moneys due upon written demand by STATE as provided hereunder or should ADMINISTERING AGENCY breach this AGREEMENT by failing to complete PROJECT without adequate justification and approval by STATE, then, within thirty 30 days of demand, or within such other period as may be agreed to in writing between the PARTIES, STATE, acting through the State Controller, the State Treasurer, or any other public entity or agency, may withhold or demand a transfer of an amount equal to the amount paid by or owed to STATE from future apportionments, or any other funds due ADMINISTERING AGENCY from the Highway Users Tax Fund or any other sources of funds, and/or may withhold approval of future ADMINISTERING AGENCY federal-aid projects.

23. Should ADMINISTERING AGENCY be declared to be in breach of this AGREEMENT or otherwise in default thereof by STATE, and if ADMINISTERING AGENCY is constituted as a joint powers authority, special district, or any other public entity not directly receiving funds through the State Controller, STATE is authorized to obtain reimbursement from whatever sources of funding are available, including the withholding or transfer of funds, pursuant to Article IV - 22, from those constituent entities comprising a joint powers authority or by bringing of an action against ADMINISTERING AGENCY or its constituent member entities, to recover all funds provided by STATE hereunder.

24. ADMINISTERING AGENCY acknowledges that the signatory party represents the ADMINISTERING AGENCY and further warrants that there is nothing within a Joint Powers Agreement, by which ADMINISTERING AGENCY was created, if any exists, that would restrict or otherwise limit STATE's ability to recover State funds improperly spent by ADMINISTERING AGENCY in contravention of the terms of this AGREEMENT.

ARTICLE V
AUDITS, THIRD PARTY CONTRACTING, RECORDS RETENTION AND REPORTS

1. STATE reserves the right to conduct technical and financial audits of PROJECT work and records and ADMINISTERING AGENCY agrees, and shall require its contractors and subcontractors to agree, to cooperate with STATE by making all appropriate and relevant PROJECT records available for audit and copying as required by paragraph three (3) of ARTICLE V.

2. ADMINISTERING AGENCY, its contractors and subcontractors shall establish and maintain a financial management system and records that properly accumulate and segregate reasonable, allowable, and allocable incurred PROJECT costs and matching funds by line item for the PROJECT. The financial management system of ADMINISTERING AGENCY, its contractors and all subcontractors shall conform to Generally Accepted Accounting Principles, enable the determination of incurred costs at interim points of completion, and provide support for reimbursement payment vouchers or invoices sent to or paid by STATE.

3. ADMINISTERING AGENCY, ADMINISTERING AGENCY's contractors and subcontractors, and STATE shall each maintain and make available for inspection and audit by STATE, the California State Auditor, or any duly authorized representative of STATE or the United States all books, documents, papers, accounting records, and other evidence pertaining to the performance of such contracts, including, but not limited to, the costs of administering those various contracts and ADMINISTERING AGENCY shall furnish copies thereof if requested. All of the above referenced parties shall make such AGREEMENT, PROGRAM SUPPLEMENT and contract materials available at their respective offices at all reasonable times during the entire PROJECT period and for three (3) years from the date of submission of the final expenditure report by the STATE to the FHWA.

4. ADMINISTERING AGENCY is required to have an audit in accordance with the Single Audit Act of 2 CFR 200 if it expends $750,000 or more in Federal Funds in a single fiscal year. The Federal Funds received under a PROGRAM SUPPLEMENT are a part of the Catalogue of Federal Domestic Assistance (CFDA) 20.205.

5. ADMINISTERING AGENCY agrees to include all PROGRAM SUPPLEMENTS adopting the terms of this AGREEMENT in the schedule of projects to be examined in ADMINISTERING AGENCY's annual audit and in the schedule of projects to be examined under its single audit prepared in accordance with 2 CFR, Part 200.

6. ADMINISTERING AGENCY shall not award a non-A&E contract over $5,000, construction contract over $10,000, or other contracts over $25,000 (excluding professional service contracts of the type which are required to be procured in accordance with Government Code sections 4525 (d), (e) and (f)) on the basis of a noncompetitive negotiation for work to be performed under this AGREEMENT without the prior written approval of STATE. Contracts awarded by ADMINISTERING AGENCY, if intended as local match credit, must meet the requirements set forth in this AGREEMENT regarding local match funds.

7. Any subcontract entered into by ADMINISTERING AGENCY as a result of this AGREEMENT shall contain provisions 5, 6, 17, 19 and 20 of ARTICLE IV, FISCAL PROVISIONS, and provisions 1, 2, and 3 of this ARTICLE V, AUDITS, THIRD-PARTY CONTRACTING RECORDS RETENTION AND REPORTS,

8. To be eligible for local match credit, ADMINISTERING AGENCY must ensure that local match funds used for a PROJECT meet the fiscal provisions requirements outlined in ARTICLE IV in the same manner as required of all other PROJECT expenditures.

9. In addition to the above, the pre-award requirements of third-party contractor/consultants with ADMINISTERING AGENCY should be consistent with the LOCAL ASSISTANCE PROCEDURES.

ARTICLE VI - FEDERAL LOBBYING ACTIVITIES CERTIFICATION

1. By execution of this AGREEMENT, ADMINISTERING AGENCY certifies, to the best of the signatory officer's knowledge and belief, that:

A. No federal or state appropriated funds have been paid or will be paid, by or on behalf of ADMINISTERING AGENCY, to any person for influencing or attempting to influence an officer or employee of any STATE or federal agency, a member of the State Legislature or United States Congress, an officer or employee of the Legislature or Congress, or any employee of a Member of the Legislature or Congress in connection with the awarding of any STATE or federal contract, including this AGREEMENT, the making of any STATE or federal loan, the entering into of any cooperative contract, and the extension, continuation, renewal, amendment, or modification of any STATE or federal contract, grant, loan, or cooperative contract.

B. If any funds other than federal appropriated funds have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any federal agency, a member of Congress, an officer or employee of Congress or an employee of a member of Congress in connection with this AGREEMENT, grant, local, or cooperative contract, ADMINISTERING AGENCY shall complete and submit Standard Form-LLL, "Disclosure Form to Rep Lobbying," in accordance with the form instructions.

C. This certification is a material representation of fact upon which reliance was placed when this AGREEMENT and each PROGRAM SUPPLEMENT was or will be made or entered into. Submission of this certification is a prerequisite for making or entering into this AGREEMENT imposed by Section 1352, Title 31, United States Code. Any party who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

2. ADMINISTERING AGENCY also agrees by signing this AGREEMENT that the language of this certification will be included in all lower tier sub-agreements which exceed $100,000 and that all such sub-recipients shall certify and disclose accordingly.

ARTICLE VII - MISCELLANEOUS PROVISIONS

1. ADMINISTERING AGENCY agrees to use all state funds reimbursed hereunder only for transportation purposes that are in conformance with Article XIX of the California State Constitution and the relevant Federal Regulations.

2. This AGREEMENT is subject to any additional restrictions, limitations, conditions, or any statute enacted by the State Legislature or adopted by the CTC that may affect the provisions, terms, or funding of this AGREEMENT in any manner.

3. ADMINISTERING AGENCY and the officers and employees of ADMINISTERING AGENCY, when engaged in the performance of this AGREEMENT, shall act in an independent capacity and not as officers, employees or agents of STATE or the federal government.

4. Each project-specific E-76 or E-76 (AMOD), PROGRAM SUPPLEMENT and Finance Letter shall separately establish the terms and funding limits for each described PROJECT funded under the AGREEMENT. No federal or state funds are obligated against this AGREEMENT.

5. ADMINISTERING AGENCY certifies that neither ADMINISTERING AGENCY nor its principals are suspended or debarred at the time of the execution of this AGREEMENT. ADMINISTERING AGENCY agrees that it will notify STATE immediately in the event a suspension or a debarment occurs after the execution of this AGREEMENT.

6. ADMINISTERING AGENCY certifies, by execution of this AGREEMENT, that no person or selling agency has been employed or retained to solicit or secure this AGREEMENT upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by ADMINISTERING AGENCY for the purpose of securing business. For breach or violation of this warranty, STATE has the right to annul this AGREEMENT without liability, pay only for the value of the work actually performed, or in STATE's discretion, to deduct from the price of consideration, or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee.

7. In accordance with Public Contract Code section 10296, ADMINISTERING AGENCY hereby certifies under penalty of perjury that no more than one final unappealable finding of contempt of court by a federal court has been issued against ADMINISTERING AGENCY within the immediate preceding two (2) year period because of ADMINISTERING AGENCY's failure to comply with an order of a federal court that orders ADMINISTERING AGENCY to comply with an order of the National Labor Relations Board.

8. ADMINISTERING AGENCY shall disclose any financial, business, or other relationship with STATE, FHWA or Federal Transit Administration (FTA) that may have an impact upon the outcome of this AGREEMENT. ADMINISTERING AGENCY shall also list current contractors who may have a financial interest in the outcome of this AGREEMENT.

9. ADMINISTERING AGENCY hereby certifies that it does not have nor shall it acquire any financial or business interest that would conflict with the performance of PROJECT under this AGREEMENT.

10. ADMINISTERING AGENCY certifies that this AGREEMENT was not obtained or secured through rebates, kickbacks or other unlawful consideration either promised or paid to any STATE employee. For breach or violation of this warranty, STATE shall have the right, in its discretion, to terminate this AGREEMENT without liability, to pay only for the work actually performed, or to deduct from the PROGRAM SUPPLEMENT price or otherwise recover the full amount of such rebate, kickback, or other unlawful consideration.

11. Any dispute concerning a question of fact arising under this AGREEMENT that is not disposed of by agreement shall be decided by the STATE's Contract Officer who may consider any written or verbal evidence submitted by ADMINISTERING AGENCY. The decision of the Contract Officer, issued in writing, shall be conclusive and binding on the PARTIES on all questions of fact considered and determined by the Contract Officer.

12. Neither the pending of a dispute nor its consideration by the Contract Officer will excuse ADMINISTERING AGENCY from full and timely performance in accordance with the terms of this AGREEMENT.

13. Neither ADMINISTERING AGENCY nor any officer or employee thereof is responsible for any injury, damage or liability occurring by reason of anything done or omitted to be done by STATE, under or in connection with any work, authority or jurisdiction arising under this AGREEMENT. It is understood and agreed that STATE shall fully defend, indemnify and save harmless the ADMINISTERING AGENCY and all of its officers and employees from all claims, suits or actions of every name, kind and description brought forth under, including, but not limited to, tortious, contractual, inverse condemnation and other theories or assertions of liability occurring by reason of anything done or omitted to be done by STATE under this AGREEMENT.

14. Neither STATE nor any officer or employee thereof shall be responsible for any injury, damage or liability occurring by reason of anything done or omitted to be done by ADMINISTERING AGENCY under, or in connection with, any work, authority or jurisdiction arising under this AGREEMENT. It is understood and agreed that ADMINISTERING AGENCY shall fully defend, indemnify and save harmless STATE and all of its officers and employees from all claims, suits or actions of every name, kind and description brought forth under, including, but not limited to, tortious, contractual, inverse condemnation or other theories or assertions of liability occurring by reason of anything done or omitted to be done by ADMINISTERING AGENCY under this AGREEMENT.

15. STATE reserves the right to terminate funding for any PROJECT upon written notice to ADMINISTERING AGENCY in the event that ADMINISTERING AGENCY fails to proceed with PROJECT work in accordance with the project-specific PROGRAM SUPPLEMENT, the bonding requirements if applicable, or otherwise violates the conditions of this AGREEMENT and/or PROGRAM SUPPLEMENT, or the funding allocation such that substantial performance is significantly endangered.

16. No termination shall become effective if, within thirty (30) days after receipt of a Notice of Termination, ADMINISTERING AGENCY either cures the default involved or, if not reasonably susceptible of cure within said thirty (30) day period, ADMINISTERING AGENCY proceeds thereafter to complete the cure in a manner and time line acceptable to STATE. Any such termination shall be accomplished by delivery to ADMINISTERING AGENCY of a Notice of Termination, which notice shall become effective not less than thirty (30) days after receipt, specifying the reason for the termination, the extent to which funding of work under this AGREEMENT is terminated and the date upon which such termination becomes effective, if beyond thirty (30) days after receipt. During the period before the effective termination date, ADMINISTERING AGENCY and STATE shall meet to attempt to resolve any dispute. In the event of such termination, STATE may proceed with the PROJECT work in a manner deemed proper by STATE. If STATE terminates funding for PROJECT with ADMINISTERING AGENCY, STATE shall pay ADMINISTERING AGENCY the sum due ADMINISTERING AGENCY under the PROGRAM SUPPLEMENT and/or STATE approved finance letter prior to termination, provided, however, ADMINISTERING AGENCY is not in default of the terms and conditions of this AGREEMENT or the project-specific PROGRAM SUPPLEMENT and that the cost of PROJECT completion to STATE shall first be deducted from any sum due ADMINISTERING AGENCY.

17. In case of inconsistency or conflicts with the terms of this AGREEMENT and that of a project-specific PROGRAM SUPPLEMENT, the terms stated in that PROGRAM SUPPLEMENT shall prevail over those in this AGREEMENT.

18. Without the written consent of STATE, this AGREEMENT is not assignable by ADMINISTERING AGENCY either in whole or in part.

19. No alteration or variation of the terms of this AGREEMENT shall be valid unless made in writing and signed by the PARTIES, and no oral understanding or agreement not incorporated herein shall be binding on any of the PARTIES.

IN WITNESS WHEREOF, the PARTIES have executed this AGREEMENT by their duly authorized officers.

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	Town of Paradise
By_____	By_____
_____	_____
Chief, Office of Project Implementation Division of Local Assistance	_____ Town of Paradise Representative Name & Title (Authorized Governing Body Representative)
Date _____	Date _____

EXHIBIT A

FAIR EMPLOYMENT PRACTICES ADDENDUM

1. In the performance of this Agreement, ADMINISTERING AGENCY will not discriminate against any employee for employment because of race, color, sex, sexual orientation, religion, ancestry or national origin, physical disability, medical condition, marital status, political affiliation, family and medical care leave, pregnancy leave, or disability leave. ADMINISTERING AGENCY will take affirmative action to ensure that employees are treated during employment without regard to their race, sex, sexual orientation, color, religion, ancestry, or national origin, physical disability, medical condition, marital status, political affiliation, family and medical care leave, pregnancy leave, or disability leave. Such action shall include, but not be limited to, the following: employment; upgrading; demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. ADMINISTERING AGENCY shall post in conspicuous places, available to employees for employment, notices to be provided by STATE setting forth the provisions of this Fair Employment section.

2. ADMINISTERING AGENCY, its contractor(s) and all subcontractors shall comply with the provisions of the Fair Employment and Housing Act (Government Code Section 1290-0 et seq.), and the applicable regulations promulgated thereunder (California code of Regulations, Title 2, Section 7285.0 et seq.). The applicable regulations of the Fair Employment and Housing Commission implementing Government Code, Section 12900(a-f), set forth in Chapter 5 of Division 4 of Title 2 of the California Code of Regulations are incorporated into this AGREEMENT by reference and made a part hereof as if set forth in full. Each of the ADMINISTERING AGENCY'S contractors and all subcontractors shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreements, as appropriate.

3. ADMINISTERING AGENCY shall include the nondiscrimination and compliance provisions of this clause in all contracts and subcontracts to perform work under this AGREEMENT.

4. ADMINISTERING AGENCY will permit access to the records of employment, employment advertisements, application forms, and other pertinent data and records by STATE, the State Fair Employment and Housing Commission, or any other agency of the State of California designated by STATE, for the purposes of investigation to ascertain compliance with the Fair Employment section of this Agreement.

5. Remedies for Willful Violation:

(a) STATE may determine a willful violation of the Fair Employment provision to have occurred upon receipt of a final judgment to that effect from a court in an action to which ADMINISTERING AGENCY was a party, or upon receipt of a written notice from the Fair Employment and Housing Commission that it has investigated and determined that ADMINISTERING AGENCY has violated the Fair Employment Practices Act and had issued an order under Labor Code Section 1426 which has become final or has obtained an injunction under Labor Code Section 1429.

(b) For willful violation of this Fair Employment Provision, STATE shall have the right to terminate this Agreement either in whole or in part, and any loss or damage sustained by STATE in securing the goods or services thereunder shall be borne and paid for by ADMINISTERING AGENCY and by the surety under the performance bond, if any, and STATE may deduct from any moneys due or thereafter may become due to ADMINISTERING AGENCY, the difference between the price named in the Agreement and the actual cost thereof to STATE to cure ADMINISTERING AGENCY's breach of this Agreement.

EXHIBIT B

NONDISCRIMINATION ASSURANCES

ADMINISTERING AGENCY HEREBY AGREES THAT, as a condition to receiving any federal financial assistance from the STATE, acting for the U.S. Department of Transportation, it will comply with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.S.C. 2000d-42 U.S.C. 2000d-4 (hereinafter referred to as the ACT), and all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, "Nondiscrimination in Federally-Assisted Programs of the Department of Transportation - Effectuation of Title VI of the Civil Rights Act of 1964" (hereinafter referred to as the REGULATIONS), the Federal-aid Highway Act of 1973, and other pertinent directives, to the end that in accordance with the ACT, REGULATIONS, and other pertinent directives, no person in the United States shall, on the grounds of race, color, sex, national origin, religion, age or disability, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which ADMINISTERING AGENCY receives federal financial assistance from the Federal Department of Transportation. ADMINISTERING AGENCY HEREBY GIVES ASSURANCE THAT ADMINISTERING AGENCY will promptly take any measures necessary to effectuate this agreement. This assurance is required by subsection 21.7(a) (1) of the REGULATIONS.

More specifically, and without limiting the above general assurance, ADMINISTERING AGENCY hereby gives the following specific assurances with respect to its federal-aid Program:

1. That ADMINISTERING AGENCY agrees that each "program" and each "facility" as defined in subsections 21.23 (e) and 21.23 (b) of the REGULATIONS, will be (with regard to a "program") conducted, or will be (with regard to a "facility") operated in compliance with all requirements imposed by, or pursuant to, the REGULATIONS.

2. That ADMINISTERING AGENCY shall insert the following notification in all solicitations for bids for work or material subject to the REGULATIONS made in connection with the federal-aid Program and, in adapted form, in all proposals for negotiated agreements:

ADMINISTERING AGENCY hereby notifies all bidders that it will affirmatively insure that in any agreement entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, sex, national origin, religion, age, or disability in consideration for an award.

3. That ADMINISTERING AGENCY shall insert the clauses of Appendix A of this assurance in every agreement subject to the ACT and the REGULATIONS.

4. That the clauses of Appendix B of this Assurance shall be included as a covenant running with the land, in any deed effecting a transfer of real property, structures, or improvements thereon, or interest therein.

5. That where ADMINISTERING AGENCY receives federal financial assistance to construct a facility, or part of a facility, the Assurance shall extend to the entire facility and facilities operated in connection therewith.

6. That where ADMINISTERING AGENCY receives federal financial assistance in the form, or for the acquisition, of real property or an interest in real property, the Assurance shall extend to rights to space on, over, or under such property.

7. That ADMINISTERING AGENCY shall include the appropriate clauses set forth in Appendix C and D of this Assurance, as a covenant running with the land, in any future deeds, leases, permits, licenses, and similar agreements entered into by the ADMINISTERING AGENCY with other parties:

Appendix C;

(a) for the subsequent transfer of real property acquired or improved under the federal-aid Program; and

Appendix D;

(b) for the construction or use of or access to space on, over, or under real property acquired, or improved under the federal-aid Program.

8. That this assurance obligates ADMINISTERING AGENCY for the period during which federal financial assistance is extended to the program, except where the federal financial assistance is to provide, or is in the form of, personal property or real property or interest therein, or structures, or improvements thereon, in which case the assurance obligates ADMINISTERING AGENCY or any transferee for the longer of the following periods:

(a) the period during which the property is used for a purpose for which the federal financial assistance is extended, or for another purpose involving the provision of similar services or benefits; or

(b) the period during which ADMINISTERING AGENCY retains ownership or possession of the property.

9. That ADMINISTERING AGENCY shall provide for such methods of administration for the program as are found by the U.S. Secretary of Transportation, or the official to whom he delegates specific authority, to give reasonable guarantee that ADMINISTERING AGENCY, other recipients, sub-grantees, applicants, sub-applicants, transferees, successors in interest, and other participants of federal financial assistance under such program will comply with all requirements imposed by, or pursuant to, the ACT, the REGULATIONS, this Assurance and the Agreement.

10. That ADMINISTERING AGENCY agrees that the United States and the State of California have a right to seek judicial enforcement with regard to any matter arising under the ACT, the REGULATIONS, and this Assurance.

11. ADMINISTERING AGENCY shall not discriminate on the basis of race, religion, age, disability, color, national origin or sex in the award and performance of any STATE assisted contract or in the administration on its DBE Program or the requirements of 49 CFR Part 26. ADMINISTERING AGENCY shall take all necessary and reasonable steps under 49 CFR Part 26 to ensure non-discrimination in the award and administration of STATE assisted contracts. ADMINISTERING AGENCY'S DBE Implementation Agreement is incorporated by reference in this AGREEMENT. Implementation of this program is a legal obligation and failure to carry out its terms shall be treated as a violation of this agreement. Upon notification to the recipient of its failure to carry out its approved DBE Implementation Agreement, STATE may impose sanctions as provided for under 49 CFR Part 26 and may, in appropriate cases, refer the matter for enforcement under 18 USC 1001 and/or the Program Fraud Civil Remedies Act of 1985 (31USC 3801 et seq.)

THESE ASSURANCES are given in consideration of and for the purpose of obtaining any and all federal grants, loans, agreements, property, discounts or other federal financial assistance extended after the date hereof to ADMINISTERING AGENCY by STATE, acting for the U.S. Department of Transportation, and is binding on ADMINISTERING AGENCY, other recipients, subgrantees, applicants, sub-applicants, transferees, successors in interest and other participants in the federal-aid Highway Program.

APPENDIX A TO EXHIBIT B

During the performance of this Agreement, ADMINISTERING AGENCY, for itself, its assignees and successors in interest (hereinafter collectively referred to as ADMINISTERING AGENCY) agrees as follows:

(1) Compliance with Regulations: ADMINISTERING AGENCY shall comply with the regulations relative to nondiscrimination in federally assisted programs of the Department of Transportation, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the REGULATIONS), which are herein incorporated by reference and made a part of this agreement.

(2) Nondiscrimination: ADMINISTERING AGENCY, with regard to the work performed by it during the AGREEMENT, shall not discriminate on the grounds of race, color, sex, national origin, religion, age, or disability in the selection and retention of sub-applicants, including procurements of materials and leases of equipment. ADMINISTERING AGENCY shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the REGULATIONS, including employment practices when the agreement covers a program set forth in Appendix B of the REGULATIONS.

(3) Solicitations for Sub-agreements, Including Procurements of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by ADMINISTERING AGENCY for work to be performed under a Sub-agreement, including procurements of materials or leases of equipment, each potential sub-applicant or supplier shall be notified by ADMINISTERING AGENCY of the ADMINISTERING AGENCY's obligations under this Agreement and the REGULATIONS relative to nondiscrimination on the grounds of race, color, or national origin.

(4) Information and Reports: ADMINISTERING AGENCY shall provide all information and reports required by the REGULATIONS, or directives issued pursuant thereto, and shall permit access to ADMINISTERING AGENCY's books, records, accounts, other sources of information, and its facilities as may be determined by STATE or FHWA to be pertinent to ascertain compliance with such REGULATIONS or directives. Where any information required of ADMINISTERING AGENCY is in the exclusive possession of another who fails or refuses to furnish this information, ADMINISTERING AGENCY shall so certify to STATE or the FHWA as appropriate, and shall set forth what efforts ADMINISTERING AGENCY has made to obtain the information.

(5) Sanctions for Noncompliance: In the event of ADMINISTERING AGENCY's noncompliance with the nondiscrimination provisions of this agreement, STATE shall impose such agreement sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:

(a) withholding of payments to ADMINISTERING AGENCY under the Agreement within a reasonable period of time, not to exceed 90 days; and/or

(b) cancellation, termination or suspension of the Agreement, in whole or in part.

(6) Incorporation of Provisions: ADMINISTERING AGENCY shall include the provisions of paragraphs (1) through (6) in every sub-agreement, including procurements of materials and leases of equipment, unless exempt by the REGULATIONS, or directives issued pursuant thereto. ADMINISTERING AGENCY shall take such action with respect to any sub-agreement or procurement as STATE or FHWA may direct as a means of enforcing such provisions including sanctions for noncompliance, provided, however, that, in the event ADMINISTERING AGENCY becomes involved in, or is threatened with, litigation with a sub-applicant or supplier as a result of such direction, ADMINISTERING AGENCY may request STATE enter into such litigation to protect the interests of STATE, and, in addition, ADMINISTERING AGENCY may request the United States to enter into such litigation to protect the interests of the United States.

The following clauses shall be included in any and all deeds effecting or recording the transfer of PROJECT real property, structures or improvements thereon, or interest therein from the United States.

(GRANTING CLAUSE)

NOW, THEREFORE, the U.S. Department of Transportation, as authorized by law, and upon the condition that ADMINISTERING AGENCY will accept title to the lands and maintain the project constructed thereon, in accordance with Title 23, United States Code, the Regulations for the Administration of federal-aid for Highways and the policies and procedures prescribed by the Federal Highway Administration of the Department of Transportation and, also in accordance with and in compliance with the Regulations pertaining to and effectuating the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252; 42 U.S.C. 2000d to 2000d-4), does hereby remise, release, quitclaim and convey unto the ADMINISTERING AGENCY all the right, title, and interest of the U.S. Department of Transportation in, and to, said lands described in Exhibit "A" attached hereto and made a part hereof.

(HABENDUM CLAUSE)

TO HAVE AND TO HOLD said lands and interests therein unto ADMINISTERING AGENCY and its successors forever, subject, however, to the covenant, conditions, restrictions and reservations herein contained as follows, which will remain in effect for the period during which the real property or structures are used for a purpose for which federal financial assistance is extended or for another purpose involving the provision of similar services or benefits and shall be binding on ADMINISTERING AGENCY, its successors and assigns.

ADMINISTERING AGENCY, in consideration of the conveyance of said lands and interests in lands, does hereby covenant and agree as a covenant running with the land for itself, its successors and assigns,

(1) that no person shall on the grounds of race, color, sex, national origin, religion, age or disability, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination with regard to any facility located wholly or in part on, over, or under such lands hereby conveyed (;) (and) *

(2) that ADMINISTERING AGENCY shall use the lands and interests in lands so conveyed, in compliance with all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Non-discrimination in federally-assisted programs of the Department of Transportation - Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations may be amended (;) and

(3) that in the event of breach of any of the above-mentioned nondiscrimination conditions, the U.S. Department of Transportation shall have a right to re-enter said lands and facilities on said land, and the above-described land and facilities shall thereon revert to and vest in and become the absolute property of the U.S. Department of Transportation and its assigns as such interest existed prior to this deed.*

* Reverter clause and related language to be used only when it is determined that such a clause is necessary in order to effectuate the purposes of Title VI of the Civil Rights Act of 1964.

APPENDIX C TO EXHIBIT B

The following clauses shall be included in any and all deeds, licenses, leases, permits, or similar instruments entered into by ADMINISTERING AGENCY, pursuant to the provisions of Assurance 7(a) of Exhibit B.

The grantee (licensee, lessee, permittee, etc., as appropriate) for himself, his heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree (in the case of deeds and leases add "as covenant running with the land") that in the event facilities are constructed, maintained, or otherwise operated on the said property described in this (deed, license, lease, permit, etc.) for a purpose for which a U.S. Department of Transportation program or activity is extended or for another purpose involving the provision of similar services or benefits, the (grantee, licensee, lessee, permittee, etc.), shall maintain and operate such facilities and services in compliance with all other requirements imposed pursuant to Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of Secretary, Part 21, Nondiscrimination in federally-assisted programs of the Department of Transportation - Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations may be amended.

(Include in licenses, leases, permits, etc.)*

That in the event of breach of any of the above nondiscrimination covenants, ADMINISTERING AGENCY shall have the right to terminate the (license, lease, permit etc.) and to re-enter and repossess said land and the facilities thereon, and hold the same as if said (license, lease, permit, etc.) had never been made or issued.

(Include in deeds)*

That in the event of breach of any of the above nondiscrimination covenants, ADMINISTERING AGENCY shall have the right to re-enter said land and facilities thereon, and the above-described lands and facilities shall thereupon revert to and vest in and become the absolute property of ADMINISTERING AGENCY and its assigns.

* Reverter clause and related language to be used only when it is determined that such a clause is necessary in order to effectuate the purposes of Title VI of the Civil Rights Act of 1964.

APPENDIX D TO EXHIBIT B

The following shall be included in all deeds, licenses, leases, permits, or similar agreements entered into by the ADMINISTERING AGENCY, pursuant to the provisions of Assurance 7 (b) of Exhibit B.

The grantee (licensee, lessee, permittee, etc., as appropriate) for himself, his personal representatives, successors in interest and assigns, as a part of the consideration hereof, does hereby covenant and agree (in the case of deeds, and leases add "as a covenant running with the land") that:

(1) no person on the ground of race, color, sex, national origin, religion, age or disability, shall be excluded from participation in, denied the benefits of, or otherwise subjected to discrimination in the use of said facilities;

(2) that in the construction of any improvements on, over, or under such land and the furnishing of services thereon, no person on the ground of race, color, sex, national origin, religion, age or disability shall be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination; and

(3) that the (grantee, licensee, lessee, permittee, etc.,) shall use the premises in compliance with the Regulations.

(Include in licenses, leases, permits, etc.)*

That in the event of breach of any of the above nondiscrimination covenants, ADMINISTERING AGENCY shall have the right to terminate the (license, lease, permit, etc.) and to re-enter and repossess said land and the facilities thereon, and hold the same as if said (license, lease, permit, etc.) had never been made or issued.

(Include in deeds)*

That in the event of breach of any of the above nondiscrimination covenants, ADMINISTERING AGENCY shall have the right to re-enter said land and facilities thereon, and the above-described lands and facilities shall thereupon revert to and vest in and become the absolute property of ADMINISTERING AGENCY, and its assigns.

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* Reverter clause and related language to be used only when it is determined that such a clause is necessary in order to effectuate the purposes of Title VI of the Civil Rights Act of 1964.

Town of Paradise
Council Agenda Summary **Agenda Item: 6(g)**
Date: April 12, 2016

Originated by: Gina S. Will, Finance Director/Town Treasurer

Reviewed by: Lauren Gill, Town Manager

Subject: Report of Development Impact Fees for the Town of Paradise for Fiscal Years Ended June 30, 2015

Council Action Requested:

1. Adopt A Resolution of the Town Council of the Town of Paradise, California, Reporting Unexpended Development Impact Fees in Accordance with Government Code Section 66006; or

Alternatives:

Refer the matter back to staff for further development and clarification

Background:

In April 1995 the Town of Paradise adopted a Development Impact Fee Program to address the cost of facilities and capital needs generated by residential and commercial new development. The purpose was to ensure that new growth paid its own way and didn't burden existing revenue sources. In January 2001 the program and associated fees were revised and updated. The program has five basic elements:

- Fire Facilities, Training and Equipment
- Law Enforcement Facilities, Training and Equipment
- Traffic Control Facilities
- Streets and Thoroughfares
- Drainage Facilities

In accordance with Section 66006 of the Government Code, the Town is required to prepare an annual report related to development impact fees. This report must contain the following information and be made available to the public 15 days prior to review at a public meeting:

1. A brief description of the type of fee in the fund.
2. The amount of the fee.
3. The beginning and ending amount of each fund.
4. The amount of the fees collected and interest earned.
5. An identification of each public improvement on which fees were expended and the percent of the public improvement funded with the fees.

6. An identification of approximate dates by which the construction of the public improvements will commence if the Town determines that sufficient funds have been collected to complete the project.
7. A description of each interfund transfer or loan made from the fund (if any).
8. The amount of refunds made of fees collected (if any).

Staff has completed a resolution with attached reports which includes the required information for review and adoption. It reports on development impact fees for the fiscal years ended June 30, 2015.

Discussion:

Staff has completed a resolution with attached addendum which includes the required information for review and adoption. It reports on development impact fees for the fiscal year ended June 30, 2015.

$8,359 was used of the Traffic Control Facilities DIF funds to leverage grant funds and upgrade the traffic signals throughout the Town. The signals were equipped with battery backups installed and emergency vehicle detection systems.

$50,000 has been budgeted from the Drainage Facilities DIF funds in the current 2015/16 fiscal year to improve drainage issues along Pearson as part of the Pearson Road Shoulder Widening Project. Construction will begin on this project in early summer.

Over 30 individual drainage basins exist within the overall Drainage Facilities DIF funds so while collectively the fund has accumulated a reasonable balance, balances within each basin are not sufficient to properly address all drainage issues and without negatively impacting other basins. According to the plan, $7.7 million is needed to address all drainage issues. Staff will continue to leverage these funds and address drainage issues in conjunction with other road rehabilitation projects.

$42,000 has been budgeted in 2015/16 to purchase 2 used police vehicles in accordance with the Law Enforcement Facilities, Equipment and Training plan.

Conclusion/Fiscal Analysis:

There is no financial impact to the Town of preparing and presenting these development impact fee reports.

TOWN OF PARADISE

RESOLUTION NO. 16-___

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF PARADISE, CALIFORNIA, REPORTING UNEXPENDED DEVELOPMENT IMPACT FEES IN ACCORDANCE WITH GOVERNMENT CODE SECTION 66006

WHEREAS, Government Code section 66006 requires the Town to annually disclose to the public information concerning development impact fees it has received in connection with the approval of development projects; and

WHEREAS, pursuant to Government Code Section 66006, the Town made the information pertaining to the funds and improvements relating to development impact frees available to the public on March 24, 2016 after mailing notice thereof to any interest party who has filed a written request with the Town Clerk for such information.

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF PARADISE AS FOLLOWS:

Section 1. Pursuant to Government Code section 66006, the Town Council made available to the public all required development impact fees information for fiscal year ended June 30, 2015 as stated in the reports attached to this resolution as Exhibit "A".

Section 2. On April 12, 2016, after considering the available information and all written and oral evidence provided to it, the Council adopted this resolution.

PASSED AND ADOPTED by the Town Council of the Town of Paradise this 12th day of April 2016 by the following vote:

AYES:

NOES:

ABSENT:

NOT VOTING:

_____
Jody Jones, Mayor

ATTEST:

By: _____
Joanna Gutierrez, CMC, Town Clerk

APPROVED AS TO FORM:

By: _____
Dwight L. Moore, Town Attorney

Town of Paradise
Statement of Revenues, Expenditures, and Change in Fund Balances
Streets and Thoroughfares (Fund 2510)
For Fiscal Year Ended June 30, 2015

Streets and Thoroughfares Impact Fees are necessary and imposed on new development in order to mitigate the impact of increased traffic on the Town's roadways. The originally adopted Management Services Institute Development Impact Fee Report indicates that street shoulder widening, street widening, road extension and connections will be necessary to keep traffic moving smoothly throughout Town as development continues. In January 2001 the schedule of development impact fees projects were updated and revised.

	July 1, 2014 - June 30, 2015
Beginning Balance	**480,126.96**
Revenues:	
Impact Fees Collected: *	27,640.15
Interest and Other Earnings:	790.88
Total Revenues:	**28,431.03**
Expenditures:	
	-
Total Expenditures:	**-**
Ending Fund Balance	**508,557.99**

* Fees Calculated and Collected According to Resolution No. 01-04

Town of Paradise
Statement of Revenues, Expenditures, and Change in Fund Balances
Traffic Control Facilities (Fund 2520)
For Fiscal Year Ended June 30, 2015

The Town's growth will impact the level of congestion on all of the Town's roadways which is the reason Traffic Control Facilities Impact Fees are necessary and imposed on new development. The originally adopted Management Services Institute Development Impact Fee Report further explains that construction of new signals will be needed to avoid congestion in the future. In January 2001 the schedule of development impact fees projects were updated and revised.

	July 1, 2014 - June 30, 2015
Beginning Balance	**70,149.45**
Revenues:	
Impact Fees Collected: *	2,129.36
Interest and Other Earnings:	112.57
Total Revenues:	**2,241.93**
Expenditures:	
Town Signal Upgrade - Battery Backup and Emergency Vehicle Detection	(8,359.19)
Total Expenditures:	**(8,359.19)**
Ending Fund Balance	**64,032.19**

* Fees Calculated and Collected According to Resolution No. 01-04

Town of Paradise
Statement of Revenues, Expenditures, and Change in Fund Balances
Law Enforcement Facilities, Training and Equipment (Fund 2540)
For Fiscal Year Ended June 30, 2015

Law Enforcement Facilities Impact Fees are necessary and imposed on new development because future development will impact the Town's Police Department by requiring additional police officers and support staff, new equipment and vehicles and additional building space in order to maintain the same level of service. The originally adopted Management Services Institute Development Impact Fee Report supports this need. Additional equipment and facilities are necessary to accommodate the increased public safety demands of development. In January 2001 the schedule of development impact fees projects were updated and revised.

	July 1, 2014 - June 30, 2015
Beginning Balance	**41,589.38**
Revenues:	
Impact Fees Collected: *	3,810.68
Interest and Other Earnings:	70.71
Total Revenues:	**3,881.39**
Expenditures:	
	-
Total Expenditures:	**-**
Ending Fund Balance	**45,470.77**

* Fees Calculated and Collected According to Resolution No. 01-04

Town of Paradise
Statement of Revenues, Expenditures, and Change in Fund Balances
Fire Facilities, Training and Equipment (Fund 2550)
For Fiscal Year Ended June 30, 2015

Fire Facilities Impact Fees were imposed on new development because new development increases the demand on public safety facilities and fire equipment through increased calls for services as shown in the originally adopted Management Services Institute Development Impact Fee Report. Additional equipment and facilities are necessary to accommodate the increased public safety demands of development. In January 2001 the schedule of development impact fees projects were updated and revised.

	July 1, 2014 - June 30, 2015
Beginning Balance	**16,128.81**
Revenues:	
Impact Fees Collected: *	2,998.12
Interest and Other Earnings:	29.79
Total Revenues:	**3,027.91**
Expenditures:	
	-
Total Expenditures:	**-**
Ending Fund Balance	**19,156.72**

* Fees Calculated and Collected According to Resolution No. 01-04

Town of Paradise
Statement of Revenues, Expenditures, and Change in Fund Balances
Drainage Facilities (Fund 2551)
For Fiscal Year Ended June 30, 2015

The Construction of flood control and storm drainage facilities is essential to the preservation of private property, public streets, curbs and other facilities. Drainage Facilities Impact fees are necessary and imposed on new development in order to build such facilities. The originally adopted Management Services Institute Development Impact Fee Report indicates that development will require the installation of additional storm drain lines and detention basins to handle increased runoff from developing areas. In January 2001 the schedule of development impact fees projects were updated and revised.

	July 1, 2014 - June 30, 2015
Beginning Balance	**646,201.60**
Revenues:	
Impact Fees Collected: *	50,073.42
Interest and Other Earnings:	1,084.49
Total Revenues:	**51,157.91**
Expenditures:	
	-
Total Expenditures:	**-**
Ending Fund Balance	**697,359.51**

* Fees Calculated and Collected According to Resolution No. 01-04

TOWN OF PARADISE
Council Agenda Summary
Date: April 12, 2016

Agenda No. 6(h)

ORIGINATED BY: Doug Danz, Onsite Sanitary Official

REVIEWED BY: Lauren Gill, Town Manager

SUBJECT: Adopt a Resolution Amending Multiple Chapters of the Town of Paradise Manual for the Onsite Treatment of Wastewater in Accordance with State Requirements known as Tier II Local Agency Management Program (LAMP)

COUNCIL ACTION REQUESTED:

1) Consider Adopting Resolution 16-_____, A Resolution Amending Multiple Chapters of the Town of Paradise Manual for the Onsite Treatment of Wastewater in Accordance with State Requirements known as Tier II Local Agency Management Program (LAMP)
2) Provide alternative direction to staff.

BACKGROUND:

On June 19, 2012, the California State Water Resources Control Board (State Board) adopted Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems (State Policy). The State Policy requires all onsite wastewater jurisdictions in the State of California to implement a prescribed body of regulations known as Tier I requirements upon all onsite wastewater treatment system construction, repair and maintenance; or, to propose their own set of prescribed requirements under the Tier II provision of the Policy. Tier II requirements must be approved by the State Board as a Local Agency Management Program (LAMP).

Since its incorporation in 1979, the Town of Paradise has developed a very comprehensive and protective body of regulations that govern onsite wastewater construction. These regulations are located in the Paradise Municipal Code (PMC) and in the Town of Paradise Manual for the Onsite Treatment of Wastewater (Manual), and are tailored to the unique geographic and hydrological conditions of the Town as well as to the Town's infrastructure and administrative processes. However, under the State Policy, Tier I regulations would take effect in the Town if a LAMP is not approved. Tier I implementation in the Town would significantly restrict, and in many cases, cease the construction of onsite sewage disposal systems in the Town. For instance, under Tier I regulations, most leach fields could not be repaired in the Town because rainfall and geologic conditions require at least 10 feet of soil, which most areas do not have. It is imperative to the Town that we submit our existing regulations for review and approval by the State as the Town of Paradise LAMP. In light of this, Town staff is proposing for review and approval by the State Board the Town's onsite wastewater regulations, amended as proposed, as a LAMP.

In February, 2016, the Town Council approved changes to pertinent sections of the Paradise Municipal Code that were required for the Town of Paradise LAMP. Revisions must now be made to the Manual in order to be compliant with the State Policy for a LAMP. Some of the revisions proposed address LAMP requirements as called for in the State Policy. Other changes are made to correct inconsistencies throughout the Manual, inconsistencies and corrections necessary for approval of the Manual during the State review. Other changes are proposed to update the Manual to better incorporate industry standards and provide more business and consumer friendly onsite regulations.

The proposed amendments include provisions required for subsequent approval by the State Water Resources Control Board pursuant to the State Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems relating to approval of a Local Agency Management Program (LAMP).

Once these changes are made, as well as forthcoming additions to the new Chapter 8, the Manual and pertinent sections of the PMC will be presented to the State as part of the total regulations that will be used to govern onsite wastewater treatment systems in the Town of Paradise. The deadline for submitting the LAMP to the State Board is May 13, 2016.

DISCUSSION:

There are multiple revisions proposed in the Manual. Sixty two (62) revisions have been identified as substantive and are described in the Attachment B, Substantive Change Report. Of those 62, some have been separated into the following two groups; Less Restrictive Changes, and, More Restrictive Changes. For further details please reference the bracketed [ ] reference to this report after each comments below;

LESS RESTRICTIVE CHANGES

Of the substantive revisions proposed, many are less restrictive to septic system owners. They include:

- Removing the requirement that advanced treatment septic systems owners provide routine sampling of the inflow wastewater.
    - Unless there are found to be high 'pollutant' levels in wastewater discharging from a system the wastewater strength coming into a septic system can be assumed to be within known quantities. It is not necessary to have the extra expense of sampling it. [See note 7]
- Removing the requirement that any septic system receiving a complaint must be automatically evaluated by a private evaluator.
    - The complaint investigation conducted by the Town often reveals the extent of a septic system problem and a private evaluation is not necessary. [See note 8]
- Removing the requirement that all advanced treatment septic systems be inspected by the Town twice a year.

    - An inspection program by the Town has never been carried out for advanced treatment systems. It has been found that the quarterly service and maintenance that most of these systems receive is adequate oversight for them to stay in good working order. [See note 9]
- Removing the requirement that all alternative systems must be evaluated once a year.
    - Not all alternative systems are technologically complicated enough to warrant annual inspections, such as a simple 'pump' or 'capping fill' system. [See note 10]
- Removing the requirement that septage pumpers must be licensed by the Town.
    - The Town has never maintained a septage pumpers licensing program and has found that the County licensing program is adequate for maintaining sanitary pumping equipment and practices. The Town will require the proof of licensing with the County. [See note 12]
- Allowing a higher wastewater application rate for the Town's designated 'downtown' area, which will allow for more affordable septic repairs and construction.
    - The current maximum wastewater application rate of 900 gpd/acre is 'difficult to impossible' for some downtown lots to achieve when undergoing repairs or new construction. Adjusting this application rate to 1350 gpd/acre (1.5 multiplier) will still preserve the over-all 'cleanliness' of groundwater in the Town and allow a much needed broadening of system design parameters for this area. [See note 14]
- Allowing traffic areas over the top of distribution boxes in dispersal fields.
    - A type of d-box is now manufactured to withstand vehicle forces and leachfields are allowed under traffic areas throughout the Town. With proper site conditions it is no longer necessary to prohibit d-boxes under traffic areas. [See note 21]
- Allowing a greater dispersal trench depth in an area where there is soil fill material.
    - The permeability of the top layer of soil in conditions found throughout the Town is not diminished by placing soil fill on it. For this reason a dispersal trench deeper than four feet and into native soil should be allowed if there is imported soil fill on top of it. [See note 28]
- Reducing the amount of native soil necessary to place a bottomless sand filter system.
    - Wastewater that has been treated by passing through 2 feet of sand needs less soil for treatment than does untreated wastewater in standard leachfields. For this reason the amount of soil depth under a bottomless sand filter is reduced from 4 to 3 feet. [See note 31]
- Reducing the amount of native soil necessary to place a dispersal field from a recirculating advanced treatment system.
    - Wastewater that has been treated through a recirculating gravel, textile or other media filter is significantly 'cleaned' prior to discharging to soil. It is also routinely sampled which assures that the necessary level of treatment is maintained. For these reasons the amount of soil necessary beneath this type of system to treat the discharging effluent is reduced from 4 to 2 feet. [See note 32]
- Removing the requirement that redundant septic systems must be inspected by the Town.
    - Redundant systems are not complicated nor require a higher level of oversight provided by Town inspections. Therefore, a conventional evaluation schedule provided by a private evaluator is all that is necessary. [See note 38]
- Removing the requirement to perform a nitrogen loading calculations for any proposed advanced system that is less than 5000 gallons per day.

    - Nitrogen 'pollution' from wastewater discharged into soil has not been an issue in the Town. Our groundwater and creek monitoring has substantiated that the rainfall and soil conditions effectively treat nitrogen influx. For this reason it is not necessary to provide a study of the nitrogen loading from smaller septic systems. [See note 54]
- Removing the mandatory requirement for groundwater monitoring wells for all advanced treatment systems exceeding 900 gallons per acre per day.
    - This requirement was initially initiated by the State many years ago. Experience shows that the many existing wells do not provide measurable levels of groundwater that benefit the analysis of a septic systems' impact on groundwater. Also, not all systems over 900 gpd/acre are large enough to warrant groundwater monitoring wells. [See note 55]

MORE RESTRICTIVE CHANGES

Substantive revisions proposed that are more restrictive to a septic system owner in terms of construction or maintenance includes:

- The State requirement that all septic systems that have projected wastewater flows over 10,000 gallons per day must submit a Report of Waste Discharge to the Regional Water Quality Control Board and be governed under permit by them.
    - As depicted in the State Onsite Wastewater Treatment System Policy, Section 6.1.1, this is a new state law effective 2013. [See note 5]
- The requirement that all septage pumpers that operate in the Town become certified as a Septic System Evaluator.
    - There are no known pumpers operating in Town that do not have an evaluator's license. This requirement assures that the Town is made aware of failing, overflowing septic systems when a pumper is called to pump a system, since all Evaluators are required to report their observations. [See note 13]
- The new State requirement that all public water wells maintain a one hundred and fifty (150) foot setback from septic systems.
    - This new law is found in the State Onsite Wastewater Treatment System Policy, Section 7.5.6. The prior requirement was for a 100 foot setback. [See note 16]
- The provision that the construction of serial distribution dispersal fields only be allowed when absolutely necessary.
    - Serial distribution relies on the principle of a leachline completely failing and backing up into a distribution box before overflowing into the next leachline. Although allowed in the past this system has inherent problems and shown to be less effective for treatment and longevity. [See note 17]
- Allowing a maximum of 30 inches of leachrock in a dispersal trench.
    - Over 30 inches is almost never possible in the Town because of the need for 4 feet of soil beneath a dispersal field. When leachrock becomes too deep, conditions in a trench become more septic and a clogging mat occurs. [See note 26]
- Requiring a minimum of 12 inches of soil cover over all dispersal fields, as opposed to 6 inches that was allowed under special circumstances.

    - 12 inches of soil is found to be the minimal suitable amount of protection needed for dispersal fields. Rainfall, erosion, landscaping and vehicle loads are all conditions that 12 inches of soil backfill protect against when placed above a dispersal field. [See note 27]
- Reducing the maximum liquid application rate to soil from 1.2 to 1.0 gpd/ft^2 for secondary treated effluent.
    - The application rate of 1.0 gpd/ft^2 has been used on all projects for the past many years and provides a degree of conservancy that is required to have the LAMP approved. [See note 34]
- Increasing the minimum width of narrow dispersal trenches from 6 to 12 inches.
    - Narrow trenches less than 12 inches are very difficult to construct and rarely proposed. Their difficulty to construct makes them inappropriate to remain as a standard in the Manual. [See note 36]
- Requiring that all new septic systems treating over 300 gallons per day and have a pump must be designed with a separate dosing tank, with the pump placed in it.
    - A septic tank is effective in separating out solids from wastewater under normal is static conditions in a tank. When a septic tank has a pump in it, the liquid level rises and falls and turbulence is created every time the pump 'kicks on'. Therefore with a pump in the tank more solids enter into the dispersal field, which reduces its longevity. [See note 51]
- The new requirement mandated by State law that all septic systems receiving wastewater from commercial food buildings must have a grease interceptor.
    - This new requirement is depicted in the State Onsite Wastewater Treatment System Policy, Section 6.1.2. and will apply to all commercial food septic systems, both new and existing. This provision is required to be in the LAMP. [See note 56]

Other revisions incorporate the re-wording of existing regulation to provide clarity and better understanding. Some revisions remove inconsistencies within the Manual. Others entail the codification of policy or circumstance that is peculiar to our Town and has been a long-standing discretionary practice, such as requiring dosing tanks for wastewater systems larger than three hundred gallons per day, or increasing the minimum length of effluent pipe coming out of a septic tank from one to three feet. Lastly some revisions provide more descriptive depictions of existing regulations. For a more detailed analysis of the substantive changes proposed please refer to Attachment B.

In addition to the proposed text revisions in the Manual several drawings have been revised so as to be more clear and concise. The titles and content of the drawings, known as Figures, remains the same. The Figures have been revised to include better labeling and some code corrections. A new Figure, Figure 4.14, has also been added to depict the Downtown Adjustment Area for Gross Hydraulic Loading. The revised Figures are presented in Attachment C.

FINANCIAL IMPACT:

There is no financial impact associated with the adoption this resolution to amend the Manual. However, some nominal cost will be borne by the Town that is associated with the publication of the revised Manual

ATTACHMENTS:

Attachment A: Resolution of the Town Council of the Town of Paradise amending multiple chapters of the Town of Paradise Manual for the Onsite Treatment of Wastewater in preparation for submission to the State Water Resources Control Board as the Local Agency Management Program for the Town of Paradise.

Attachment B; Proposed Substantive Changes to the Manual

Attachment C: February 15, 2015 letter from Clint E. Snyder, P.G. Assistant Executive Officer, Central Valley Regional Water Quality Control Board to Doug Danz, [Onsite Sanitary Official], Town of Paradise regarding Review Criteria, Local Agency Management Programs (LAMPS) for Tier II Onsite Wastewater Treatment Systems.

Attachment A

TOWN OF PARADISE
RESOLUTION NO. 16-____

A RESOLUTION AMENDING MULTIPLE CHAPTERS OF THE TOWN OF PARADISE MANUAL FOR THE ONSITE TREATMENT OF WASTEWATER IN ACCORDANCE WITH STATE REQUIREMENTS KNOWN AS TIER II LOCAL AGENCY MANAGEMENT PROGRAM (LAMP), WHICH SHALL TAKE EFFECT IMMEDIATELY

WHEREAS, The Town Council of the Town of Paradise adopted Resolution No. 99-37 that readopted the Town of Paradise Manual for the Onsite Treatment of Wastewater; and

WHEREAS, The Town of Paradise Onsite Sanitation Division, under direction of Council, and in accordance with State Law, have formulated changes and additions to the Manual for submission to the State of California as a Local Agency Management Program (LAMP).

NOW, THEREFORE BE IT RESOLVED by the Town Council of the Town of Paradise as follows;

Section 1. The revisions and additions to Chapters 1 through 9, and Appendixes A through D, and Title Page and Table of Contents thereof of the Town of Paradise Manual for the Onsite Treatment of Wastewater, attached as Exhibit "A", excluding the bracketed reference notes as exemplified by; [See note XX], are approved and adopted.

Section 2 The revisions and additions to twenty four (24) Figures in the Town of Paradise Manual for the Onsite Treatment of Wastewater, attached as Exhibit "B", are approved and adopted.

Section 3 A copy of this resolution may be submitted to the State Water Resources Control Board, along with the revised Town of Paradise Manual for the Onsite Treatment o f Wastewater.

Section 4 This resolution shall take effect immediately.

PASSED AND ADOPTED by the Town Council of the Town of Paradise this 12th day of April, 2016 by the following vote:

AYES:

NOES:

ABSENT:

NOT VOTING:

_____
Jody Jones, Mayor

ATTEST:
By:_____
Joanna Gutierrez, CMC, Town Clerk

APPROVED AS TO FORM:

By:_____
Dwight L. Moore, Town Attorney

Exhibit "A"

Town of Paradise Manual for the Onsite Treatment of Wastewater

Text revisions

TOWN OF PARADISE ONSITE WASTEWATER MANAGEMENT ZONE

MANUAL FOR THE ONSITE TREATMENT OF WASTEWATER

REVISED: APRIL 12, 2016 [See note 1]

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REVISED: OCTOBER 6, 2011
REVISED: NOVEMBER 8, 2005
REVISED: SEPTEMBER 9, 2004
REVISED: AUGUST 9, 2002
REVISED: MARCH 28, 2000
REVISED: JANUARY 1, 2000
ADOPTED: SEPTEMBER 14, 1995

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1
PERMITS

The Town of Paradise requires that permits be obtained to construct, operate, and repair onsite wastewater disposal systems. The Town also requires that septic tank contractors be certified by the Town prior to conducting business within the Town. ~~Onsite Wastewater Management Zone.~~ The permitting procedures are outlined in this chapter.

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1.1 GENERAL GUIDE FOR ONSITE SEWAGE DISPOSAL SYSTEM APPLICATIONS

The table shown below is an outline of the Town permits or approval actions required for various common situations.

Situation	Permits[1]		
	Site Evaluation	Construction	Operating[2]
1. Routine system inspection			A
2. New home construction. new system	A	A	A
3. Failing system repair	B	A	A
4. Bedroom addition	B	B	A
5. Replacement of mobile homes with similar units			B
6. Connection of temporary housing to existing system			A

[1] A: Permit required
B: Town should determine if permit is required
[2] New or renewal

1.2 SITE EVALUATION REPORT

Site evaluations are part of the Land Use Review process and ~~,~~ may be conducted by either qualified onsite wastewater disposal system designers or authorized Town personnel. Evaluations conducted by private designers must be approved by the Onsite Sanitary Official prior to a Land Use Review approval being given by the Town and the development of construction plans and specifications.

A. Site Evaluation by Qualified Designers

A qualified designer may conduct a site evaluation and prepare a ~~Site Evaluation Report~~ Land Use Review application for approval by the Town. ~~Site Evaluations~~ The site evaluation must be conducted by or under the direct supervision of one of the following:

1. Registered Civil Engineer
2. Certified Professional Soil Scientist
3. Certified Engineering Geologist or Registered Geologist
4. Registered Environmental Health Specialist

The professional conducting or directly supervising the evaluation must be knowledgeable and experienced in the field of onsite wastewater disposal. The Town ~~will~~ may institute a procedure of random, unannounced verification inspections to ensure that site evaluations by qualified designers meet the standards of the Town.

A ~~Site Evaluation Report prepared by a qualified designer~~ Land Use Review approval must be given~~approved~~ by the Onsite Sanitary Official before the property owner authorizes the preparation of ~~construction~~ plans for the construction of a new septic system or addition to an existing septic system. ~~and specifications. Town approval of a Site Evaluation Report is required for the issuance of a construction permit.~~ ~~Town~~ ~~approval~~ Approval is obtained by submitting ~~the~~ a Site Evaluation Report along with a completed Land Use Review application. ~~form provided by the~~ ~~Town~~. The Onsite Sanitary Official has the discretion of exempting the requirement for a Site Evaluation Report depending on the size of the project. ~~and payment of the required fee~~. The Onsite Sanitary Official may perform a brief site inspection as part of the approval process. Lots or parcels located in identified areas of high groundwater or marginal soil conditions will be inspected by the Town. ~~depending on the location of the proposed site.~~ Justification must be given for a denial of approval for an onsite wastewater disposal system recommendation by a qualified designer.

An approved ~~Site Evaluation Report~~ Land Use Review issued by the Town is transferable with a property sale provided the intended use of the property, structure, size, and ~~intended disposal~~ proposed dispersal area(s) do not change. There may be a long period of time between the site evaluation and septic system construction ~~on some parcels. The~~ during which time the Town's rules and regulations could change. ~~during this time.~~ The Town therefore reserves the right to change the type of septic system specified in the Land Use Review~~Site Evaluation Report~~ approval ~~at any time~~ until a construction permit is issued. ~~Lots or parcels located in identified areas of high groundwater or marginal soil conditions will be inspected by the Town.~~ [See note 2]

B. Exemption ~~To~~to Soils and Percolation Requirements

All single family residential lots, created by parcel map or subdivision map, and approved by the Town of Paradise subsequent to November 27, 1979, will be considered to be approved with respect to soils and percolation data, if the following criteria are met:

1. The parcel is located in an area location that is listed as AVD, 0-30" (Aiken Very Deep, 0-30% Slope) as illustrated on the general soil map of Paradise prepared by Wert & Associates, on file at the Town Onsite Division.
2. The parcel is not located in an area known to have problematic soils conditions, such as high water table, perched water, or very slow percolation rates (>60 min/inch)

Soil conditions that differ substantially from that represented on the Wert soils map may require relocation of the proposed system or other measures, such as engineered or special design systems, at the discretion of the Town Onsite Sanitary Official.

C. Denial ~~Of Approval~~ of Application

Upon receipt of a completed Site Evaluation ~~r~~Report, the Onsite Sanitary Official may deny ~~a approval of the Site Evaluation recommendations~~ Land Use Review application if:

- The proposed system would not comply with the approved rules and regulations of the Town, including the maximum gross hydraulic loading rate requirement.
- The proposed system location is compromised by an encumbrance.
- The report contains false information.

D. Site Evaluation Report Requirements

The following items shall be included in the Site Evaluation Report:

- Assessor's parcel map, which may be acquired at the Butte County Assessor's office.
- Gross hydraulic loading calculations for the parcel. For standard treatment septic systems 900 gpd/acre is the maximum application rate (excluding downtown exemption area, Section 1.9). For advanced treatment 2000 gpd/acre is the maximum application rate. [See note 3]
- Preliminary site development plan, drawn to scale, including:

  a. Parcel size: The map must include dimensions of parcel and any easements on the parcel.

  b. Topography: Topographic map of the parcel at a scale of one inch equals fifty feet (1"=50') and two foot contours or greater.

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c. Surface waters: All ponds, intermittent streams, perennial streams, and springs must be located accurately.

d. Landslides or unstable soils: Areas that appear to be unstable should be checked by an engineering geologist or civil engineer to determine if the presence of ~~an absorption~~ a dispersal field will cause mass movement. [See note 4]

e. Existing and proposed wells located within 100 feet of the proposed ~~absorption~~ dispersal fields (initial and replacement).

f. Encumbrances such as easements, roads, rock outcrops, etc.

g. Escarpments and large cuts (See Figures 1.1 and 1.2).

h. Soil test hole locations

i. Proposed and existing developments including tank and dispersal field locations. For new construction 100% dispersal field replacement area must be shown.

j. Utilities such as water mains, gas lines, power lines, etc.

- Description of soil and groundwater conditions on the site.

a. Soil profiles: A minimum of two soil profiles taken from soil test pits shall be described. The pits should represent the soils in the initial and replacement area. The test pits should be a minimum of twenty-four inches wide by four feet long by seven feet deep and easily exited by a person. If pits are dug by hand, they should be deep enough to examine the soil to a depth of seven feet.

Minimum observation of the soils are:

- Thickness of each major horizon
- Texture based on USDA definition of textural classes
- Structure
- Color
- Presence of roots, pores, clay skins
- Mottles (low and high chroma)
- Estimates of permeability

All of these soil features are defined in Appendix A.

b. Soil permeability: Often the observations made in the soil profile descriptions will be adequate to assess permeability for a single family dwelling. Where the soil permeability is in question, soil percolation tests shall be required. For very sensitive sites, soil absorption tests shall be needed (see Appendix C for guidelines).

c. Soil underlain by saprolite: Saprolite is material that can be textured, crushed, or broken with hand pressure. If there are clay films or iron coatings with moist values of five or less and moist chromas of four or more, and/or organic coatings with moist values of three or less and moist chromas of three or more occurring on fracture surfaces, then saprolite will be considered soil. Where the material does not meet the above criteria, it shall be treated as fractured bedrock.

d. Presence of saturated soil: The maximum height of a groundwater table shall be noted. Often the presence of a temporary high groundwater table can be detected by soil mottles. However, mottling in the soils of Paradise can understate the maximum level of the groundwater table. ~~High levels of oxidized iron, long periods between periods of high rainfall, and high levels of oxygen in the soil water prevent mottles from being as prominent as they are in other soils~~ . For those sites suspected of having a seasonally high groundwater table and having unmottled soil, or on sites located in identified areas of high groundwater, monitoring of the water levels will be required (see Appendix B).

~~The type of water table needs to be determined.~~ Most of the sites in Paradise with drainage problems have temporary high groundwater tables. Typically, these ~~they~~ are perched on a clay pan or bedrock, otherwise known as an aquatard, ~~and are not used for domestic purposes. If there is an aquatard (bedrock, clay layer) which prevents waters leaving an absorption field from entering an aquifer used for domestic purposes, it is considered temporary.~~ A temporary high ~~perched~~ groundwater table must last longer than a continuous two-week period in order for it to be regarded as significant for the design of a dispersal field~~. Anything less than two weeks is considered insignificant.~~ If it lasts no more than a two week period it is considered a spike and is not used as the level for the temporary high groundwater table when designing a dispersal field.

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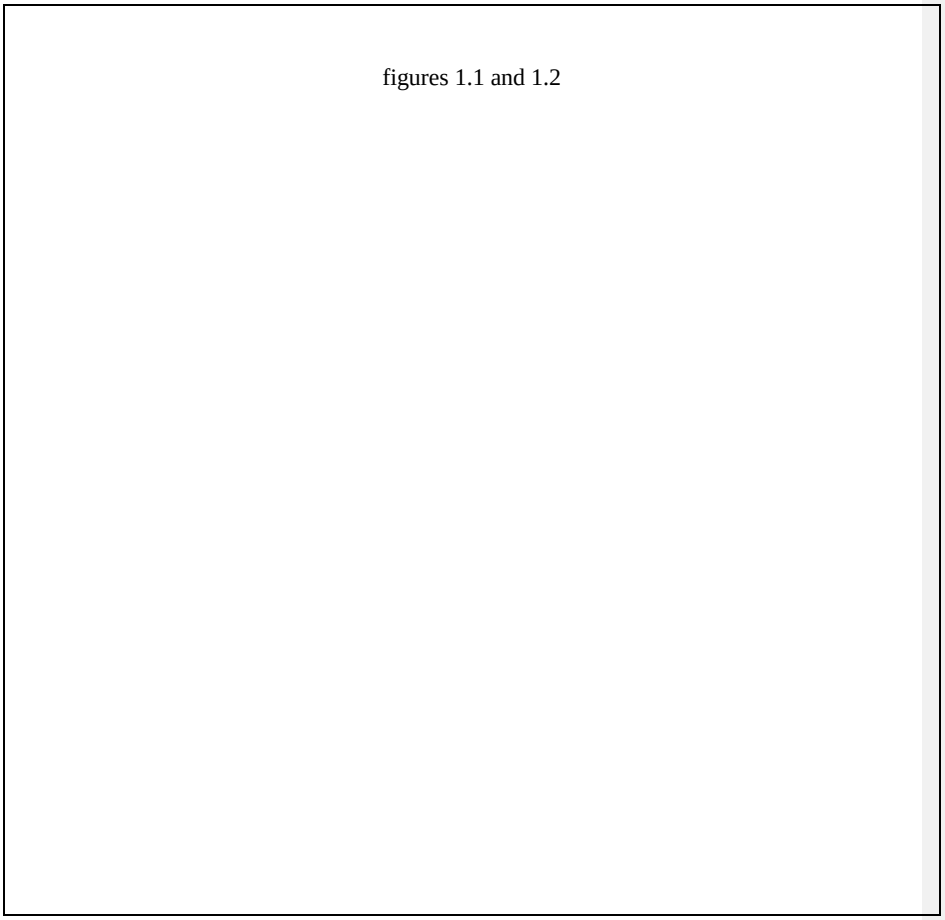
figures 1.1 and 1.2

1.3 CONSTRUCTION PERMIT

An application must first be submitted to obtain a permit for all construction, alteration or repair of any onsite wastewater disposal system with the exception of the installation of septic tank risers. Applications will be made on forms provided by the Town and will be considered acceptable only when the form is completed in full, signed by the owner or the owner's legally authorized representative, and accompanied by all required exhibits and fees. A permit shall be issued only to a licensed contractor hired by the owner or to the owner or easement holder of the land on which the system is to be installed.

The Town will either issue or deny the permit within thirty days after the receipt of the completed application for a conventional system, with the exception that the weather conditions prevent the Town from acting within thirty days. The applicant shall be notified in writing with the reason for delay. The Town will either issue or deny the permit within sixty days after the mailing date of such notification. Review of alternative or innovative designs may take longer than thirty days.

The approved permit will remain effective for one year from the date of issuance on only new construction permits. Construction Permits for repairs shall remain in effect only for the time period allowed in the Corrective Action Request or Notice. The construction permit is not transferable. Once a system is installed pursuant to the construction permit, an operating permit shall be issued for the installation.

Renewal of a permit may be granted to the original permittee if an application of permit renewal is filed prior to the original permit expiration date. A new construction permit shall only be renewed once.

A. Application Requirements

The application for a construction permit must include the following:

- Site Evaluation Report approved by the Town.
- Detailed and specific site development plans and specifications. Plans and specifications for alternatives systems will need to be prepared by a qualified designer. The plans must include:

    a. Existing and proposed locations of all buildings, roads, driveways and other physical features.

    b. Property lines.

    c. Easements.

    d. Water sources and surface water courses or drainage ways.

E. Exact location of proposed septic tank, distribution box or drop boxes, and all other system components.

F. Exact location of ~~absorption~~ ~~the~~ the effluent dispersal field area and replacement area, drawn to scale. Each lot receiving a septic system for the first time must have sufficient usable area available to accommodate an initial and replacement ~~system~~ dispersal field.

Sites may be approved where the initial and replacement dispersal fields ~~systems~~ would be of different types. For example, a standard system could be approved for the initial system and a capping fill for the replacement system.

G. Proposed elevations of the building sewer, the inlet and outlet of the septic tank, distribution boxes or drop boxes, number and length of the ~~absorption trenches~~ dispersal trenches and specification of installation of any other system components.

H. Required setbacks, as discussed in Section 3.1 of this manual, must be identified on the site development plan.

~~• Draft operations and maintenance instructions for alternative systems for approval by the Town.~~

B. Precover inspection

When permitted construction, alteration or repair of a system ~~for which a construction permit has been issued~~ is complete, ~~except for backfill (cover),~~ or as required by permit, the system installer shall notify the Town for inspection. The installer will provide to the Town a detailed, as-built plan (drawn to scale) of the installation. The Town shall inspect the installation to determine if it complies with ~~the~~ construction regulations ~~rules of the Town~~ and conditions prescribed on the permit.

The Town may waive the Precover Inspection for standard systems, at the sole discretion of the Onsite Sanitary Official. Inspections may be waived by the Onsite Sanitary Official for standard system installations made by licensed installers certified by the Town.

1.4 OPERATING PERMIT

A valid operating permit is required for all onsite wastewater disposal systems located in the Onsite Wastewater Management Zone. Operating permits are not transferable and must be renewed periodically. Initial operating permits and renewal of operating permits are discussed separately below. In addition to receiving a Town of Paradise onsite operating permit and compliance with pertinent regulations in the Town of Paradise Local Agency Management Program, all onsite wastewater treatment systems that have projected flows over 10,000 gallons per day are regulated by the Central Valley Regional Water Quality Control Board and are subject to filing a Report of Waste Discharge with them. [See note 5]

A. Initial operating permit

The Town will issue an operating permit if, upon inspection of installation or modification, the system complies with the conditions of the construction permit.

Standard System: The Town will issue an operating permit if, upon inspection of installation or modification, the system complies with the conditions of the construction permit. The Town will not issue an operating permit until as-built plans have been received and approved.

If inspected installation does not comply with the conditions of the construction permit, the permittee will be notified in writing or a Correction Notice will be posted on the site. System deficiencies will be explained and satisfactory completion required before an operating permit will be issued.

Failure to meet requirements for satisfactory completion within thirty (30) days after written notification or posting a Correction Notice on the site constitutes a violation of the construction permit process and these rules, and can result in a Stop Work Notice.

Alternative and ~~Innovative Pre-~~Advanced Treatment Systems: The Town will issue an operating permit if, upon inspection of installation or modification, the system complies with the conditions of the construction permit. The Town will not issue an operating permit until as-built plans, and final operation, maintenance and monitoring instructions have been received and approved by the Onsite Sanitary Official. In the instances where alternative ~~and innovative~~ systems are ~~Pre-Treatment Systems~~ advanced treatment systems the following operation, maintenance and monitoring requirements are required: [see note 6]

- Operation and Maintenance Personnel: The system shall be operated and maintained by experienced personnel as approved by the Onsite Sanitary Official. Experienced personnel may include Town of Paradise Licensed Evaluators or other experienced personnel licensed by the State Water Resources Control Board as "Certified Wastewater Treatment Plant Operators". The Owner will provide the Onsite Sanitary Official with written proof that experienced personnel have been retained by the Owner to operate and maintain the system.

- Frequency of Operation and Maintenance Attendance: The frequency of operation and maintenance attendance shall be determined by the Onsite Sanitary Official~~.~~, ~~B~~but, in no case shall it be more frequent than once a month.~~the frequency be greater than one (1) month.~~

- Operation and Maintenance Attendance Log: An operation and maintenance attendance log of system tasks shall be completed upon each system visit. The log may become part of the reporting requirements submitted to the Town as determined by the Onsite Sanitary Official.

- Minimum Monitoring Requirements: The minimum constituent and physical monitoring requirements are as follows:

  ~~1. Influent 5-day Bio-chemical Oxygen Demand;~~
  ~~2.~~1. Effluent 5-day Bio-chemical Oxygen Demand;

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~~3. Influent Total Suspended Solids;~~ [See note 7]
~~4.~~2. Effluent Total Suspended Solids;
~~5. Influent Total Nitrogen (as determined by the Onsite Sanitary Official)~~
~~6.~~3. Effluent Total Nitrogen (as determined by the Onsite Sanitary Official)
~~7.~~4. Effluent Flow Metering (as determined by the Onsite Sanitary Official)

Other monitoring requirements, including influent sampling, may be required depending on the site specific ~~discharge~~ characteristics and as determined by the Onsite Sanitary Official.

Frequency of Monitoring Analyses: The frequency of the monitoring analyses shall be determined by the Onsite Sanitary Official depending on the site specific characteristics, system type, ~~of the discharge~~ and the location and type of ~~the~~ discharge~~.~~

Monitoring Reporting: The Owner shall submit to the Onsite Wastewater Management Division the results of all monitoring tasks. The submittal shall be on a quarterly basis as outlined below:

1. First quarter analyses data to be submitted on the 15th ~~1st~~ day of April each year.
2. Second quarter analyses data to be submitted on the 15th ~~1st~~ day of July each year.
3. Third quarter analyses data to be submitted on the 15th ~~1st~~ day of September each year.
4. Fourth quarter analyses data to be submitted on the 15th ~~1st~~ day of January each year.

B. Operating permit renewal – standard systems

1. Operating Permits will be renewed each time a standard onsite wastewater disposal system 1) successfully passes an evaluation performed by a Town of Paradise Licensed Evaluator, or, 2) permitted repairs are finalled by the Onsite Division Staff.~~and received and approved by the Onsite Sanitary Official~~ .

2. The Town Licensed Evaluators may recommend to the owner and the Town, any correction necessary to bring the onsite wastewater disposal system into compliance with all applicable Town rules and regulations. The Town will issue all correction notices to the owner and issue repair permits as needed to bring the septic system into compliance.

3. The Town will act to resolve any disputes between the property owner and the evaluator personnel. ~~Operating permits will be renewed upon receipt of satisfactory evidence that the corrections have been made.~~

C. Evaluation schedule – standard systems

Evaluations of septic systems will be required for any of the following circumstances:

1. ~~Whenever the septic tank is pumped that is not a condition of an existing Operating Permit.~~ The Operating Permit for an onsite wastewater disposal system has expired or is soon to be expired.
2. Whenever any parcel of land in the Town upon which an onsite wastewater disposal system is located is having a transfer of title from one owner to another and the system

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~~the property is sold and the property~~ ~~does not have a current Operating Permit~~ has not been evaluated within the last year.

3. Whenever a complaint is filed with the Town and upon review the Onsite Sanitary Official determines that there is a need to have the onsite wastewater disposal system evaluated so as to substantiate its performance.[See note 8]

~~4.~~ ~~——~~ The time interval between evaluations for each septic system shall be determined ~~established by the Town~~ based on the ~~its approximated~~ volume of wastewater processed, ~~and~~ the ~~Town's~~ most current septic system evaluations report(s), ~~concerning the observed performance of the onsite wastewater treatment and disposal system,~~ and~~,~~ any other conditions deemed appropriate by the Onsite Sanitary Official. Time intervals assigned shall be in accordance with provisions of the Paradise Municipal Code, Section 13.04.090.

D. Evaluation schedule – alternative ~~and innovative pre-treatment~~ ~~-~~systems

Periodic evaluations of alternative systems ~~shall~~ may be performed by the Town of Paradise Onsite Division Staff twice each year. ~~in the months of February and August. During the course of reviewing the required Owner submitted Quarterly Reports, should the Onsite Division Staff find discrepancies an evaluation may be triggered on a more frequent schedule.~~ The cost for the Onsite Division Staff evaluations shall be borne by the owner based on the Town of Paradise adopted fee schedule for "onsite monitoring". [See note 9]

E. Operating permit renewal – alternative ~~and innovative pre-treatment~~ systems

~~Alternative and innovative pre-treatment systems will be evaluated on a regular basis by Town personnel.~~ Operating Permits for alternative ~~and innovative pre-treatment~~ systems shall be renewed on an annual basis~~. No operating permits for these systems~~ and shall not be issued for periods longer than one (1) year, except for some standard 'pump to pressure' or 'pump to gravity' systems, including capping fills. The requirements for renewal are as follows: [See note 10]

1. The system shall be in total compliance with the previously issued Operating Permit. ~~for the facility at the time of renewal~~.
2. When required ~~Q~~quarterly, semi-annual or annual report ~~Report~~ submittals shall be up to date with current reporting requirements.
3. Failure of compliance with the above two (2) requirements ~~for permit renewal~~ shall result in the issuance of a Correction Notice with a thirty (30) day, or less requirement to bring the system into compliance~~, and~~ ~~, a non-compliance fee~~ .
4. Failure to renew the permit ~~shall~~ may result in "Abatement" as per the Town of Paradise Municipal Code ~~Chapter~~ Section 13.04.430.

1.5 USE OR MODIFICATION OF AN EXISTING SYSTEM

No person shall place into service, change the use of or increase the ~~projected~~ wastewater strength or daily wastewater flow into an existing onsite wastewater disposal system without obtaining a new operating permit or a construction permit, as appropriate.

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To determine whether a previously constructed onsite sewage disposal system is usable when a change of use is proposed, the applicant must apply for a Land Use Review with the Town of Paradise. This review process includes an inspection by the Onsite Division staff, file review of past entitlements and permits, calculations of gross hydraulic loading rates and possibly a soil analysis including a high groundwater determination, soil characterization and permeability testing. ~~have the system inspected by certified personnel, pay the appropriate fee, and provide all required attachments.~~ If the Town determines that the existing onsite wastewater disposal system appears adequate to serve the purpose for which a particular application is made, then a new operating permit will be issued. [See note 11]

A construction permit will be required when the existing system is failing, setback requirements can no longer be met or the system must be altered in size, location or level of treatment necessary. ~~due to the proposed use, or a public health hazard would be created in the opinion of the Town.~~

A new operating permit is not required when: (1) there is a change in use, but no change in flows such as replacement of a mobile home with a similar unit, (2) for placing into service a previously unused system, provided a valid operating permit ~~must have been~~ was issued within the last two years for the system.

1.6 REPAIR OF FAILING SYSTEMS

A construction permit is required for the repair of a failing onsite wastewater disposal system, except for emergency repairs as described in Section 1.7. Alternative or experimental designs not found in this manual ~~that will correct the problem on a long term basis~~ may be ~~entertained~~ permitted for repairs upon review by the Onsite Sanitary Official. ~~, even if they are not included in this manual.~~ Refer to Chapter 7 for the approval procedures for innovative applications. The Town will require a monitoring program, performed at the owner's expense, for some alternative and all ~~or~~ innovative designs.

1.7 EMERGENCY REPAIR

An emergency repair means the repair of a system where wastewater is backing up into a dwelling or commercial facility, or there is a broken pressure sewer pipe or the health and safety of humans are threatened and immediate action is necessary to correct the situation. In order to immediately and temporarily stop a health hazard, the Onsite Sanitary Official may waive the applicable permit requirements. The Town shall determine if a Site Evaluation Report is required for the permanent system repair.

1.8 LICENSING TO PERFORM WASTEWATER DISPOSAL SERVICES

Wastewater disposal services are hereby defined to include:

- The pumping out or cleaning of wastewater systems (including portable toilets), or any part thereof.
- The inspection of standard and alternative onsite wastewater disposal systems for the town.
- The disposal of material derived from the pumping out or cleaning of wastewater systems (including portable toilets).

A. Licensing and Certification

No person will perform wastewater disposal services or advertise or represent himself/herself as being in the business of performing such services without first obtaining ~~a license~~ certification from the ~~Town.~~Butte County Environmental Health Department as a septage pumper. Evidence of this certification is required annually by the septage pmper in order to be allowed to operate in the Town of Paradise.

Any wastewater disposal service that does not comply with all requirements with the county to maintain their certification will be prohibited from providing wastewater disposal services in the Town of Paradise. [See note 12]

All individuals that provide wastewater disposal services in the Town of Paradise, including the pumping of septic tanks, grease tanks and any other wastewater tanks, are required to obtain and hold current a septic system evaluators license with the Town of Paradise. The issuance of the evaluator's license must be in compliance with Paradise Municipal Code, Chapter 5.14. Persons who are only servicing portable holding tanks such as those in port-o-potties or recreational vehicles are exempt from the requirement to have an evaluator's license with the Town of Paradise. [See note 13]

~~To apply for a wastewater disposal service license, a person must submit a complete license application form to the Town for each business, agree to have applicant's pumping equipment inspected by the onsite sanitary official or his designee, and submit the appropriate application fee. Onsite wastewater treatment and disposal system installation businesses shall maintain and submit evidence to the onsite sanitary official of any and all appropriate licenses, insurance, and bonding as required by the State of California and Butte County.~~

~~A wastewater disposal service license may be transferred or amended during the license period to reflect changes in business name, ownership or entity (i.e. individual partnership or corporation) provided a complete application to transfer or amend the license is submitted to the Town with the appropriate fee. The initial valid wastewater disposal service license (not suspended, revoked or expired) must be returned to the Town. Lastly, if there is a change in the business name, a new wastewater Pumping Equipment Description/Inspection form for each vehicle must be submitted to the Town.~~

Each licensee shall be responsible for any violation of any law, rule or order pertaining to his or her license privileges. The licensee shall provide evidence to the person for whom the licensee provides services that the required State of California and town licenses are maintained in good standing. The licensee shall provide the person for whom the licensee provides services a list of the rights and responsibilities as pertaining to the services rendered. Septic tank pumpers shall maintain their equipment in good operating condition and a manner so as not to create a public health hazard or nuisance. Septic tank pumpers shall comply with all applicable State of California, Butte County, and Town of Paradise laws and regulations concerning the performances of wastewater disposal services.

Certain acts constitute misuse of a license. No licensee will permit anyone to operate under his/her license, except a person who is working under his/her supervision. No person will display a fictitious, revoked, suspended or fraudulently altered license. No person will refuse or fail to surrender to the Town any license which has been suspended or revoked. Nor will any person give false or fictitious information or knowingly conceal a material fact or otherwise commit a fraud in any license application.

The Town may suspend, revoke or refuse to grant or refuse to renew any wastewater disposal service license if it finds after conducting a hearing as specified in Chapter 5.14 of the Paradise Municipal Code:

- A material misrepresentation or false statement in connection with a license application or septic system evaluation report form.

- Failure to comply with any provision established in this onsite manual or the other adopted regulations of the Town.

Whenever a license is suspended, revoked or expires, the licensee must remove the license from display.

A wastewater disposal service may not be considered for relicensing for a period of at least one year after revocation.

A suspended license may be reinstated provided that a complete application for reinstatement of license is submitted to the Town, the grounds for suspension have been corrected and the original license would not have otherwise expired.

B. Equipment

All pumping vehicles must be equipped with either a vacuum or other type pump which will not allow leakage from the diaphragm or other packing glands and which will not allow leakage from the pump or fittings and which is self priming. Each vehicle must, at all times, be supplied with a pressurized wash water tank, disinfectant and implements for cleanup.

The wastewater hose on the vehicles must be drained, capped, and stored in a manner that will not create a public health hazard or nuisance.

The discharge nozzle must be provided with either a camlock quick coupling or threaded screw cap. It must be sealed by either of these when not in use, located so that there is no flow or drip onto any portion of the vehicle and protected from accidental damage or breakage.

All pumping equipment must be used for pumping wastewater disposal facilities exclusively unless otherwise authorized in writing by the Town. Also chemical toilet cleaning equipment shall not be used for any other purpose.

When in use, pumping equipment must be operated in a manner so as not to create a public health hazard or nuisance. All equipment must be maintained in a reasonably clean condition at all times.

Vehicle identification rules must also be followed. The name or assumed business name must be displayed on each vehicle cab and on each side of a tank trailer. Vehicle identification must be in letters at least three inches in height and in a color contrasting with the background. The tank capacity must also be printed on both sides of the tank in letters at least three inches in height and in a contrasting color with the background.

Tanks for pumping out wastewater disposal facilities must have a liquid capacity of at least 1,000 gallons. With the exception that tanks used exclusively with equipment for pumping chemical toilets not exceeding a fifty gallon capacity, should have a liquid capacity of at least 150 gallons. All tanks must be of watertight metal construction, be fully enclosed and have suitable covers to prevent spillage.

C. Pumping and evaluation services

If a wastewater disposal service license is issued for pumping and inspection, the licensee must accept several additional responsibilities. The spilling of wastewater while pumping or while in transport for disposal must be avoided. Any spillage of wastewater must be cleaned up immediately by the operator and the spill area disinfected.

1. Each licensee must dispose of pumpings by the following procedures:

- No parts of the pumpings will be discharged upon the surface of the ground unless at an approved septage disposal site.

- The licensee must possess at all times during pumping, transport or disposal of pumpings, origin-destination records for wastewater disposal services rendered. A complete file of these origin-destination records must be maintained. The origin-destination record must include:

  a. A source of pumpings on each occurrence including name and address.

  b. The specific type of material pumped on each occurrence.

  c. The quantity of material pumped on each occurrence.

~~d. The name and location of the authorized disposal site where the pumpings were deposited on each occurrence.~~

~~e. The quantity of material deposited on each occurrence.~~

~~f. All pumping events shall be reported to the Town of Paradise Onsite Division within five (5) days of the pumping occurrence. The report shall include all items (a.) through (e.) listed above. Failure to comply with this reporting requirement may result in the revocation of the Evaluator's License.~~

- ~~The licensee must transport all pumpings in a manner that will not create a public health hazard or nuisance.~~

~~2. Each licensee conducting evaluation services has the following responsibilities:~~

- ~~Participate in Town training programs.~~
- ~~Provide truthful and unbiased evaluations that conform to septic system evaluation report form line item requirements as specified in the septic system evaluation report form handbook.~~
- ~~Be knowledgeable in the operations and maintenance of pumps, effluent screens and other components of onsite systems.~~

~~3. The Town shall attempt to resolve all conflicts between licensees and the public.~~

~~4. The Town shall issue all corrections notices concerning septic systems.~~

~~5. The Town shall periodically observe and evaluate the performance of licensees.~~

~~6. The Town shall develop an ongoing training and licensing program for all Evaluators conducting evaluations in the Onsite Wastewater Management Zone.~~

1.9 GROSS HYDRAULIC LOADING RATE OF A PARCEL

On all parcels situated in the Town of Paradise, the following wastewater application rates apply. In the case that septic systems serve structures located on multiple parcels, the total cumulative acreage of these parcels is used. Gross area calculations shall include the area to the centerline of any abutting public street or any other public right of way.

- For parcels that receive primary treated wastewater, the maximum application rate of 900 gallons/acre/day shall not be exceeded.
- For parcels that receive secondary treated wastewater, the maximum application rate of 2000 gallons/acre/day shall not be exceeded.

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- The gross hydraulic loading rate shall not exceed 1350 gallons/acre/day for primary treated wastewater for all parcels that are located adjacent to Skyway between Black Olive Drive and Elliot Road, for all parcels located between Skyway and Black Olive Drive, for all parcels located adjacent to Black Olive Drive west of Foster Road and for all parcels located between Skyway and Almond Street, with Elliot Road being the northern border. See Figure 4-14. [See note 14]

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2
VARIANCES

A variance is a deviation from any onsite wastewater system policy or design standard set forth in this manual or in the rules and regulations of the Town. A variance may be granted to an applicant by the Town after a hearing by a special committee of variance officers. The variance committee will generally issue a directive to the Onsite Sanitary Official to approve, conditionally approve or deny the variance.

Onsite systems enumerated in Chapter 4 (standard and alternative) and Chapter 6 shall be considered approved systems and therefore shall ~~be processed for permit to use through the Public Works Department Division in standard fashion, not as variances~~ require a valid operating permit to function as an onsite sewage disposal system in the Town.

2.1 VARIANCE APPLICATION AND PROCESSING

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Variance applications shall be made to the Onsite Sanitary Official. A separate application shall be filed for each site considered for a variance. Each application should be signed by the property owner and accompanied by:

- A site evaluation report
- Plans and specifications for the proposed onsite wastewater disposal system
- The appropriate fee
- Other information necessary, if requested

The variance committee members shall hold a public hearing on each variance application. The hearing shall take place within thirty days after the date a submitted variance application has been deemed complete by the Onsite Sanitary Official. A copy of the complete variance application and any supporting documentation shall be submitted by the Town Onsite Division to the California

Regional Water Quality Control Board, Central Valley Region.

The variance committee shall individually visit the site of the requested variance prior to conducting the hearing, but the burden of presenting the supportive facts shall be the responsibility of the applicant. A decision to grant or deny the variance will be made in writing within thirty days after completion of the hearing. If the variance is granted, the variance committee will state, in writing, the specifications, conditions and location of the onsite wastewater system.

The Town shall issue a construction permit for granted variance systems once the appropriate plans and fees have been submitted, perform necessary inspections, and issue an Operating Permit once the system installation has been approved by the Onsite Sanitary Official or his designee. An operations maintenance and monitoring program, performed at the owner's expense, shall be required for systems permitted under a variance.

2.2 NOTICE OF PUBLIC HEARING

Notices of public hearing for variance applications shall be given by the body conducting such hearing at least ten days prior thereto, by publication in a newspaper of general circulation in the Town. In addition, the Town shall give additional notice by mail, using addresses from the latest equalized assessment roll, to all owners of property within a three-hundred-foot distance of any boundary of the subject property. The Town shall also mail or deliver such notice at least ten days prior to the hearing to the owner(s) of the subject property, or his agent, and to the project applicant. The Town shall follow the notice procedures of California government Code Section 65091. Failure to any person to post notice shall not invalidate any proceedings conducted by the decision making body.

2.3 RIGHT OF APPEAL

All determinations of the Variance Committee shall be final unless a written appeal and any required appeal fees are filed within seven (7) days from the date the Variance Committee acts on a variance application. The appeal shall be filed with the Town Clerk. Any interested person shall have the right to file an appeal. The Town Council shall conduct a public hearing on the appeal in accordance with applicable procedures as set forth in this chapter.

2.4 APPEAL OF VARIANCE COMMITTEE DECISIONS

Except as otherwise provided in this chapter, appeals of Variance Committee decisions shall be administered in accordance with the following applicable provisions:

A. The appeal shall be in writing with a detailed statement of the grounds for the appeal.

B. The Town Clerk shall set the time, date, and place for a public hearing before the Town Council concerning an appeal of a Variance Committee decision.

C. Public hearings before the Town Council shall be conducted within forty days after the receipt of a written appeal and any required appeal fee.

D. Upon receipt of the notice of appeal of a Variance Committee decision, the Onsite Sanitary Official shall prepare a report of the facts pertaining to the decision of the Variance Committee and shall submit such report to the Town Council.

E. The Town Council may refer any matter subject to appeal back to the Variance Committee for further consideration if, in the opinion of the Town Council, any new and substantial evidence is presented to the Town Council that was not previously presented
to the Variance Committee.

F. At the close of the hearing, the Town Council may affirm, reverse, revise or modify the appealed decision of the Variance Committee.

G. If the Town Council does not finalize its action on an appeal within ninety days after the filing thereof, the decision action of the Variance Committee shall be deemed affirmed.

H. The decision of the Town Council may be appealed to the California State Regional Water Quality Control Board, Central Valley Region, within ten days after the date of the decision. The decision by the California State Water Quality Control Board, Central Valley Region, shall be final.

2.5 QUALIFICATIONS OF THE VARIANCE COMMITTEE

The variance committee members shall be selected by the Town Council to give objective third party opinions concerning special or unusual cases. They must have adequate training in soils as they pertain to subsurface wastewater disposal, knowledge of the public health issues associated with onsite wastewater disposal systems, a thorough understanding of pumps and hydraulics, and personal experience with onsite wastewater disposal systems. The variance committee shall consist of three and not more than five citizen-at-large members appointed by the Town Council. The Town Council may also appoint one additional citizen-at-large member to serve on the variance committee only when a member of the variance committee is absent.

2.6 VARIANCE COMMITTEE MEMBER TERMS

The five citizen-at-large positions and the alternate citizen at large position shall serve a term of four years and be appointed by the Town Council in accordance with the standard procedures utilized by the Town Clerk for filling positions on boards and commissions. The terms of the five citizen-at-large positions and the alternate citizen at large position shall be staggered to provide continuity on the Variance Committee.

2.7 OFFICERS, MEETING AND RULES

The Variance Committee shall elect a chairman and vice-chairman from its membership annually. In the absence or disability of either the chairman or vice-chairman, the Variance Committee may designate a temporary chairman.

The Variance Committee shall hold at least one meeting each year and such other meetings as may be necessary. Variance Committee meetings shall be scheduled at the request of the Town Council, Town Manager or the Onsite Sanitary Official.

The Variance Committee shall adopt rules for the transaction of its business and shall keep a public record of its findings and determinations.

2.8 DUTIES OF THE VARIANCE COMMITTEE

The Variance Committee shall comply with the following provisions established within the Onsite Wastewater Management Zone:

- To hear and consider all requests for variances from the Manual for the Onsite Treatment of Wastewater and other regulations of the Town relating to the disposal of wastewater. Such hearing shall be conducted in accordance with the standards and procedures set forth in this chapter.

- To consider items relating to the treatment and dispersal ~~disposal~~ of wastewater within the Town of Paradise referred to them by the Town Council, Town Manager, and Onsite Division staff.

2.9 REMOVAL OF VARIANCE COMMITTEE MEMBERS

A member of the Variance Committee may be removed by a majority vote of all the members of the Town Council. A member who fails, without permission, to attend three successive meetings or fifty percent (50%) of the regular meetings per year of the Variance Committee is subject to possible removal by the Town Council.

2.10 VARIANCE COMMITTEE MEMBER VACANCIES

A vacancy on the Variance Committee occurring by death, resignation, removal or any other cause before the expiration of the affected member's term as a Variance Committee member shall be filled by appointment for the unexpired term by the Town Council.

2.11 LIMITATIONS ON VARIANCES

The following limitations on variances shall apply within the Onsite Wastewater Management Zone:

- A maximum of one variance will be allowed per application.
- No variances will be granted for lot splits or subdivisions.
- No variances will be granted for groundwater or surface water separation requirements.
- No variances will be granted if the proposed system would cause groundwater or surface water degradation.
- No variance will be granted if the proposed system would cause public health and safety problems as determined by the Onsite Sanitary Official.
- Any variance issued by the Town shall be considered to be site- and situation-specific. The granting of a variance for one site shall not set a precedent for other sites.

3

SELECTION OF APPROPRIATE ONSITE WASTEWATER SYSTEMS ~~FOR SINGLE FAMILY DWELLINGS~~

This chapter of the manual is intended to serve as a guide for the selection of onsite wastewater disposal systems which are appropriate for the various soil conditions found in the Town of Paradise. ~~Onsite Wastewater Management Zone. THE SITING CRITERIA ONLY APPLIES TO THE REPAIR OF EXISTING SYSTEMS AND FOR THE CONSTRUCTION OF NEW SYSTEMS ON EXISTING LOTS. THIS MANUAL DOES NOT APPLY TO SUBDIVISIONS OR LOT SPLITS.~~ **[See note 15]**

3.1 GENERAL REQUIREMENTS FOR ONSITE WASTEWATER DISPOSAL SYSTEMS

Certain requirements apply to all onsite wastewater disposal systems located within ~~the Onsite Wastewater Management Zone~~the Town of Paradise. These include setbacks, the acquisition of easements for disposal off the property, and proper abandonment of unused systems, as described within this chapter. Variances will be required for systems which cannot meet the general requirements discussed in this section.

A. Required setbacks

Required setbacks are presented in Table 3.1. Required setbacks for portable toilet systems are shown in Table 3.2. Other guidelines are presented below.

- Water lines and sewer lines: Where water lines and building or effluent sewer lines cross, separation distances shall be as required in the Uniform Plumbing Code, California Plumbing Code Edition and the American Water Works Associations "Guidelines for Distribution of Nonpotable Water."

- Septic tank setbacks: The Town encourages the placement of septic tanks and other treatment units as close as feasible to the minimum separation from the building foundation to minimize potential clogging of the building sewer.

- Stream setbacks: Setback from streams shall be measured from the ten-year high-water mark.

Table 3.1
REQUIRED SETBACKS

Setback requirements are minimum and may be altered for wastewater flows over 2500gpd as determined by the Onsite Sanitary Official

Condition	Setback, ft	
	A[1] ~~Absorp-tion~~ Disperal fields, etc.	**B**[2] Septic tanks, etc.
Wells, whether in use or abandoned, excluding shallow aquifer, non-permanent groundwater monitoring wells associated with hazardous substance investigation sites. Properly destroyed wells are exempt from setbacks [See note 16]	100 150 ft for Public water wells	50 150~~100~~ ft for Public water wells
Surface waters:[3]		
perennial (all year) streams, springs or seeps[4]	100	50
intermittent (part of year) streams, springs or seeps	50	50
ravine, drainageway or ephemeral stream	50	50
lakes and reservoirs[5]	200	50
Groundwater interceptors such as french drain or curtain drain used to collect groundwater:		
upgradient (the interceptor is upgradient)	20	20
downgradient (the interceptor is downgradient)	50[5]	25
Irrigation canals:		
lined (watertight canal)	50	25
unlined		
upgradient	100	50
downgradient	100	50
Cuts exceeding 30%, downslope from ~~an absorption~~ a dispersal field, in excess of 30 in. (top of cut):		10
– intersects layers that limit effective soil depth within 48 in. of surface	Four times height of cut[7]	
– does not intersect layers that limit effective soil depth	10	10
Fill downslope from ~~an absorption~~ a dispersal field, trenches. Fill must be on top of a native soil surface with over 30% slope [7,8]	Four x's height of fill[7]	10

Condition	Setback, ft	
	A[1] ~~Absorption~~ Dispersal fields, etc.	**B**[2] Septic tanks, etc.
Escarpment (a steep slope or cliff, over 30% slope, that makes a boundary to a flat or gently sloped upland area) downslope from ~~an absorption~~ a dispersal field :	50	10
Roadway setback, from road or street edge	20[9]	20[9]
Property lines	5	5
Swimming pool	5	5
Water lines (service line off water main)	5	5
Water main (public) - New construction / Repairs	25/10	10/10
Water main (private)	10	10
Driveway or parking area	0[10]	0[11]
Foundations, building peers, foundation lines of any building or structure	5[12]	5[12]
~~Absorption~~ Dispersal trench (from the sidewall) Narrow ~~absorption~~ dispersal trenches are exempt as per Section 4.4 ~~of this manual~~	8	5
Storm water drainage pipe	25[13]	5[13]
Storm Water Retention/Detention Basins	50	50

1 **A** = From wastewater dispersal ~~absorption~~ fields or infiltrative surfaces, including dispersal ~~absorption~~ field replacement areas

2 **B** = From septic tanks dosing tanks, treatment units and distribution units of over 20 gallon capacity

3 Does not prevent stream crossing in approved piping systems; culverting these drainage ways will not be allowed to reduce these setback requirements

4 When a perennial stream, spring or seep is upgradient and higher in elevation the setback to "A" or "B" may be reduced to 50 feet

5 Any impounded body of water with no less than one-acre foot of water

6 Twenty feet if an impermeable barrier is supplied with the drain

7 Four times the height of the bank, measured from the top edge of bank (with a 50 foot maximum distance)

8 For existing ~~absorption~~ dispersal field repairs where no other option is available earthen fill areas may be exempt from this setback requirement if the fill has been in place for over 5 years, has been adequately evaluated by a qualified designer and has demonstrated

compatibility with underlying soils. Native soils underneath fill areas may also be used for ~~absorption~~ dispersal fields if they are properly evaluated by a qualified designer and necessary system controls/mitigations are designed into the wastewater treatment and dispersal system

[9] If an existing public road right-of-way or public utility easement exceeds the twenty-foot setback a greater setback distance is required. A lesser setback distance to the edge of the road is allowed when information is provided that demonstrates the location of the public road right of way or public utility easement is less than 20 feet. In no instance shall a septic tank, etc., or dispersal~~absorption~~ field, etc., be allowed to be constructed in a public road right of way or public utility easement.

[10] Only if percolation rate is less than thirty minutes per inch

[11] Only if access risers are provided and a minimum one-foot of total cover is provided over the septic tank. New installations in vehicle areas require traffic-rated septic tanks

[12] Including non-slab porches and steps whether covered or uncovered, breezeways, roofing structures, carports, and similar structures or appurtenances. Small cement porches and steps that do not serve as foundations for overhead structures are exempt from these setback requirements

[13] Greater or lesser distances may be required depending on site characteristics. Lesser distances may be allowed for storm drains that flow only during rain events and are engineered to eliminate effluent infiltration and preferential pathways

Table 3.2
REQUIRED SETBACKS FOR PORTABLE TOILETS

Condition	Setback, ft	
Groundwater supplies, including springs and cisterns	50	25
Surface public waters, excluding intermittent streams	50	50
Intermittent streams	50	25
Property line	25	25

B. Easements

An onsite wastewater disposal system shall be located entirely on the ~~property~~ parcel served by the system or a legal permanent easement for a dispersal ~~an absorption~~ field needs to be obtained for placement on a neighboring ~~property~~ parcel before the issuance of a permit. An easement will provide for future access to allow maintenance of the system. Examples of single party and multiple party easement forms are available from the ~~Onsite Wastewater Management Zone~~ Town of Paradise.

When the system crosses a property line separating ~~properties~~ parcels of different ownership, a recorded permanent utility easement and covenant against conflicting uses is required in a format approved by the Town. An easement must accommodate that part of the system, including setbacks for property lines and building foundations, which lies beyond the applicant's property line. The easement must allow for entry to install, maintain and repair the system.

When the system crosses a property line separating ~~properties~~ parcels under the same ownership, the applicant/owner must create an easement with covenants in a format approved by the Town to enter and inspect that portion of the system, including setbacks for property lines and building foundations, on the adjacent parcel, by excavation, if necessary, agreeing not to put that portion of the adjacent parcel to a conflicting use, and agreeing upon severance of the adjacent parcel to grant a permanent utility easement in favor of the owner of the parcel served by the system.

Dispersal~~Absorption~~ field easements or covenants are ~~may be~~ necessary for the repair of existing septic systems ~~mandates~~ crossing property lines.

C. Abandonment of a septic system

The owner shall abandon a septic system for several reasons:

- A ~~sewerage~~ public sewer or public onsite septic system becomes available to a building and the building sewer has been connected thereto; or
- The source of wastewater has been eliminated permanently.
- The system has been operated in violation of these rules, unless and until a repair permit and an Operating Permit are subsequently issued therefore; or
- The system has been constructed, installed, altered or repaired without a required permit authorizing such, unless and until a permit is subsequently issued therefore.

Procedures for abandonment should start with the septic tank, cesspool or seepage pit being pumped by a licensed wastewater disposal service to remove all sludge. The septic tank, cesspool or seepage pit should then be filled with sand. If, in the judgment of the Onsite Sanitary Official, it is not reasonable, possible or necessary to pump and fill the system, the Onsite Sanitary Official may waive either or both of these requirements provided such action does not constitute a menace to public health, welfare or safety.

3.2 SELECTION OF AN APPROPRIATE ONSITE SYSTEM

A series of flow charts (Figures 3.1 through 3.7) and a soil map on file with the Town, have been developed to aid in the selection of an appropriate onsite wastewater system in the Town of Paradise ~~Onsite Wastewater Management Zone~~. Figures 3.1 through 3.7 are based on soil and site conditions commonly found in Paradise. However, they do not cover all conditions. The soil map is also general in nature and may not show all ~~the~~ soil conditions present. Therefore, a site evaluation is still required to verify actual soil conditions at all proposed disposal areas. Special designs may be considered under a variance for those sites not described in Figures 3.1 - 3.7. Table 3.3 lists the

general procedure for the use of the flow charts and soil map. Table 3.4 is a summary of the soil types, areas, and recommended onsite systems.

TABLE 3.3

PROCEDURE FOR THE SELECTION OF AN APPROPRIATE ONSITE ~~DISPOSAL~~ WASTEWATER SYSTEM

For General Planning:

1. Locate the lot on the soil map to identify the soil type commonly found in the area.

2. Use Figures 3.1 through 3.7 to identify the appropriate soil group and probable onsite system requirements.

3. Review the onsite system requirements as described in Chapter 4 of this manual.

For Design:

1. Verify site conditions. Dig test holes, identify soil conditions, and select an appropriate system. **The charts and soil map do not replace good judgment or common sense.**

3.3 LOTS WITH LIMITED SPACE FOR WASTE DISPOSAL SYSTEM

Those existing lots which have very small suitable ~~disposal~~ dispersal areas can use one or more of the following techniques depending on soil conditions:

- ~~Pretreatment~~ Advanced treatment of septic tank effluent with an intermittent dosing sand filter or recirculating gravel filter.
- Bottomless intermittent dosing sand filter (bed or trench)
- ~~Package engineered~~ Advanced treatment systems with approved technology components.
- Pressure distribution with narrow ~~absorption~~ dispersal trenches and narrow spacing
- ~~Deep absorption trenches~~

- Redundant system

A qualified designer shall prepare plans of the proposed onsite wastewater system. There must be adequate space on the lot for a replacement ~~system and absorption~~ dispersal field.

TABLE 3.4
SUMMARY OF SOIL TYPES FOUND IN PARADISE AND THE RECOMMENDED TYPE OF ONSITE WASTEWATER DISPOSAL SYSTEM

Soil Map Symbol	Mapping Unit Name	Area (Acres)	Percent of Total	Recommended Onsite System
AVD 0-30%	Aiken Very Deep	7805	66.7	S
AVD 30-45%	Aiken Very Deep	50	0.4	S
AD 0-30%	Aiken Deep	173	1.5	S
BA 0-30%	Aiken Bouldery Phase	380	3.3	S + Extra
BA 30-45%	Aiken Bouldery Phase	19	0.2	S + Extra
PR 0-10%	Basalt flow with soil between columns of rock	140	1.2	S + Extra
MC-C 0-30%	Guenoc-Cohasset complex	243	2.0	S or ~~P~~A
MC-C >30%	Guenoc-Cohasset complex	49	0.4	~~P~~A
SC-MC 0-30%	Shallow clay loam - Guenoc complex	406	3.5	U
SC-MC 30-45%	Shallow clay loam - Guenoc complex	7	0.1	E
SC-T 0-30%	Shallow clay loam - Toomes complex	133	1.1	U

Soil Map Symbol	Mapping Unit Name	Area (Acres)	Percent of Total	Recommended Onsite System
SC-T 30-45%	Shallow clay loam - Toomes complex	3	>0.1	D or ~~P~~ A or E
W 0-10%	Wetlands/swamp/marshes	10	>0.1	NA
TW-MA 0-10%	Complex of two unnamed series with seasonal water tables	927	7.9	U
SM 0-30%	Shallow, very poorly drained soil	34	0.3	U
PO 0-30%	Mariposa	6	0.1	U
C/F	Cuts and fills	22	0.2	~~P~~A
F	Fills	8	0.1	~~P~~A
RL	Rockland	440	3.7	U
Q	Quarries	1	>0.1	U
45%	Slopes over 45% with a variety of soils	844	7.2	U
		11,700	100	

S = Standard System S + Extra = Standard System plus extra drainfield
~~P~~ A = ~~Pretreatment~~Advanced treatment E = Engineered Fill D = Dewatering U = Unsuitable

FIGURE 3.1
SOIL GROUP CHART

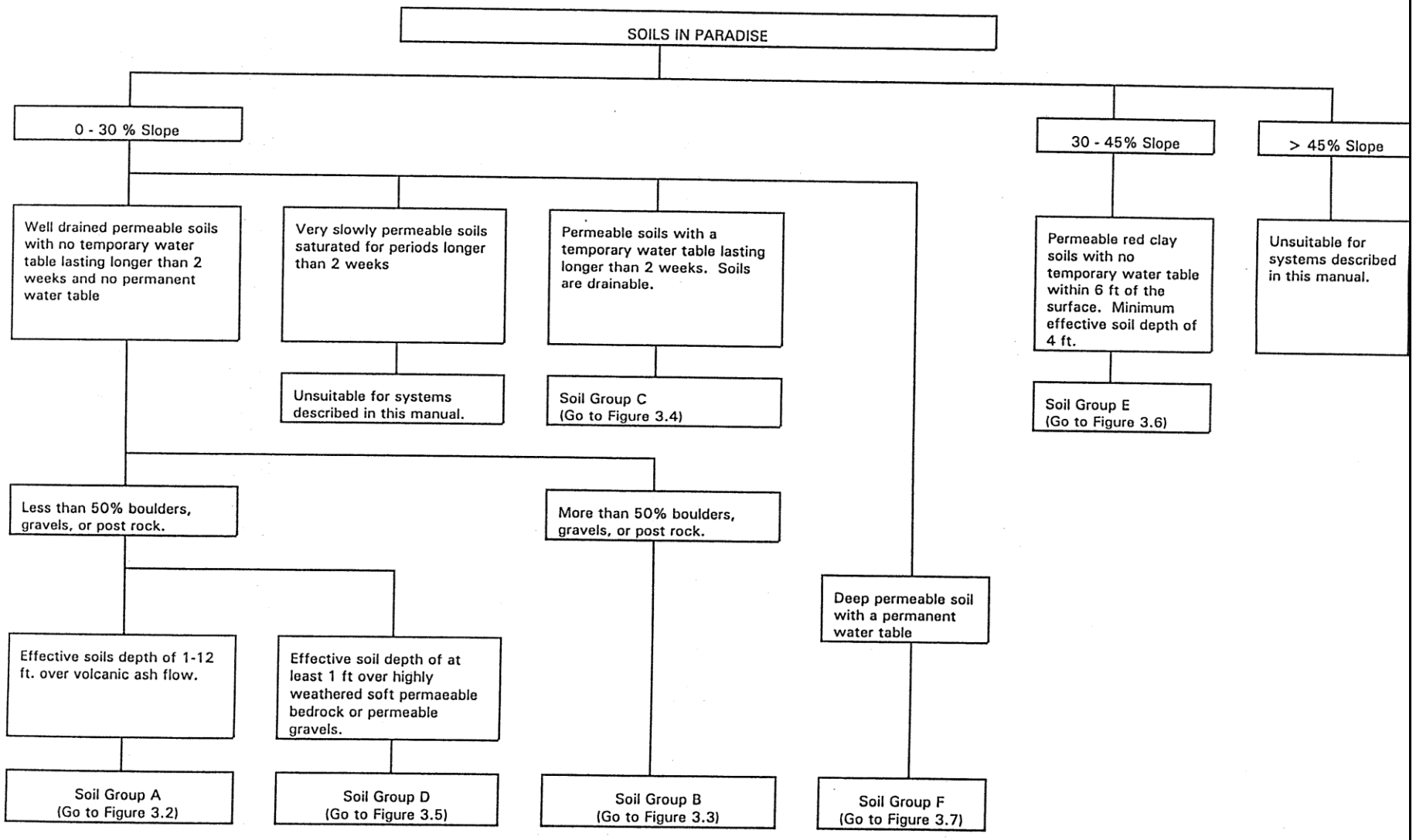


FIGURE 3.2
SYSTEM SELECTION CHART: SOIL GROUP A

Well-drained, permeable soils on slopes less than thirty percent. Soils have no permanent water table and no temporary water table lastir more than two weeks. Texture of subsoil is either clay or clay loam.

Series	Soil Map Symbol	Effective Soil Depth
Aiken very deep	AVD 0-30	5 - 12 ft
Aiken deep	AD 0-30	4 - 5 ft
Cohasset	C 0-30	3 - 4 ft
Guenoc	MC 0-30	2 - 3 ft
Unnamed shallow soil	SC 0-30	1 - 2 ft
Mariposa	PO 0-30	1 - 2 ft

NOTE: ALL SYSTEMS MUST COMPLY WITH THE MINIMUM SEPARATION DISTANCES BETWEEN DISPOSAL TRENCH BOTTOMS AND SENSITIVE LAYERS

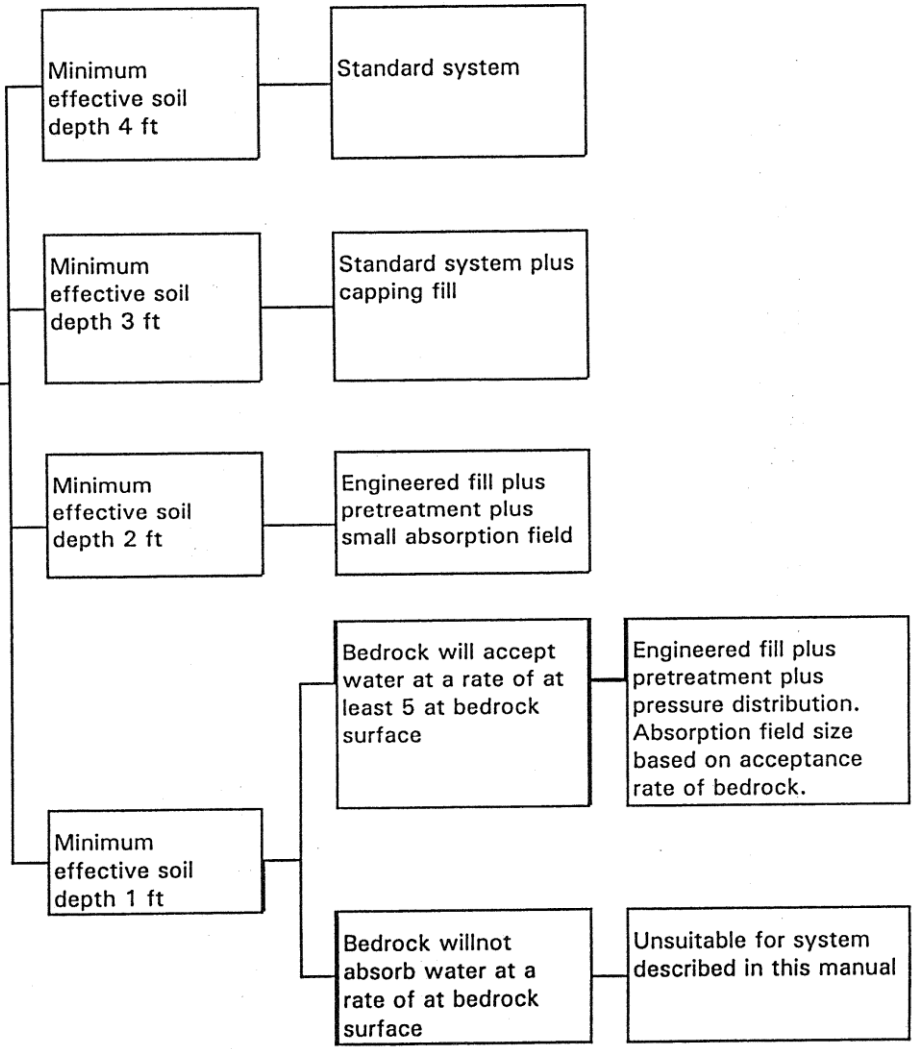


FIGURE 3.3
SYSTEM SELECTION CHART: SOIL GROUP B

Well-drained, permeable soils on slopes less than thirty percent (30%) with more than fifty percent (50%) boulders, gravels, or post rock Texture of the subsoil is very gravelly clay to loam. These soils have no water table.

Series	Soil Map Symbol	Effective Soil Depth
Aiken bouldery phase	BA	4 - 6 ft
Unnamed soil derived from basalt	PR	at least 4 ft

- If rock content is lower enough to excavate → Standard system plus 50% more absorption trench
- If rock content is too high to excavate and there is at least 30% → Four foot deep engineered fill plus pressure disribution. No large systems
- If soil content is less than 30% → Shallow engineered fill plus pretreatment plus pressure distribution
- If rock content is greater than 50% → No large systems

Toomes	T	1 - 2 ft

- Soil and bedrock will accept water at a rate of at least 5 minutes per inch and no greater than 60 minutes per inch → Engineered fill maintaining 4 foot soil depth plus pretreatment plus pressure distribution. Absorption field size based on acceptance rate of engineered fill, native soil and bedrock.
- Bedrock will not absorb water at rate of 5 gal/ft^2 d at bedrock surface → Unsuited for systems described in this manual

NOTE: ALL SYSTEMS MUST COMPLY WITH THE MINIMUM SEPARATION DISTANCES BETWEEN DISPOSAL TRENCH BOTTOMS AND SENSITIVE LAYERS

FIGURE 3.4
SYSTEM SELECTION CHART: SOIL GROUP C

Permeable soils on slopes less than thirty percent. Soils have temporary water tables lasting longer than two weeks. Texture of subsoi ranges from clay loam to dense clay.

Series	Soil Map Symbol	Depth to Temporary Water Table		
Unnamed deep clay loam soil	TW	3 - 5 ft	Drainable to 4 ft below ground surface	Perimeter drain plus standard system
Unnamed deep clay soil with clay pan within 3 ft of surface	MA	1 - 3 ft	Drainable to 3 ft below ground surface	Perimeter drain plus narrow absorption trenches plus pressured distribution plus capping fill
			Drainable to 2 ft below ground surface	Perimeter drain plus engineered fill plus pretreatment plus narrow absorption trenches
Unnamed shallow soil	SM	<1 ft	Most areas of this soil are not drainable to 2 ft below ground surface	Unsuitable for systems described in this manual

NOTES: ALL COMPLETED SYSTEMS MUST COMPLY WITH THE MINIMUM SEPARATION DISTANCES BETWEEN DISPOSAL TRENCH BOTTOMS AND SENSITIVE LAYERS.

DEMONSTRATION THAT THE DISPOSAL SITE CAN BE DRAINED OVER AN ENTIRE WET SEASON WILL BE REQUIRED PRIOR TO CONSTRUCTION OF THE WASTEWATER DISPOSAL SYSTEM.

FIGURE 3.5
SYSTEM SELECTION CHART: SOIL GROUP D

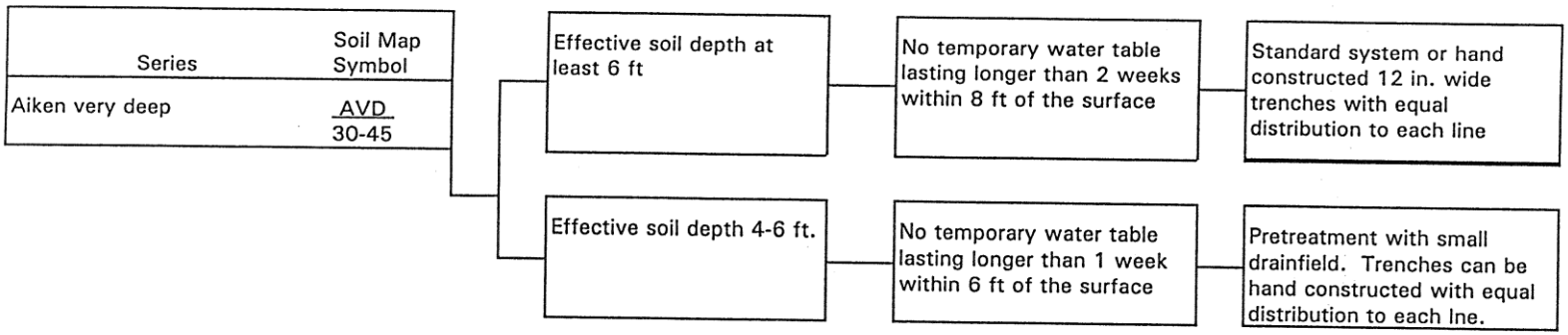
Permeable soils overlying fractured, permeable bedrock on slopes less than thirty percent with no permanent or temporary water table. Bedrock must be diggable with a common backhoe and have clay films along fractures. Infiltration rate thirty-six inches into bedrock must be greater than five gallons per square feet·day.

There are a limited number of areas with these conditions in Paradise. No soil series designations have been developed for these soils. A bottomless and filter may be used if the completed system will have the minimum required effective soil depth.

NOTE: ALL SYSTEMS MUST COMPLY WITH THE MINIMUM SEPARATION DISTANCES BETWEEN DISPOSAL TRENCH BOTTOMS AND SENSITIVE LAYERS

FIGURE 3.6
SYSTEM SELECTION CHART: SOIL GROUP E

Permeable soils on slopes between thirty-forty percent . These soils have no permanent water tables.



NOTE: ALL SYSTEMS MUST COMPLY WITH THE MINIMUM SEPARATION DISTANCES BETWEEN DISPOSAL TRENCH BOTTOMS AND SENSITIVE LAYERS

FIGURE 3.7
SYSTEM SELECTION CHART: SOIL GROUP F

There are a few soils in Paradise which qualify as having a permanent water table. The maximum height of the water lasting more tha two weeks needs to be established on a case-by-case basis. A four foot separation from the trench bottom and the maximum height o the water table shall be maintained.

4
DESCRIPTION OF ONSITE SYSTEMS

This chapter includes descriptions and design guidelines for the various types of onsite wastewater disposal systems allowed in the Onsite Wastewater Management Zone. There are two classifications of onsite systems in the Town: standard systems and alternative systems. Onsite systems not described in this Chapter shall only be permitted under the provisions of Chapter 7. Specifications for various system components such as septic tanks, piping, and pumps, are provided in Chapter 5.

4.1 STANDARD SYSTEMS

A standard ~~absorption system is an~~ onsite wastewater disposal system ~~for a single family dwelling consisting~~ consists of a septic tank, a flow distribution unit and a gravity-fed ~~absorption~~ dispersal field constructed in accordance with the guidelines outlined in this manual. A standard pressure distribution system consists of a septic tank, a dosing tank and a pressure distribution dispersal field.

The ~~Method~~ method of septic tank effluent distribution will depend on the system. Variables such as the slope of the site, the depth of soil and the location of the dispersal field ~~and type of final treatment facility~~ will determine the necessary method of distribution. A distribution box is used for systems requiring distribution of effluent in equal portions to ~~absorption~~ dispersal trenches. ~~-~~Drop boxes are distribution boxes used for serial distribution systems on sloping ground. ~~requiring serial distribution.~~ Serial distribution is allowed only when it is impractical to provide equal distribution and is approved by the Onsite Sanitary Official. [See note 17]

A. General conditions for approval

To be approved for a standard system each site must meet all the following conditions:

- Soil depth: See Figure 4.1
- Water table levels: Water table levels shall be predicted using conditions associated with saturation (Appendix A) or monitoring wells (Appendix B). If conditions associated with saturation do not occur in soil with rapid or very rapid permeability, predictions of the highest level of the water table shall be based on past recorded observations. If such observations have not been made, or are inconclusive, the application shall be denied until observations can be made. Groundwater level determinations shall be made during the period of the year in which high groundwater normally occurs. A seasonal groundwater table is also known as a temporary high groundwater level and must be maintained for over two weeks in order to be regarded as significant for dispersal field design. Minimum soil separation requirements for the design of waste water dispersal beds are based off of the temporary high groundwater level. ~~A permanent water table shall be forty-eight inches or more from the bottom of the absorption facility. A temporary water table shall be twenty-four inches or more below the bottom of the absorption trench.~~ [See note 18]
- Slopes shall not exceed thirty percent.
- The site must not have been altered in a way that would affect proper functioning of the system.
- The site of the initial and replacement ~~absorption facility~~ dispersal fields will not be subjected to excessive saturation due to, but not limited to, artificial drainage of ground surfaces, driveways, roads, and roof drains.
- The required setbacks must be maintained ~~observed~~ (See Table 3.1).
- For repair or new construction, the gross wastewater hydraulic loading rate to any parcel with an onsite sewage disposal system that does not have advanced treatment shall not exceed 900 gallons per acre per day. Gross area calculations shall include the area to the centerline of any abutting public street or any other public right of way. [See note19]

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figure 4.1

B. Septic tanks

A diagram of a typical septic tank is shown in Figure 4.2. Volume and installation requirements are listed below. Other specifications are included in Chapter 5.

- Size of septic tank: Septic tanks to serve new single family dwellings shall be sized on the number of bedrooms in the dwelling, as follows:

Bedrooms	Minimum Tank Size (gallon)
1 - 3	1,500
4	1,500
5 - 6	1,500

- Existing septic tanks that are structurally sound and not identified as being in failure shall comply with the minimum septic tank sizes established by Appendix I, Table I-2 of the Uniform Plumbing Code, California Plumbing Code Edition.

- Septic tank installation requirements:

  a. Septic tanks shall be installed on a level, stable base that will not settle. A minimum eight (8) inch base layer of pea gravel shall be required. For fiberglass or PVC tanks, pea gravel or sand shall be used as backfill to the midseam of the tank as a minimum.

  b. Septic tanks located in high groundwater areas shall be weighted or provided with an antibuoyancy device to prevent flotation.

  c. A watertight access riser extending from the top of the septic tank to the ground surface or above is recommended for standard systems, but are not required. Watertight access risers extending to finished grade which are capable of supporting vehicle loads shall be installed on septic tanks located beneath vehicle traffic areas, sidewalks, and concrete pads. Watertight access risers are required on all alternative systems. The riser shall have a minimum inside dimension equal to or greater than that of the tank access port opening. A cover shall be provided and securely fastened or weighted to prevent easy removal and shall have a gasket to prevent odors from escaping.

  d. Septic tanks shall be installed in a location that provides access for servicing and pumping.

  e. Septic tank construction shall comply with minimum standards set forth in this manual (see Chapter 5), unless otherwise authorized in writing by the Onsite Sanitary Official. A double compartment septic tank shall be used for standard systems.

- Effluent sewer: The effluent sewer shall extend at least ~~one~~ three feet ~~foot~~ beyond the septic tank before connecting to the distribution unit. It shall be installed with a minimum fall of four inches per 100 feet , but in no instance shall there be less than two inches of fall from one end of the pipe to the other. Effluent sewers which are placed on a steep slope and running a long distance ~~need~~ require clay dams in the trench containing the effluent sewer. The purpose of the dams is to prevent water from ~~running along the pipe and in the trench from~~ and concentrating at the terminal end, ~~of the trench and either entering~~ thus over-saturating the dispersal trench ~~absorption field~~ or causing a wet surface area. [See note 20]

FIGURE 4.2

C. Distribution boxes

Distribution boxes are mandatory for parallel (equal) distribution to ~~absorption~~ dispersal trenches. The distribution box must be on a stable, level native soil or compacted soil base if it is to function properly. A typical parallel (equal) distribution system is illustrated in Figure 4.3. A typical distribution box installation is shown in Figure 4.4. Distribution box specifications are presented in Chapter 5. Other requirements are listed below:

- The distribution box shall be placed on a stable, level native or compacted soil base.

- Outlets: A separate outlet shall be provided for each distribution pipe. The inverts of all outlets shall be set at the same level that shall be a minimum of two inches above the bottom of the distribution box. When installation is complete the distribution box shall be filled with water at which time the installation shall be checked to make sure that it is level. Adjustments shall be made as necessary so that all outlets are fixed permanently and securely at exactly the same elevation prior to back-filling.

- Inlets: The invert of the inlet shall be at least one inch above the invert of the outlets. Where dosing is used, or where the connecting pipe from the septic tank has a steep slope, measures shall be taken to prevent direct flow of septic tank effluent across the distribution box resulting in unequal distribution of septic tank effluent among the distribution outlets.

- Access: Distribution boxes shall be provided with a means of access which may be a removable lid for smaller boxes or an access port for larger boxes. Access openings must be large enough for easy removal of accumulated solids and inspection of the inlet and all outlets. Openings must be watertight and also extend to within ~~twelve~~ eighteen inches of the finished grade.

- All distribution box locations shall be permanently marked with a steel post, concrete marker, access riser or other durable material. Traffic ~~should~~ shall not be allowed on the distribution boxes ~~.~~ unless the box is constructed to withstand vehicle forces and is provided with a traffic rated access riser. [See note 21]

FIGURE 4.3

FIGURE 4.4

D. Drop boxes

Drop boxes are ~~sometimes~~ used for serial distribution to ~~absorption~~ dispersal trenches. A typical serial distribution system is shown in Figure 4.5. Construction, installation, inlets, and access requirements are the same as for distribution boxes with the addition of overflow piping. Specific information about drop boxes is included in Chapter 5.~~.~~ Serial distribution is allowed only when it is impractical to provide equal distribution to the dispersal field and upon approval by the Onsite Sanitary Official. [See note 17]

The overflow pipe to the next ~~absorption~~ dispersal trench shall be set so that the upper ~~absorption~~ dispersal trench is full ~~of septic tank effluent~~ before the flow spills over to the next ~~absorption~~ dispersal trench ~~being served from the box~~. The overflow pipe between drop boxes shall be water-tight. It shall be placed in a trench dug only deep enough to allow connection to the next lower drop box. The soil back-filled around the overflow pipe shall be carefully compacted below and around it to prevent seepage along the pipe between ~~absorption~~ dispersal trenches. The drop box shall set on a firm base and carefully back-filled so as to prevent settlement or other movements.

E. Gravity-fed dispersal ~~absorption~~ field

A "standard" system will use a gravity-fed dispersal ~~absorption~~ field, as described below.

- The ~~absorption~~ absorptive area of ~~the~~ a trench is calculated by ~~using~~ counting soil sidewall area only. The ~~entire surface area of~~ soil sidewall that is in contact with the gravel up to two inches above the distribution pipe is considered absorptive area. In the case where leachfield chambers are used instead of leachrock the sidewall area of the chambers that has slots or louvers is regarded as the sidewall absorptive area. The bottom area of a dispersal trench is not counted as absorptive area unless the septic system provides advanced treatment to the wastewater effluent prior to it being discharged. [See note 22]

- Sizing: Dispersal ~~Absorption~~ trenches shall be designed and sized based on the guidelines in this manual (Table 4.1). ~~A single family dwelling with one to three bedrooms will normally need 300 lineal feet of absorption trench.~~ A typical ~~absorption~~ dispersal trench design is shown in Figure 4.6.

- Dispersal ~~Absorption~~ trenches shall be constructed in accordance with the standards contained in Table 4.2, unless otherwise allowed by the Onsite Sanitary Official.

- Construction shall not be allowed by the Town when the soil has a moisture content that will cause permanent damage to the soil. Soil smearing can effectively seal trench walls. When the sidewall within the dispersal ~~absorption~~ trench has been smeared or compacted, sidewalls shall be raked to insure permeability. All smeared material shall be removed from the dispersal ~~absorption~~ trench prior to leachrock placement.

- The bottom of the ~~absorption~~ dispersal trench shall be level within a tolerance of ~~plus or~~ minus two inches per 100 feet. [See note 23]

- Dispersal ~~Absorption~~ trenches shall not be constructed in a manner that would allow septic tank effluent to flow backwards from the distribution pipe to undermine the distribution box, the septic tank, or any portion of the distribution unit.

- A minimum of twenty-four inches of drainrock shall extend across the full width of the dispersal ~~absorption~~ trench. There shall be six inches minimum of drainrock under the pipe, four inches of drainrock around the pipe and two inches minimum of drainrock above the pipe.

FIGURE 4.5

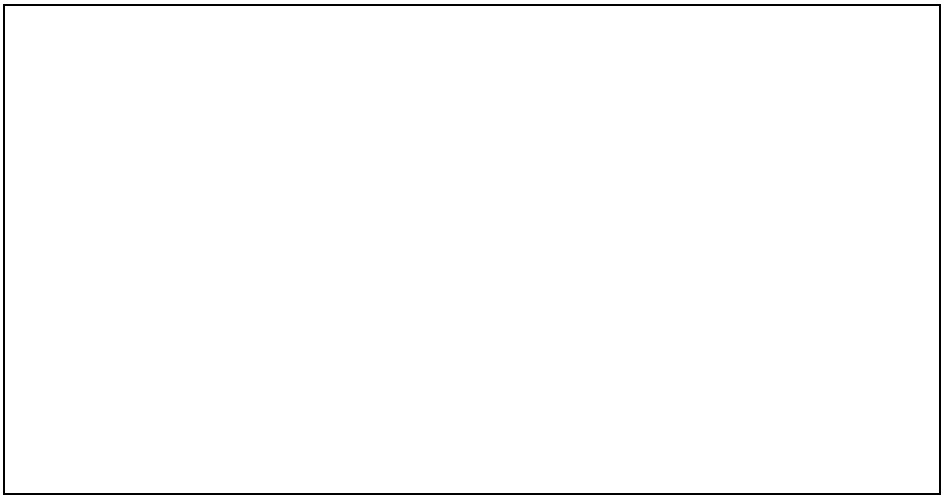

TABLE 4.1 [See note 24]
REQUIRED LINEAL FEET OF ~~ABSORPTION~~ DISPERSAL TRENCH
THAT HAS TWELVE INCHES OF DRAINROCK
RECEIVING PRIMARY TREATED EFFLUENT ~~BY TRICKLE FLOW~~[a]

Number of bedrooms	Design flows (gal/d)[b,e]	All non-sandy soils with <50% fragments smaller than 3 in.[c]	~~Gravity~~ Loam or clay loam or clay >50% coarse fragments larger than 3 in.[d]
1[f]	150	150	250
2	225	225	325
3	300	300	400
4	375	350	450
5	450	400	500
6	525	450	550
7	600	500	600

a Dispersal~~Absorption~~ trench sizing ~~for low pressure distribution is the same as for gravity flow.~~for gravity and pressure distribution of effluent that has not undergone secondary treatment.

b Loading rates are based on the long term acceptance rates for loam, clay loam, and well structured clays. Design flows provide a safety factor to cover those individual homes which produce high flow rates. ~~Actual average flow for a single family dwelling with three people is usually 150 - 180 gallons per day~~

c ~~Design long term acceptance rates 0.45 to 0.60~~ Soil application rate of .5 gallons/ft^2/day ~~per square feet day~~ for sidewall area only. [See note 25]

d ~~Design long term acceptance rates 0.38 to 0.45~~ Soil application rate of .375 gallons/ft^2/day ~~per square feet day~~ for sidewall area only.

e Soils containing excessive amounts of clay must have ~~absorption~~ dispersal trench~~es~~ lengths increased based upon soil percolation rate. ~~Absorption trenches installed in excessive clay content soils shall be pressurized.~~

f ~~System design flows shall be 150 gallons for a one bedroom residence. with each additional bedroom adding seventy-five gallons of effluent flow per bedroom~~

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TABLE 4.2
STANDARD ~~ABSORPTION~~ DISPERSAL TRENCH SPECIFICATIONS

Item	Value
Maximum length of trench	125 feet
Minimum bottom width of trench	24 inches
Minimum depth of trench, using:	
Equal or loop distribution	~~18~~24 inches
Serial distribution	24 inches
Minimum distance of undisturbed earth between trenches:	
~~For~~ 24 to 36 inch wide trenches	8 feet
~~For~~ 12 to 18 ~~6~~ inch wide trenches	6 feet
Maximum depth of trenches below native ~~natural~~ soil surface	48 inches[1]
Minimum depth of ~~filter material~~ total drainrock	12 inches
Minimum depth below pipe	6 inches
Minimum depth above pipe	2 inches
Maximum depth of total drainrock - all leach trenches	30 inches [See note 26]
Minimum soil backfill over drainrock	12 inches for gravity or pressure distribution [See note 27]

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[1] Trench depths into native soil in excess of forty-eight inches up to 60 inches may be allowed if; ~~soil profile descriptions show that the required~~ repair construction, there are no other options, minimum separation distances ~~can be~~ are maintained. ~~between the base of the absorption trenches and any groundwater or restrictive soil horizons. Absorption trenches with greater than five feet of drain rock below pipe shall require a variance.~~ [See note 28]

- Prior to backfilling the ~~absorption~~ dispersal trench, the ~~filter material~~ drainrock shall be covered with filter fabric or other material approved by the Onsite Sanitary Official to prevent fines from filling the gravel.

- The installation of a piezometer in each trench is highly recommended, but not required, for standard systems (see Appendix B).

- ~~Absorption~~ Dispersal trench backfill:

  a. Backfill shall be placed carefully to prevent damage to the system. Extra backfill is required over the ~~absorption~~ dispersal trenches to allow for settling. The backfill shall

not be compacted. The ~~absorption~~ dispersal trenches should not become depressions. Wheeled tractors must be operated with care over constructed ~~absorption~~ dispersal trenches to avoid damaging them. ~~the absorption trenches~~ .

b. Backfill shall be free of large stones, clumps of soil, masonry, stumps, or waste construction materials or other materials that could damage the system.

- All surface water shall be directed away from the ~~disposal~~ dispersal field.
- Header pipe shall be watertight, have a minimum diameter of four inches, and be bedded on undisturbed native soil or compacted soil. Where distribution boxes or drop boxes are used, header pipe shall be at least two feet in length. See Chapter 5.
- Distribution pipe:

a. Distribution pipes shall have a minimum diameter of four inches.

b. Each ~~absorption~~ dispersal trench shall have distribution piping that is centered in the trench and laid level within a tolerance of ~~plus or~~ minus one inch/100 feet of leachline.

c. Distribution piping shall comply with the standards listed in Chapter 5.

d. All perforated pipe shall be installed with centerline markings up.

- ~~All absorption trenches shall be marked permanently with a steel post, concrete, marker or other durable material. A marker shall be set at each end of the absorption trench. Piezometers, if installed, can be used to satisfy this requirement.~~

All other systems described hereafter shall comply with the conditions set forth for ~~the~~ standard systems except as indicated by ~~the~~ additions and substitutions required ~~by an~~ for ~~a~~lternative systems.

4.2 ~~PRETREATMENT~~ ADVANCED TREATMENT SYSTEMS [See note 29]

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It may be necessary to provide advanced treatment to septic tank effluent ~~with a sand or fine gravel filter in areas of shallow soil,~~ where restrictive layers are present, in areas of high groundwater, on sites with excessively permeable soil, or where ~~disposal~~ dispersal area is limited. ~~Pretreatment~~ Advanced treatment systems are considered to be "alternative systems" by the Town of Paradise. Parcels that have septic systems that are discharging effluent that has undergone advanced treatment are allowed to have a gross hydraulic loading rate of 2000 gpd/acre, whereas parcels that do not have advanced treatment are allowed 900 gpd/acre, (excluding the downtown exemption area). Advanced treatment is also known as secondary treatment and must meet certain design requirements as described in Chapter 6 of this manual. [See note 30]

A. General conditions for approval

~~Pretreatment systems shall not be permitted on a site if a standard system would be acceptable.~~ Bottomless ~~S~~sand or fine gravel filters may be permitted ~~on any site meeting~~ when all of the following minimum site conditions are met:

- General conditions for bottomless sand ~~or fine gravel~~ filter placement:

  a. Slope is forty-five percent or less. Refer to Section 4.7 for steep slope (thirty to forty-five percent) conditions.

  b. Setbacks shown in Table 3.1 can be met

  c. Soil beneath a bottomless sand filter ~~absorption area~~ shall be at least ~~four~~ three feet ~~deep~~ in depth above a temporary water table or restrictive soil or rock layer. ~~and the percolation rate must be no less than five minutes per inch and no greater than sixty minutes per inch.~~ [See note 31]

~~- Temporary water table levels:~~

  ~~a. The highest level attained by temporary water would be twenty-four inches below the bottom of the trench.~~

~~- Permanent water table levels: Permanent water table levels shall be determined in accordance with methods specified in this manual. A four foot separation from trench bottom to permanent water shall be maintained.~~

~~Types of pretreatment: There are two basic types of pretreatment: Single pass (intermittent dosing: contained and bottomless) and multiple pass (recirculating gravel) filters. The selection of the filter will be based on an evaluation of the site.~~

~~The partially treated wastewater is collected at the bottom of the filter and discharged, either by gravity or by pressure, to a suitable, approved final treatment, usually an absorption field.~~

B. ~~Intermittent~~ Sand filters - General

A ~~An intermittent dosing~~ sand filter system consists of a septic tank, a dosing system with effluent pump and controls or a dosing siphon, bed of sand, and ~~an absorption facility~~ a separate dispersal field (for contained sand filters). A two foot bed of medium sand serves as an aerobic site for microorganisms, which live on the surface of the sand grains. All or portions of the sand bed will require replacement at some point in time depending on operation practices and inert, non-biodegradable material contained in the waste.

C. ~~Intermittent dosing~~ Sand filter - contained

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A contained ~~intermittent dosing~~ sand filter consists of an impermeable container filled with a minimum of two feet of medium sand designed to filter and biologically treat septic tank or other treatment unit effluent from a pressure distribution system at an application rate not to exceed 1.23 gallons/ft^2/day ~~per square feet day~~ of sand surface area, applied at a dose not to exceed twenty percent of the projected daily sewage flow. A typical ~~intermittent~~ contained sand filter is shown in Figure 4.7.

Construction:

- Use guidelines for the distribution as outlined in pressure distribution systems.
- Filters can be placed above or below grade.
- A separate dispersal bed is provided.
- Media specifications: effective size 0.30 - 0.50 millimeters, uniformity coefficient of four or less. The media shall conform to the gradation shown below. The sand must be washed as to be free of fines and approved by the system designer prior to delivery to the site.

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Sieve Size	Percent Passing
3/8 inch	100
No. 4	40 100
No. 10	62 100
No. 16	45 82
No. 30	25 / 55
No. 50	5 20
No. 60	0 10
No. 100	0 4

D. ~~Intermittent dosing~~ Sand filter - bottomless

A bottomless ~~intermittent dosing~~ sand filter consists of two feet of medium, washed sand which is pressure dosed and effluent is allowed to drain through the sand directly into the soil beneath. A typical bottomless sand filter is illustrated in Figure 4.8. A bottomless sand filter can typically be used in soils with rapid permeability provided that the required groundwater separation distances are provided.

Maximum loading rates for bottomless sand filters are the same as for contained sand filters. The underlying ~~material~~ soil must accept the treated effluent at a rate greater than 5 gallons/ft^2/day ~~per square feet day~~. Soil hydraulic testing procedures are outlined in Appendix C. ~~A bed or trench design may be used.~~

FIGURE 4.7

FIGURE 4.8

Construction:

- Use guidelines for the distribution as outlined in pressure distribution systems.
- Filters can be placed above or below grade.
- ~~In-trench bottomless sand filters shall have a minimum width of two feet.~~
- Media specifications: effective size 0.30 - 0.50 millimeters, uniformity coefficient of four or less. The media shall conform to the gradation shown below. The sand must be washed so as to be free of fines and approved by the system designer prior to delivery to the site.

Sieve Size	Percent Passing
3/8 inch	100
No. 4	40 - 100
No. 10	62 - 100
No. 16	45 - 82
No. 30	25 - 55
No. 50	5 - 20
No. 60	0 - 10
No. 100	0 - 4

E. Recirculating gravel, textile or other media~~-~~ filter [See note 32]

Effluent from the septic tank flow~~s by gravity~~ to a recirculation tank (see Figures 4.9 and 4.10). Here it mixes with treated effluent returning from a gravel, textile or other media filter unit. A gravel filter typically has two feet of washed rounded gravel. ~~a bed of fine gravel.~~ A timer controls a pump used to pressure dose ~~a twenty-four inch layer of fine gravel~~ the filter, usually two-three times per hour. A valve or other splitter mechanism ~~in the recirculation tank~~ allows effluent returning from the filter to either enter the tank or to be discharged to the dispersal field, depending on the liquid level~~. in the tank~~.

- The filter loading rates are based on five gallons/ft^2/day ~~per square foot□day~~ based on the wastewater flow rate.
- Wastewater recirculation ratios will vary from 3:1 to 6:1 (recirculation flow to wastewater flow).
- Soil beneath dispersal fields receiving treated effluent from recirculating gravel, textile or other media filter shall be at least two feet in depth above a temporary water table or restrictive soil or rock layer. [See note 32]

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Construction:

- Media specifications for gravel: the effective size is three millimeters with a uniformity coefficient of two or less. The gravel shall have less than two percent passing through the No. 10 sieve and shall have one hundred percent passing the No. 4 sieve. The media must be washed as to be free of fines and must be approved by the designer prior to delivery to the site.

    - Containers are rigid with solid construction and must be watertight.~~can be concrete or flexible membrane~~. Use the same guidelines for containers as for contained sand filters. [See note 32]

F. Other types of ~~pretreatment~~ advanced treatment systems

Other ~~pretreatment~~ advanced treatment systems which vary in design from the filters mentioned in this manual may be authorized by the Town if it is demonstrated that the systems produce ~~comparable~~ effluent quality that meets required standards. Except for bottomless sand filters all advanced treatment systems must have the ability to be sampled for effluent quality. Advanced treatment systems that have an NSF/ANSI certification will be regarded favorably as to their design and construction. Refer to Chapter 7 for approval procedures. [See note 33]

G. ~~Pretreatment~~ Advanced treatment system disposal fields

The minimum total lengths of ~~standard~~ ~~initial absorption~~ dispersal trenches for ~~sand filter~~ advanced treatment ~~absorption facilities~~ systems serving single family homes are indicated in Table 4.3. For ~~other applications~~ all types and designs of advanced treatment systems the application rate in a dispersal field shall not exceed ~~1.20~~ 1.0 gallons/ft^2/day ~~per day square feet~~. Dispersal trenches are allowed to ~~of~~ combine~~d~~ sidewall and ~~absorption trench~~ bottom areas, based on the design flow rate, as discussed in Chapter 6. Dispersal beds cannot use sidewall area in their calculations for total absorptive surfaces. Applications submitted for new construction are required to indicate the original and replacement dispersal field locations. ~~Repair area absorption trenches for single family residences shall be maintained which utilize onsite wastewater disposal system installations other than pretreatment disposal trenches and redundant disposal trenches. Repair area absorption trench lengths shall yield sufficient absorption trench surface area equal to the absorption capacity of standard absorption trenches required for a one to three bedroom single family residence~~ [See note 34]

FIGURE 4.9

FIGURE 4.10

TABLE 4.3
~~ABSORPTION FIELD~~ SIZING FOR DISPERSAL TRENCHES WITH 12 IN. OF DRAINROCK ~~OVER PERMEABLE SOILS~~ RECEIVING ~~PRETREATED~~ SECONDARY TREATED EFFLUENT ~~BY TRICKLE OR PRESSURE DOSED FLOW~~ *

Number of bedrooms	Design flows (gal/d)	Lineal feet
1-3	300	100
4	375	125
5	450	150
6	525	175
7	600	200

* For slowly permeable soils and fractured bedrock, infiltration tests shall be performed in accordance with Appendix C.

The allowable soil hydraulic loading rates are higher ~~where pretreatment~~ with advanced treatment systems ~~are provided~~ because ~~of the following~~:

- ~~Pretreatment~~ Advanced treatment reduces soil clogging which allows higher loading rates.

- The bottom area of ~~absorption~~ dispersal trenches are ~~important~~ effective absorption surfaces for secondary treated ~~pretreated~~ effluent, because secondary treated effluent is much 'cleaner' than primary treated effluent and does not develop a clogging mat. ~~the absorption trench bottoms continue to absorb pretreated effluent unlike absorption trenches receiving untreated effluent from a septic tank. Each lineal foot of pretreated absorption~~ Therefore secondary treated dispersal trenches ~~has~~ have more usable surface area than primary treated dispersal trenches ~~absorption trenches loaded with untreated septic tank effluent.~~

H. General requirements for ~~pretreatment~~ advanced treatment systems

- All materials used in filter system construction shall be structurally sound, durable and capable of withstanding normal installation and operation stresses. Component parts subject to malfunction or excessive wear shall be readily accessible for repair and replacement.

- All filter containers shall be placed over a stable level base.

- Piping and fittings for the filter distribution system shall be as required under pressure distribution systems.

- A method for sampling treated ~~filter~~ effluent shall be provided except for bottomless sand filters.~~.~~

- The specific requirements for septic tanks, dosing tanks, etc. in Chapter 5 shall be met.

- A piezometer shall be installed adjacent into ~~into~~ each ~~absorption~~ dispersal trench (see Appendix B).

- The applicable components of the ~~pretreatment~~ advanced treatment system shall meet minimum specifications indicated in Chapter 5 unless otherwise authorized in writing by the Onsite Sanitary Official.

- Container design and construction: Container may be constructed of concrete or other materials where equivalent function, workmanship, water-tightness and at least a thirty-year service life can be documented. A flexible membrane liner (FML) is permitted provided that it is made of material with the following properties:

  a. Materials are at least equivalent to thirty milliliter unreinforced polyvinyl chloride (PVC) described in Chapter 5.

  b. Have field repair instructions and materials which are provided to the purchaser with the liner; and

  c. Have factory fabricated "boots" suitable for field bonding onto the liner to facilitate the passage of piping through the liner in a waterproof manner. Where accepted for use, flexible sheet membrane liners shall be placed against relatively smooth, regular surfaces comprised of rigid, solid approved materials. Surfaces shall be free of sharp edges, corners, roots, nails, wire, splinters and other projections which might puncture, tear, or cut the liner. ~~Where a smooth, uniform surface cannot be assured in the field, filter system plans must include specification for liner protection.~~ A four-inch bed of clean sand or a nondegradable filter fabric acceptable to the Town, shall be used to provide liner protection.

- The designer of ~~a~~ ~~pretreatment~~ an advanced treatment system shall supply both the owner and the Onsite Sanitary Official with system operations and maintenance instructions.

I. Operation and maintenance

Operation, Maintenance, Monitoring and reporting shall be as outlined in Chapter 1.4.A. Alternative and Innovative Advanced Treatment ~~Pre-Treatment~~ Systems, of this Manual.

The owner/purchaser of ~~a filter~~ an advanced treatment system must recognize that he/she assumes the continuous responsibility to preserve the installation as near as practical to~~in~~ its "as built" state. This responsibility includes erosion control, fencing out of livestock and the control of burrowing animals.

J. Operations and maintenance instructions

As a minimum, the operations and maintenance instructions shall include the following information.

- A statement notifying the homeowner of his/her responsibility for maintaining the system in proper working condition.
- A complete description of the system and components. Include process description for the homeowner and design criteria.
- Instructions on how to properly set pump control equipment.
- How ~~the Town can sample filter~~ treated effluent can be sampled.
- How and when to inspect and flush distribution laterals.
- What to do if the alarm on the control ~~pump~~ panel activates.
- A system troubleshooting table listing potential problems and their solutions for the septic tank, treatment~~filter~~, and absorption field.
- When to get the septic tank or recirculation tank pumped.
- Safety precautions to be observed.

4.3 PRESSURE DISTRIBUTION

A pressure distribution system is any system designed to intermittently distribute septic tank or other treatment unit effluent uniformly under pressure in ~~an absorption facility~~ a dispersal field or sand filter. Pressure distribution is used to prolong the life of an absorption surface, prevent surfacing of effluent, and allow the use of narrow ~~absorption~~ dispersal trenches which can be built closer together on sites with limited ~~absorption trench~~ area. Any system using pressure distribution will be considered "alternative" by the Town of Paradise.

A. General conditions for approval

A pressure dosed ~~absorption~~ dispersal field will not be permitted on a site if a standard system would be acceptable. Pressurized distribution systems may otherwise be permitted where this method of effluent distribution is desired.

B. Requirements

A typical dosing tank is shown in Figure 4.11. A single compartment septic tank may be used if the pump or siphon is located in a screened vault.

All materials used in pressurized systems shall be structurally sound, durable, and capable of withstanding normal stresses incidental to installation and operation. Nothing in these rules shall be construed to set aside applicable building, electrical, or other codes.

Pressurized distribution piping: Piping, valves and fittings for pressurized systems shall meet the following minimum requirements, as well as the applicable requirements presented in Chapter 5.

- All pressure transport, manifold, lateral piping, and fittings shall meet or exceed the requirements for Class 200 PVC 1120 pressure pipe as identified in ASTM Specification D2241.

- Pressure transport piping shall be uniformly supported along the trench bottom, and at the discretion of the Town, It shall be bedded in sand or other material approved by the Onsite Sanitary Official. A fourteen gauge tracer wire shall be placed above piping if it crosses property lines or enters public property or right of way.

- Orifices shall be located on top of the pipe.

- The ends of lateral piping shall be provided with threaded plugs or caps and extend to the surface for cleaning purposes.

- All joints in the manifold, lateral piping, and fittings shall be solvent welded, using the appropriate joint compound for the pipe material. Pressure transport piping may be solvent welded or rubber ring jointed.

FIGURE 4.11

- A ball valve shall be placed on the pressure transport pipe, in or near the dosing tank, when appropriate.
- A check valve shall be placed between the pump and the ball valve.
- Antisiphon valves shall be placed between the pump and ball valve when pumping down slope.

~~Absorption~~ Dispersal trench sizing and construction: A pressurized system using ~~absorption~~dispersal trenches shall be designed and sized in accordance with the requirements for a standard system (see Figure 4.1). ~~Absorption~~ Dispersal trenches can be narrow or standard width. A typical pressure dosed ~~absorption~~ dispersal trench is shown in Figure 4.12. ~~Absorption~~ Dispersal trenches shall be constructed based on the following guidelines.

- Pressure lateral piping shall not have ~~not~~ less ~~that~~ than six inches of ~~filter material~~ drain rock below, nor less than four inches of ~~filter material~~ drain rock above the piping.
- The top of the filter material shall be covered with filter fabric, or other nonbiodegradable material permeable to fluids that will not allow passage of soil particles coarser than very fine sand.
- A piezometer shall be installed adjacent to each absorption trench (see Appendix B).
- Hydraulic design criteria: Pressurized distribution systems shall be designed for appropriate head and capacity. Head calculations shall include maximum static lift, pipe friction, and orifice head requirements.

  a. Where pumps are used, static lift shall be measured from the minimum dosing tank level to the highest pipe elevation.

  b. Pipe friction shall be based upon a Hazen Williams coefficient of smoothness of 150. The head loss across a lateral with multiple evenly spaced orifices may be considered equal to one-third of the head loss that would result if the entrance flow were to pass through an equivalent of similar un-perforated pipe length.

  c. There shall be a minimum head of five feet (up to ten feet is desirable) at the most remote orifice and no more than a ten percent head variation between nearest and most remote orifice in an individual lateral.

FIGURE 4.12

- The capacity of a pressurized distribution system refers to the rate of flow given in gallons per minute.

  a. Lateral piping shall have one-eighth inch maximum discharge orifices spaced evenly.

  b. The system shall be dosed at a rate not to exceed twenty percent of the design daily wastewater flow.

  c. The effect of back drainage of the total volume of effluent within the pressure distribution system shall be evaluated for its impact upon the dosing tank and pump operation.

- Orifice spacing: The objective of pressure dosing is to produce unsaturated flow in a trench with no clogging mat. In ~~coarse-textured~~ typical soils found in the Town ~~with rapid permeability,~~ a spacing of two feet between orifices is adequate. Wider spacing may be approved based on a qualified engineers design. ~~In well structured, medium textured soils the spacing is not as critical. Spacing of four to six feet is adequate for these soils. Greater spacings can cause very high loading rates near the orifice which will create a clogging mat. There is no real advantage to using pressure dosing for soils with an acceptance rate slower than 0.3 gallons per square foot day. A clogging mat will form with or without pressure dosing.~~ [See note 35]

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C. Operation and maintenance

System operation and maintenance tasks and requirements shall be as specified on the operating permit and the designer's operations and maintenance instructions. The system owner shall be responsible for the continuous operation and maintenance of the system. Each system will be inspected by the Town on a regular basis.

The owner/purchaser of a pressure distribution system must recognize that he/she assumes the continuous responsibility to preserve the installation as near as practical in its "as built" state. This responsibility includes erosion control, fencing out of livestock and the control of burrowing animals.

D. Operations and maintenance instructions

As a minimum, the operations and maintenance instructions shall include the following information.

- A statement notifying the homeowner of his responsibility for maintaining the system in proper working condition.

- A complete description of the system and components, including a process description for the homeowner and design criteria.

- Instructions on how to properly set pump control equipment.
- How and when to inspect and test dosing tank components.
- How and when to inspect and flush distribution laterals.
- What to do if the alarm on the pump panel activates.
- A system troubleshooting table listing potential problems and their solutions.
- When to get tank(s) pumped.
- Safety precautions to be observed.

4.4 NARROW ~~ABSORPTION~~ DISPERSAL TRENCHES

Narrow ~~absorption~~ dispersal trenches are used to allow closer spacing of trenches in difficult-to-construct locations. A diagram of a narrow ~~absorption~~ dispersal trench system is shown in Figure 4.13. Narrow ~~absorption~~ dispersal trench systems shall be considered "alternative" by the Town of Paradise.

A. General conditions for approval

Narrow ~~absorption~~ dispersal trenches will not be permitted on a site if a standard system would be acceptable. Construction permits may be issued by the Town for narrow ~~absorption~~ dispersal trenches for sites that meet the following criteria.

- Any site that meets soil requirements for a standard or pretreated system or
- Those sites where area is limited for ~~an absorption~~ dispersal field.

B. Requirements

- All applicable requirements of Section 4.1 apply.
- Minimum ~~absorption~~ dispersal trench width shall be twelve ~~six~~ inches, the maximum shall be eighteen inches. [See note 36]
- Minimum distances between ~~absorption~~ dispersal trenches shall be six feet.
- Maximum depth shall be dependent on the depth to restrictive soil horizons and groundwater levels. ~~Absorption trenches with greater than five feet of drainrock below the pipe shall require a variance.~~
- Pressure distribution shall be used as outlined in Section 4.3.

- A piezometer shall be constructed adjacent to each ~~absorption~~ dispersal trench (see Appendix B).

- Narrow ~~absorption~~ dispersal trench fields can be installed in engineered fills. They can have a capping fill (twelve inches) if the soil depth is within twelve inches of the minimum effective soil depth requirements.

FIGURE 4.13

~~4.5 DEEP ABSORPTION TRENCH SYSTEM~~ [see note 37]

~~A deep absorption trench system is defined as a system which uses trenches that are pressurized and use a greater vertical depth of drainrock than a standard absorption trench. By using this method, absorption trenches can be fit into a smaller area and superior soil permeability, if present at a greater depth in the profile, can be utilized. A typical deep absorption trench system is shown in Figure 4.14. Deep absorption trench systems shall be considered "alternative" by the Town of Paradise.~~

~~A. General conditions for approval~~

~~A deep absorption trench system will not be permitted on a site if a standard absorption trench system would be acceptable. Construction permits may be issued by the Town for deep absorption trench systems for sites that meet all the following conditions.~~

- ~~The effective soil depths shown in Figure 4.1 can be maintained.~~
- ~~Lot or parcel size is inadequate to accommodate standard system absorption trenches with a projected flow of 300 gallons per day.~~
- ~~All other requirements for standard subsurface systems can be met.~~

~~B. Requirements~~

- ~~The deep absorption trench system shall be sized on the sidewall loading rates presented in Section 4.1 or the combined sidewall/bottom area loading rates presented in Section 4.2, as appropriate.~~
- ~~A piezometer shall be constructed adjacent to each absorption trench (see Appendix B).~~
- ~~All applicable requirements outlined in Section 4.1 apply.~~

4.~~5~~6 REDUNDANT SYSTEMS

A redundant ~~absorption~~ dispersal field system is one in which two complete ~~absorption~~ dispersal field systems are installed. The ~~absorption~~ dispersal trenches of each system alternate with each other and only one system operates at any given time. A typical redundant ~~absorption~~ dispersal field system is shown in Figure 4.15. This type of system may be required on small lots where it will be difficult to install a repair ~~absorption~~ dispersal field ~~once~~ after the house is built.

FIGURE 4.14

FIGURE 4.15

A. General conditions for approval

A redundant system will not be permitted on a site if a standard ~~absorption~~ dispersal trench system would be acceptable. Construction permits may be issued by the Town for redundant ~~disposal~~ dispersal field systems to serve single family dwellings on sites that meet all the conditions for a standard system. Redundant ~~absorption~~ dispersal systems shall not be used for large systems. Redundant systems shall be considered "alternative" by the Town of Paradise.

B. Requirements

- Each redundant ~~absorption~~ dispersal field system shall contain two complete ~~absorption~~ dispersal fields.
- Each ~~absorption~~ of the two separate dispersal fields shall be adequate in size to accommodate the projected daily wastewater flow from the structure.
- A minimum trench sidewall separation of ten feet (twelve feet on centers) shall be maintained between ~~absorption~~ dispersal trenches designed to operate simultaneously. ~~and a~~ A minimum trench sidewall separation of four feet (six feet on centers) shall be maintained between adjacent ~~absorption~~ dispersal trenches that are designed to operate alternatively. Dispersal trenches shall be two feet wide for redundant systems.
- A piezometer shall be installed adjacent to each dispersal ~~absorption~~ trench (see Appendix B).
- The diversion valve location shall be marked permanently with a steel post, concrete marker, or other durable material.

C. Operation and maintenance

System operation and maintenance tasks and requirements shall be as specified on the Operating Permit and the designer's operations and maintenance instructions. The system owner shall be responsible for the continuous operation and maintenance of the system. Each system will be inspected by ~~the Town~~ a certified service provider hired by the owner on a regular basis. [See note 38]

The owner/purchaser of the redundant system must recognize that he/she assumes the continuous responsibility to preserve the installation as near as practical in its "as built" state. This responsibility includes erosion control, fencing out of livestock and the control of burrowing animals.

D. Operation and maintenance instructions

As a minimum, the operations and maintenance instructions shall include the following information.

- A statement notifying the homeowner of his/her responsibility for maintaining the system in proper working condition.

- A complete description of the system and components, including a process description and design criteria.
- When and how to alternate the ~~absorption~~ dispersal fields.
- When to have ~~get~~ the septic tank pumped.

4.6~~7~~ STEEP SLOPE SYSTEMS

Slope stability and surfacing of effluent are major concerns when onsite systems are constructed on slopes exceeding thirty percent. Where steep slopes are encountered, ~~absorption~~ dispersal trenches using greater vertical depths of drainrock than standard ~~absorption~~ dispersal trenches can be utilized. All steep slope systems shall be considered "alternative" by the Town of Paradise.

A. General conditions for approval

An onsite system construction permit may be issued by the Town for a steep slope system to serve a single-family dwelling on slopes in excess of thirty percent provided the site meets the following requirements.

- Slope does not exceed forty-five percent.
- The soil is well drained with no evidence of saturation to a depth of eight feet.
- The soil has a minimum effective depth of six and a half feet. [See note 39]

B. Requirements

- Steep Slope ~~absorption~~ dispersal trenches shall be installed at a minimum depth of thirty inches and at a maximum depth that maintains the required separation from the trench base to a restrictive soil horizon or groundwater level. Minimum and maximum ~~steep slope absorption~~ dispersal trench depth measurements shall be made from the natural soil surface on the downhill side of the trench, and contain a minimum of eighteen inches of ~~filter material~~ drainrock and twelve inches of native soil backfill. ~~Absorption~~ Dispersal trench width can be a minimum of twelve ~~six~~ inches (narrow trench design) up to a maximum of thirty-six inches. [See note 36 again]
- The system shall be sized using the table for Standard Absorption Trench Systems.
- Steep slope ~~absorption~~ dispersal trenches can be excavated manually. All smeared and compacted surfaces in the ~~absorption~~ dispersal trench shall be removed before any filter material (drainrock) is placed. ~~in the absorption trench~~ .

- A piezometer shall be installed ~~adjacent to~~ in each ~~absorption~~ dispersal trench (see Appendix B).

- No large or community systems will be allowed on steep slopes. See Chapter 6.

4.~~7~~8 CAPPING FILL SYSTEMS

A capping fill is a system where the effective sidewall of the ~~absorption~~ dispersal trench is installed a minimum of twelve inches into natural soil and covered with a soil cap of specified depth and texture. A capping fill ~~disposal~~ dispersal system is used where the site is lacking in effective soil depth or depth to groundwater. A typical capping fill is shown in Figure 4.16. All capping fill systems shall be considered "alternative" by the Town of Paradise.

A. General conditions for approval

To be approved for a capping fill system, each site must meet all of the following conditions.

- Slope does not exceed twelve percent. (Special designs may allow installation on steeper slopes.)

- Any site which can meet all the rules for a standard system or a pretreatment system except where effective soil depth (soil depth, depth to seasonal or permanent water table, depth to rapidly draining material) is lacking by twelve inches or less.

- Soil permeability from the ground surface to the layer that limits effective soil depth is adequate to accept wastewater flow plus rainfall.

B. Requirements

The cap shall be constructed pursuant to permit requirements. Unless otherwise required by the Onsite Sanitary Official, construction sequence shall be as follows:

- The soil shall be examined and approved by the designer prior to placement. The texture of the soil used for the cap shall be of the same textural class, or one textural class coarser than the natural topsoil.

- Construction of capping fills shall occur between June 1 and October 1 unless otherwise allowed by the Onsite Sanitary Official. The upper eighteen inches of natural soil must not be saturated or at a moisture content which causes loss of soil structure and porosity when worked.

- The ~~absorption~~ dispersal trench area and the soil cap borrow site shall be scarified prior to construction to destroy the vegetative mat. Rototilling is the preferred method.

- The system shall be installed as specified in the construction permit. There shall be a minimum of ten feet of separation between the edge of the fill and the outside sidewalls of the ~~absorption~~ dispersal trenches.

- The first six inches of the fill shall be mixed thoroughly with the native soil. Fill material shall be evenly graded to a final depth of sixteen inches over the drainrock. Drainrock shall be covered by filter fabric prior to the placement of the soil cap. Both initial cap and repair cap may be constructed at the same time if the owner wishes.

- A piezometer shall be installed adjacent to each ~~absorption~~ dispersal trench (see Appendix B).

C. Required inspections

The following minimum inspections shall be performed for each capping fill installed:

- The ~~absorption~~ dispersal trench area and soil cap borrow material must be inspected for scarification, soil texture, and moisture content, prior to cap construction.

- Precover inspection of the installed ~~absorption~~ dispersal field ~~facility~~.

- ~~After a cap is placed, determine~~ Inspection of adequate contact between fill material and native soil (no obvious contact zone visible), adequate depth of material, and uniform distribution of fill material.

- Final inspection ~~is~~ after landscaping. The operating permit will be issued after the final inspection.

D. Operation and maintenance

System operation and maintenance tasks and requirements shall be as specified on the operating permit and the designer's operations and maintenance instructions. The system owner shall be responsible for the continuous operation and maintenance of the system. Each system will be inspected by the Town on a regular basis.

The owner/purchaser of a capping fill system must recognize that he/she assumes the continuous responsibility to preserve the installation as near as practical in its "as built" state. This responsibility includes erosion control, fencing out of livestock and the control of burrowing animals.

E. Operation and maintenance instructions

As a minimum, the operation and maintenance instructions shall include the following information.

- A statement notifying the homeowner of his/her responsibility for maintaining the system in proper working condition.

- A complete description of the system and components.

- How to properly maintain the integrity of the fill.

FIGURE 4.16

4.~~8~~9 Perimeter Drain or Tile Dewatering System

A perimeter drain or tile dewatering system is used to lower the groundwater level on sites with slopes less than three percent. A trench is constructed around the entire ~~absorption~~ dispersal field area to collect and divert groundwater away from the ~~absorption~~ dispersal facility. A typical perimeter drain system is shown in Figure 4.17. All drain systems shall be considered "alternative" by the Town of Paradise.

A. General conditions for approval

Construction permits may be issued by the Town for a perimeter drain system provided the site can meet the following requirements.

- The site has a natural outlet that will allow a drainage pipe installed on a proper grade around the proposed ~~absorption~~ dispersal facility to daylight above annual high water.
- Soils must be drainable, with a minimum effective soil depth of at least forty-eight inches in soils with temporary groundwater, and at least seventy-two inches in soils with permanent groundwater.
- Slope does not exceed three percent.
- All other requirements for the system, except depth to groundwater, can be met. However, after the field collection drainage tile is installed, the groundwater levels shall remain below the specified depth.

B. Requirements

- Field collection drainage pipe shall be installed on a uniform grade of 0.2-0.4 feet of fall per 100 feet at:
  a. A minimum of forty-eight inches deep in soils with temporary groundwater, or
  b. A minimum of seventy-two inches deep in soils with permanent groundwater.
- Maximum drainage pipe spacing parallel to the ~~absorption~~ dispersal field shall be seventy feet on center.
- Minimum horizontal separation distance between the drainage pipe and ~~absorption~~ dispersal facility shall be twenty feet.
- Field collection drainage pipe shall be rigid, smooth wall perforated pipe with a minimum diameter of four inches.

- Field collection drainage pipe shall be enveloped in clean filter material (drainrock) to within thirty inches of the soil surface in soils with permanent groundwater or to within twelve inches of the soil surface in soils with temporary groundwater. Filter material (drainrock) shall be covered with filter fabric or other nondegradable material approved by the Onsite Sanitary Official.

- Outlet pipe shall be rigid, smooth wall solid PVC or ABS pipe with a minimum diameter of four inches. The outlet end shall be protected by a four-foot long section of Schedule 40 PVC or ABS or galvanized metal pipe, and a flap gate or grill to exclude rodents. The outlets shall be permanently marked with a steel post or other durable material so that they can be easily located if vegetation is dense.

- The discharge pipe and pipe drainage system are integral parts of the system, but do not need to meet setback requirements to property lines, streams, lakes, ponds or other surface water bodies. The discharge of drainage water shall not create nuisance conditions.

- The Onsite Sanitary Official will require demonstration that a proposed tile dewatering site can be drained over an entire wet season prior to issuing the construction permit for the ~~absorption~~ dispersal field. The installation of piezometers within the proposed site will be required (see Appendix B).

- The ~~absorption~~ dispersal facility shall use equal or pressurized distribution and can use narrow ~~absorption~~ dispersal trenches.

C. Operation and maintenance

System operation and maintenance tasks and requirements shall be a specified on the Operating Permit and the designer's operations and maintenance instructions. The system owner shall be responsible for the continuous operation and maintenance of the system. Each system will be inspected by the Town on a regular basis.

The owner/purchaser of a perimeter drain or tile dewatering system must recognize that he/she assumes the continuous responsibility to preserve the installation as near as practical in its "as built" state. This responsibility includes maintenance of drain outlets, erosion control, fencing out of livestock and the control of burrowing animals.

FIGURE 4.17

D. Operation and maintenance instructions

As a minimum, the operations and maintenance instructions shall include the following information.

- A statement notifying the homeowner of his/her responsibility for maintaining the system in proper working condition.
- A complete description of the system and components.
- How and when to inspect the drain outlets for proper operation.
- When to get the septic tank pumped.

4.190 CURTAIN DRAIN

A curtain drain is used to lower an existing water table on sites with slopes greater than four percent. A trench is installed on the up-hill side of the ~~absorption~~ dispersal field which collects and diverts water away from the ~~absorption~~ dispersal field area. The curtain drain technique applies only to sites with a temporary water table. The effectiveness of most curtain drains extends thirty to fifty feet downslope of the trench. A typical curtain drain system is shown in Figure 4.18. All curtain drain systems shall be considered "alternative" by the Town of Paradise.

A. General conditions for approval

Construction permits may be issued by the Onsite Sanitary Official for a curtain drain system provided the site can meet the following requirements.

- Soils must be drainable, with a minimum effective soil depth of at least forty-eight inches in soils with temporary groundwater.
- Slope does not exceed forty-five percent.
- All other requirements for the system, except depth to groundwater, can be met.

B. Requirements

- Field collection drainage tile shall be installed on a uniform grade of 0.2-0.4 feet of fall per 100 foot, and a minimum of forty-eight inches deep in soils with temporary groundwater.
- Minimum horizontal separation distance between the drainage pipe and absorption facility shall be ten feet.
- Field collection drainage pipe shall be rigid smooth wall perforated pipe with a minimum diameter of four inches.

- Field collection drainage pipe shall be enveloped in clean filter material (drainrock) to within twelve inches of the soil surface. Filter material (drainrock) shall be covered with filter fabric, untreated building paper or other nondegradable material approved by the Town.

- Outlet pipe shall be rigid and smooth wall solid PVC pipe with a minimum diameter of four inches. The outlet end shall be protected by a four-foot long section of Schedule 40 PVC or ABS or galvanized metal pipe, and a flap gate or grill to exclude rodents. The outlets shall be permanently marked with a steel post or other durable material so that they can be easily located if vegetation is dense.

- The discharge pipe and pipe drainage system are integral parts of the system, but do not need to meet setback requirements to property lines, streams, lakes, ponds or other surface water bodies.

- The Onsite Sanitary Official will require demonstration that a proposed curtain drain site can be drained over an entire wet season prior to issuing a construction permit for the absorption field. The installation of piezometers within the proposed site will be required (see Appendix B).

- The ~~absorption~~ wastewater dispersal field ~~facility~~ shall ~~use~~ have equal~~, serial~~ or pressurized distribution and narrow ~~absorption~~ dispersal trenches can be used.

- The curtain drain can only be used on sites with a well defined restrictive layer. The bottom of the drain shall be a minimum of 6 in. into the restrictive layer (see diagram).

- The ~~absorption~~ dispersal trenches ~~need to~~ must be within fifty feet of the curtain drain. If tighter spacing is required to stay within the effective area of the curtain drain, a narrow ~~absorption~~ dispersal trench system can be used.

FIGURE 4.18

C. Operation and maintenance

System operation and maintenance tasks and requirements shall be a specified on the Operating Permit and the designer's operations and maintenance instructions. The system owner shall be responsible for the continuous operation and maintenance of the system. Each system will be inspected by the Town on a regular basis.

The owner/purchaser of a curtain drain system must recognize that he/she assumes the continuous responsibility to preserve the installation as near as practical in its "as built" state. This responsibility includes maintenance of drain outlets, erosion control, fencing out of livestock and the control of burrowing animals.

D. Operation and maintenance instructions

As a minimum, the operations and maintenance instructions shall include the following information.

- A statement notifying the homeowner of his/her responsibility for maintaining the system in proper working condition.
- A complete description of the system and components.
- How and when to inspect the drain outlets for proper operation.
- When to get the septic tank pumped.

4.10~~11~~ ENGINEERED FILL

Any fill thicker than twelve inches and used for an absorption facility shall be considered engineered fill. Engineered fill is typically used to provide the minimum required effective soil depth in areas of high groundwater or over sensitive layers, as illustrated in Figure 4.1. Any engineered fill shall be considered "alternative" by the Town of Paradise.

A. General conditions for approval

To be approved for an engineered fill, each site must meet all the following conditions:

- Have suitable soils which will remain stable and permeable after the fill is in place.
- The finished system must provide the minimum required separation from sensitive layers as shown in Figure 4.1.

B. Requirements

The fill shall be constructed pursuant to permit requirements and be supervised by the designer. Unless otherwise required by the Onsite Sanitary Official, construction sequence shall be as follows:

- The fill soil shall be examined and approved by the Onsite Sanitary Official prior to placement. The texture of the soil used for the fill shall be of the same textural class, or of one textural class coarser than the natural topsoil.

- Construction of fills shall occur between June 1 and October 1 unless otherwise allowed by the Onsite Sanitary Official. The natural soil on the site and the fill material shall be at a moisture content that will prevent loss of porosity when worked.

- The absorption field area and the fill soil borrow site shall be scarified to destroy the vegetative mat. Rototilling is the preferred method.

- No wheeled vehicles shall be permitted on the fill site or the fill once scarifying has been completed.

- The fill shall be installed when the soil is dry. The fill shall also be dry to prevent compaction. The fill should be as dry as possible when worked and allowed to settle naturally under water, either rainfall or irrigation.

- The system shall be installed as specified in the construction permit. There shall be a minimum of ten feet of separation between the edge of the fill and the outside sidewalls of the absorption trenches.

- The first six inches of the fill shall be mixed thoroughly with the native soil. It shall be placed with a crawler tractor to minimize compaction. Both initial and repair absorption field areas may be constructed at the same time if the owner wishes.

C. Required inspections

The following minimum inspections shall be performed for each fill installed:

- The ~~absorption~~ dispersal field area and fill soil borrow material must be inspected for scarification, soil texture, and moisture content, prior to fill construction.

- After the first six inches are in place, determine adequate contact between fill material and native soil (no obvious contact zone visible), adequate depth of material, and uniform distribution of fill material.

- After entire fill is in place, dimensions and depth shall be checked. Hydraulic testing of the fill must be conducted in accordance with the appropriate procedures in Appendix C. The hydraulic testing will be witnessed by the Onsite Sanitary Official.

- Precover inspection of the installed ~~absorption~~ dispersal facility.

- Final inspection is after landscaping. The operating permit will be issued at this point.

D. Operation and maintenance

System operation and maintenance tasks and requirements shall be as specified on the Operating Permit and the designer's operations and maintenance instructions. The system owner shall be responsible for the continuous operation and maintenance of the system. Each system will be inspected by the Town on a regular basis.

The owner/purchaser of the engineered fill system must recognize that he/she assumes the continuous responsibility to preserve the installation as near as practical in its "as built" state. This responsibility includes erosion control, fencing out of livestock and the control of burrowing animals.

E. Operation and maintenance instructions

As a minimum, the operations and maintenance instructions shall include the following information.

- A statement notifying the homeowner of his/her responsibility for maintaining the system in proper working condition.
- A complete description of the system and components.
- How and when to inspect the drain outlets for proper operation.
- When to get the septic tank pumped.

4.1112 PORTABLE TOILETS

A portable toilet is any self-contained chemical toilet facility that is housed within a portable toilet shelter and includes but is not limited to construction-type chemical toilets.

Portable toilets may be approved for temporary or limited use areas, such as construction sites, provided all liquid wastes can be handled in a manner to prevent a public health hazard and to protect public waters, and separation distances also can be met.

Portable toilet waste shall not be discharged into storm sewers, on the surface of the ground or into public waters.

Portable toilets shall be installed by a licensed wastewater disposal business.

No person shall cause or allow the installation or use of a portable toilet unless the pumping or cleaning of the portable toilet is covered by a valid and effective contract with a licensed business. Each portable toilet shall display the business name of the sewage disposal service that is responsible for servicing it.

Portable toilets shall be constructed in accordance with requirements contained in this manual and be maintained to prevent health hazards and pollution of public waters. Required setbacks are listed in Table 3.2.

4.1213 HOLDING TANKS

A holding tank is a watertight receptacle designed to receive and store wastewater to facilitate disposal at another location.

A. General conditions for approval

Installation permits may be issued by the Onsite Sanitary Official for holding tanks on sites that meet all the following conditions:

- For permanent use:

  a. The site ~~can not~~cannot be approved for the installation of any other type of onsite wastewater disposal system; and

  b. No public sewer system is available or expected to be available within five years; and

  c. The tank is intended to serve a facility with intermittent occupancy; and

  d. Unless otherwise allowed by the Onsite Sanitary Official, the projected daily wastewater flow is not more than 200 gallons; and

  e. Setbacks as required for septic tanks can be met.

- For temporary use:

  a. The Town has committed in writing to provide sewer service to the property within five years.

  b. Installation of an approved onsite system has been delayed by weather conditions; or

  c. The tank is to serve a temporary construction site.

B. Requirements

- No building may be served by more than one holding tank.
- A single lot may be served by no more than one holding tank.
- Plans and specifications for each holding tank proposed to be installed shall be submitted to the Onsite Sanitary Official for review and approval.
- Each tank must:

a. Have a minimum liquid capacity of 1,500 gallon.

b. Comply with standards for septic tanks contained in Chapter 5.

c. Be located and designed to facilitate removal of contents by pumping. The holding tank shall be equipped with watertight risers extending to finished grade to facilitate the removal of contents by pumping.

d. Be equipped with both an audible and visual alarm, placed in a location acceptable to the Onsite Sanitary Official, to indicate when the tank is seventy-five percent full. The audible alarm only may be user cancelable.

e. Have no overflow vent at an elevation lower than the overflow level of the lowest fixture served.

f. Be designed for antibuoyancy if test hole examination or other observations indicate seasonally high groundwater may float the tank when empty.

- The application for a construction permit shall contain:

a. A copy of a contract with a licensed wastewater disposal service company which shows the tank will be pumped periodically, at regular intervals or as needed, and the contents disposed of in a manner and at a facility approved by the Onsite Sanitary Official.

b. Evidence that the owner or operator of the proposed disposal facility will accept the pumping for treatment and disposal.

- A record of pumping dates and amounts pumped shall be maintained by both the treatment facility owner and the wastewater disposal service and upon request, made available to the Onsite Sanitary Official.

- Inspection requirements: Each holding tank shall be inspected regularly by the Onsite Sanitary Official.

4.13~~14~~ WATER CONSERVATION FIXTURES

The use of low flush toilets or other water conservation fixtures is encouraged to aid in water conservation. **NO REDUCTION IN THE SIZE OF THE ~~ABSORPTION~~ DISPERSAL FIELDS OR FILTERS WILL BE ALLOWED.** Reduction of water flow does not decrease the amount of biological matter which must be treated in the onsite system. The use of water conservation fixtures will prolong the life of ~~an absorption~~ a dispersal field.

4.1415 PRE-CONSTRUCTED PACKAGE OR PLANT ADVANCED TREATMENT SYSTEMS [see note 40]

A pre-constructed advanced treatment package or plant system is defined as a proprietary self-contained wastewater treatment and disposal system. Proof of compliance with the California Environmental Quality Act, California Water Quality Control Board, EPA and NSF International ANSI/NSF 40 - 1990 Class I standards is required. , or tThe performance of the selected Package Plant or Plant System, incorporated in the overall facility plan system shall be guaranteed for one (1) year upon start up by the Equipment Manufacturer and Design Engineer. An alternative preliminary design selection shall be furnished at the time of final plan approval should the original selected plant process fail to meet the Town of Paradise requirements.

A typical pre-constructed advanced treatment package or plant system or equivalent shall provide acceptable wastewater treatment as per standards outlined in Chapter 6 of this Manual. Control panel remote telemetry access is required. The Onsite Sanitary Official shall determine the type and method and extent of remote monitoring required based on the complexity of the system. or the system's location. Suitable auto-phone monitoring must be provided .

The minimum basic requirements to permit the use of pre-constructed advanced treatment systems alternative systems shall be in all cases:

- An engineering study by qualified practitioners Be certified with NSF International NSF/ANSI 40 classification or similar equivalent. [See note 33]
- Have proof of long-term performance and reliability
- Operation, Maintenance, Monitoring and Reporting shall be as outlined in Chapter 1.4.A., Alternative and Innovative Pre-Treatment Systems, of this manual.

4.1516 GRAYWATER DISPOSAL SYSTEMS

A graywater waste disposal system is a wastewater treatment system capable of discharging and treating liquid waste from bathtubs, showers, bathroom wash basins, and water from clothes washing machines and laundry tubs. Graywater waste disposal systems shall not treat liquid waste discharged from toilets, kitchen sinks, dishwashers or laundry water from soiled diapers. Graywater waste disposal systems shall be considered "alternative" systems by the Town of Paradise. [See note 50]

A. General conditions for approval

Installation permits may be issued by the Onsite Sanitary Official for graywater waste systems on sites that meet all the following conditions:

- Sites must be approved for standard system installation.

- Minimum separation distances listed in Figure 4.1 can be met.
- Slope does not exceed forty-five percent.

B. REQUIREMENTS

- System design and installation standards shall comply with minimum standards for graywater waste systems mandated in Appendix J of the Uniform Plumbing Code, California Plumbing Code Edition (Title 24, Part 5, California Administrative Code).

  A one-third reduction in size of the black waste system shall be allowed when a graywater waste disposal system is installed.

C. Operation and maintenance

System operation and maintenance tasks and requirements shall be as specified on the Operating Permit and the designer's operations and maintenance instructions. The system owner shall be responsible for the continuous operation and maintenance of the system. Each system will be inspected by the Town on a regular basis.

The owner/purchaser of a graywater ~~disposal~~ system must recognize that he/she assumes the continuous responsibility to preserve the installation as near as practical in its "as built" state. This responsibility includes erosion control, fencing out of livestock and the control of burrowing animals.

D. Operations and maintenance instructions

As a minimum, the operations and maintenance instructions shall include the following information:

- A statement notifying the homeowner of his/her responsibility for maintaining the system in proper working condition.
- A complete description of the system and components. Include process description for the homeowner and design criteria.
- Instructions on how to properly set pump control equipment.
- How the Town can sample graywater system effluent.
- How and when to inspect and flush distribution laterals.
- What to do if the alarm on the pump panel activates.
- A system troubleshooting table listing potential problems and their solutions for the graywater system.
- When to get the graywater system tank pumped.

- Safety precautions to be observed.

5
COMPONENT AND EQUIPMENT SPECIFICATIONS

Specifications for the major components of onsite wastewater disposal systems are included in this chapter. The goal of this chapter is to provide material and construction requirements which will enable the construction of effective and reliable onsite wastewater disposal systems in the Town of Paradise Onsite Wastewater Management Zone.

5.1 SEPTIC TANKS

A. General

The following requirements shall apply to all septic tanks manufactured for use in the Town of Paradise Wastewater Management Zone unless specifically exempted by other portions of these rules:

- Tanks shall be manufactured to comply with specifications within this manual, and requirements mandated by the Uniform Plumbing Code, California Plumbing Code Edition. Tanks shall be installed in strict conformance with the manufacturer's recommendations.

- Compartments: Septic tanks shall have multiple compartments for standard systems. Dosing tanks equipped with a screened vault may be single compartment. Multiple compartment tanks shall comply with the following:

  a. The first compartment shall have a minimum liquid capacity of at least two-thirds of the total required liquid capacity, as measured from the invert of the outlet fitting.
  b. The second and succeeding compartments shall each have a minimum liquid capacity equal to or greater than one-half of the first compartment.

c. Each compartment shall have access provided by a manhole having not less than eighteen inches across its shortest dimension unless otherwise approved by the Town.

d. No compartment shall have an inside horizontal dimension of less than twenty-four inches.

- Liquid depth: The liquid depth of any compartment shall be at least thirty inches.

- Septic tanks shall be watertight. Tanks shall be capable of successfully withstanding an above-ground static hydraulic test.

- Septic tanks shall be capable of supporting a vertical load of at least 300 pounds per square foot when the maximum coverage does not exceed three feet. Tanks installed with more than three feet of cover shall be reinforced to support the additional load. Tanks shall be designed for lateral loads of at least 62.4 pounds per cubic foot.

- The inlet and outlet fittings shall be of Schedule 40 PVC plastic, Schedule 40 ABS plastic, or other materials approved by the Town, with a minimum diameter of four inches:

  a. The distance between the inlet and outlet fittings shall be equal to, or greater than the liquid depth of the tank.

  b. The inlet and outlet fitting shall be located at opposite ends of the tank. They shall be attached in a watertight manner approved by the Town.

  c. The inlet fitting shall be a "sanitary tee" extending at least six inches above and below the liquid level.

  d. The outlet fitting shall be a "tee" extending below liquid level a distance equal to at least thirty-five percent but not greater than fifty percent of the liquid depth, and at least six inches above the liquid depth in order to provide scum storage. When the tank is used as a holding tank, the outlet fitting shall be provided with a watertight plug.

  e. Ventilation shall be provided through the fittings by means of a two-inch minimum space between the underside of the top of the tank and the tip of the "tee" fitting.

  f. The invert of the inlet fitting shall be not less than one inch but preferably three inches above the invert of the outlet fitting.

  g. The septic tank manufacturer shall provide, with each fitting, a rubber or neoprene rubber gasket meeting ASTM Specification C564, or an appropriate coupler which the Town determines will provide a watertight connection between the fittings and the building and effluent sewer pipes.

  h. An access cover of not less than 6 in. across shall be provided above each fitting.

- At least ten percent of the inside volume of the tank shall be above liquid level to provide scum storage.

- In tanks with more than one compartment, a four-inch diameter (minimum) "tee" fitting shall be placed in each common compartment wall, using the same specifications as required for the outlet fitting. The invert of this "tee" fitting shall be at the same elevation as the outlet "tee".

- All prefabricated septic tanks shall be marked on the uppermost tank surface with the liquid capacity of the tank and the manufacturers identification.

B. Precast concrete tanks

The following requirements apply to precast concrete septic tanks.

- Tanks shall be designed by a registered civil engineer.

- Walls, bottom and top reinforced-concrete tanks shall be designed across the shortest dimension using one-way slab analysis. Stresses in each face of monolithically-constructed tanks may be determined by analyzing the tank cross-section as a continuous fixed frame.

- The walls and bottom slab shall be poured monolithically.

- Reinforcing steel, when used, shall be ASTM A-615 Grade 60, f_y=60,000 psi. Details and placement shall be in accordance with ACI 315 and ACI 318.

- Concrete shall be ready-mix with cement conforming to ASTM C150, Type II. It shall have a cement content of not less than six (6) sacks per cubic yard and maximum aggregate size of three-fourths inch. Water/cement ratio shall be kept low (0.35±), and concrete shall achieve a minimum compressive strength of 5,000 psi in twenty-eight days.

- Tanks shall be protected by applying a heavy cement-base waterproof coating (Thoroseal or equal), on both inside and outside surfaces, in compliance with Council of American Building Officials (CABO) report No. NRB-168; 6181.

- Form release used on tank molds shall be Nox-Crete or equal. Diesel or other petroleum products are not acceptable.

- Tanks shall not be moved from the manufacturing site to the job site until the tank has cured for seven (7) days or has reached two-thirds of the design strength.

- In order to demonstrate water tightness, tanks shall be tested twice prior to acceptance. Each tank shall be tested at the factory, prior to shipping, by filling with water to the soffit and letting stand. After 24 hours, the tank shall be refilled to the soffit and the exfiltration rate shall be determined by measuring the water loss during the next two hours. The two-hour

loss shall not exceed one gallon. After installation is completed, each tank shall be filled with water and retested as previously described. If the tank is filled with water to the top of the riser, backfill of a depth equal to the height of the riser must be in place over the tank to prevent damage due to hydrostatic uplift.

C. Cast-in-place concrete tanks

Cast-in-place concrete tanks shall be designed by a registered civil engineer.

D. Fiberglass tanks

The following requirements apply to fiberglass tanks.

- The tank shall be constructed with a glass fiber and resin content specified by the manufacturer and with no exposed glass fibers. The manufacturer shall supply satisfactory evidence of testing by an approved laboratory showing compliance with IAPMO IGC 3-74, excepting as herein modified. Any metal part shall be 300 series stainless steel.

- The tank wall thickness shall average at least one-fourth inch.

- Holes specified for the tank shall be provided by the manufacturer. Resin shall be properly applied to all cut or ground edges so that no glass fibers are exposed and all voids are filled.

- Water testing shall be performed on each tank. Every tank shall be assembled by the manufacturer and filled with water to the brim of the access opening. The tank shall show no leakage from section seams, pinholes or other imperfections. Any leakage is cause for rejection. The manufacturer shall be responsible for making all corrective measures in production or assembly necessary to ensure a completely watertight tank.

- After installation is completed, each tank shall be filled with water to the top of the riser and the water loss measured after a two-hour period shall not exceed 1 gallon. Backfill of a depth equal to the height of the riser must be in place over the tank to prevent damage due to hydrostatic uplift.

5.2 DOSING SEPTIC TANK ~~ASSEMBLIES~~

A dosing septic tank combines the functions of a septic tank and dosing tank into one unitized assembly by withdrawing septic tank effluent with a pump or dosing siphon from the clear zone (the area between scum and sludge) at the outlet end of the tank. A second compartment draw-down tank is required for a septic tank that will also be used as a dosing tank (See Figure 4.2 - Second Compartment Draw-Down). A dosing septic tank is not allowed for systems where commercial food

preparation is done or where the daily design flow is over 300 gallons per day. These systems require a separate dosing tank. [See note 51]

A. Design

- ~~A single compartment tank may be used if an effluent screen and vault is provided.~~

- Design and equipment shall emphasize ease of maintenance and longevity and reliability of components and shall be proven suitable by operational experience, test, or analysis suitable to the Onsite Sanitary Official.

- An easy means of electrical and plumbing disconnection shall be provided, preventing the need for a repairman.

- Component materials shall be durable and corrosion resistance such as Type 316 stainless steel, suitable plastics, or 85-5-5-5 bronze.

- Each dosing tank shall be constructed and reinforced to withstand the loads imposed upon the top, walls and bottom.

- The minimum total volume of the tank shall be 1,500 gallons.

- The minimum submerged volume at the lowest operating liquid level shall be 900 gallons.

- Unless otherwise authorized by the Town, liquid levels shall be controlled so that a maximum of twenty percent of the projected daily wastewater flow is discharged each cycle.

- The invert of the inlet tee shall be not less than one inch above the high operating liquid level.

- Ports, or holes provided in a vault or outlet device shall be located to withdraw effluent horizontally at an elevation that represents the zone of best effluent quality.

- A convenient means of monitoring sludge and scum accumulation shall be provided with access extending to ground level. Dosing septic tanks shall be fitted with watertight access risers that extend to finished grade.

B. Construction requirements

Dosing septic tanks shall comply with applicable Town standards for septic tanks. Each tank shall be water tested by filling to the top of the tank for a period of one hour. During the test there shall be no measurable drop in water level, and no visible leakage. Each tank shall be certified watertight.

Tanks may be constructed of concrete, fiberglass, or other noncorrosive materials approved by the Town.

Dosing tanks with siphons shall be designed and sized for each specific project and shall allow sufficient clearance above the siphon dome to allow removal of the dome.

5.3 DISTRIBUTION BOXES

- Distribution boxes shall be constructed of concrete, fiberglass, or other materials acceptable to the Town.

- Distribution boxes shall be watertight, and designed to accommodate the necessary distribution laterals. The top, walls, and bottom of concrete distribution boxes shall be at least one and one-half inches thick.

- The invert elevation of all outlets shall be the same, and shall be at least two inches below the inlet invert.

- Each distribution box shall be provided with a sump extending at least two inches below the invert of the outlets.

- The minimum inside horizontal dimension measured at the bottom shall be eight inches, with a minimum bottom inside surface area of 160 square inches. The bottom outside surface area shall be equal to or greater than the top outside surface area.

- Distribution box covers shall be marked with the manufacturer's identification.

5.4 DROP BOXES

- Drop boxes shall be constructed of concrete, fiberglass, or other materials acceptable to the Onsite Sanitary Official.

- Drop boxes shall be watertight, and designed to accommodate the necessary piping. The top, walls, and bottom of concrete drop boxes shall be at least one and one-half inches thick.

- The inverts of the inlet and overflow port shall be at the same elevation. The invert of the header pipe port(s) leading to the absorption trench(es) shall be six inches below the inlet invert.

- Drop box covers shall be marked with the manufacturer's identification.

5.5 FILTER FABRIC

Except as otherwise allowed by the Onsite Sanitary Official on a case-by-case basis, filter fabric used within onsite systems in the zone shall meet the following specifications:

- Material: synthetic fabric, either spun bonded or woven

- Burst strength: not less than twenty-five pounds per square inch.
- Air permeability: not less than 500 cubic feet per square foot□minute.
- Water flow rate: not less than 500 gallon per square foot□minute at three inches of head.
- Surface reaction to water: hydrophilic
- Equivalent opening size: No. 70 to No. 100 sieve
- Chemical properties:

  a. Non-biodegradable
  b. Resistant to acids and alkalies within a pH range of four to ten
  c. Resistant to common solvents

5.6 DIVERSION VALVES

- Diversion valves shall be constructed of durable material and be of a design approved by the Onsite Sanitary Official. They shall be corrosion-resistant, watertight, and designed to accommodate the inlet and outlet pipes.
- The manufacturer's name shall be marked on the cover.

5.7 EFFLUENT PUMPS, CONTROLS AND ALARMS

Electrical components used in onsite sewage disposal systems shall comply with National Electrical Code, and the following provisions:

- Motors shall be continuous-duty, with overload protection.
- Pumps shall have durable impellers of bronze, cast iron, or other materials approved by the Onsite Sanitary Official.
- Submersible pumps shall be provided with an easy, readily accessible means of electrical and plumbing disconnect, and a noncorrosive lifting device as a means of removal for servicing.
- Pump can be placed within a corrosion-resistant

- Pumps shall be controlled automatically by UL, CSA, or ETL approved sealed mercury float switches with mercury tube ratings of 4-20 amps at 115 volts A.C. (depending on function) or by an approved equivalently reliable switching mechanism. The switches shall be installed so that the design dose is discharged each cycle.

- An audible and visual high water level alarm with manual silence switch shall be located in or near the building served by the pump. The audible alarm can be the type that can be turned off by the owner. The switching mechanism controlling the high water level alarm shall be located so that at time of activation the dosing tank has a reserve capacity remaining for effluent storage.

- When a system has more than one pump, the Onsite Sanitary Official may require they be wired into the electrical control panel to function alternately after each pumping cycle. If either pump should fail the other pump will continue to function, while an audible and visual alarm indicating pump malfunction will activate. A cycle counter and hour run meter shall be installed in the electrical control panel for each pump.

5.8 DOSING SIPHONS

Dosing siphons used in onsite wastewater disposal systems shall comply with all of the minimum requirements:

- Shall be constructed of corrosion-resistant materials.

- Shall be installed in accordance with the manufacturer's recommendations.

5.9 PIPE MATERIALS AND CONSTRUCTION

- Effluent sewer: The building effluent sewer shall be constructed with materials in conformance to building sewer standards, as identified in the Uniform Plumbing Code, California Plumbing Code Edition. The effluent sewer pipe shall have a minimum diameter of four inches.

- Distribution and Header Pipe and Fittings - Plastic pipe and fittings:

    a. Styrene-rubber plastic distribution and header pipe and fitting shall meet the most current ASTM Specification D2852 and Sections 5.5 and 7.8 of Commercial Standard 228, published by the U.S. Department of Commerce. Pipe and fittings shall also pass a deflection test withstanding 350 pounds per foot without cracking by using the method found in ASTM 2412.

    b. Polyethylene distribution pipe in 10 ft lengths and header pipe in lengths of ten feet or greater of which pipe and fitting shall meet the current ASTM Specification F405. Pipe and fittings shall also pass a deflection test withstanding 350 pounds per foot without cracking or collapsing by using the method found in ASTM 2412.

c. Polyvinyl chloride (PVC) distribution and header pipe and fittings shall meet the most current ASTM Specification D2729. Pipe and fittings shall pass a deflection test withstanding 350 pounds per foot without cracking or collapsing by using the method found in ASTM 2412. Markings shall meet requirements established in ASTM Specification D2729, subsections 9.1.1, 9.1.2 and 9.1.4.

d. Polyethylene smooth wall distribution and header pipe ten foot lengths and fittings shall meet the most current ASTM specification F810. Pipe and fittings shall also pass a deflection test of 350 lb/ft without cracking or collapsing by using the method found in ASTM 2412. Markings shall meet the requirements established in ASTM specification F810, Section 9.

E. The four types of plastic pipe described above shall have two rows of holes spaced 120 degrees apart and 60 degrees on either side of a center line. For distribution pipe, a line of contrasting color shall be provided on the outside of the pipe along the line furthest away and parallel to the two rows of perforations. Markings, consisting of durable ink, shall cover at least fifty percent of the pipe. Markings may consist of a solid line, letters, or a combination of the two. Intervals between markings shall not exceed twelve inches. The holes of each row shall be not more than five inches on center and shall have a minimum diameter of one-half inch.

- Polyvinyl chloride (PVC) pressure transport pipe, pressure manifolds, and pressure lateral pipe and fittings shall meet the current requirements for Class 200 PVC 1120 pressure pipe as identified in ASTM Specification D2241. The pipe and fittings shall marked be as required by ASTM Specifications D2241.

5.10 FLEXIBLE MEMBRANE LINERS

Unsupported polyvinyl chloride (PVC) shall have the properties listed in Table 5.1.

TABLE 5.1
PROPERTIES OF UNSUPPORTED PVC USED AS A MEMBRANE LINER IN FILTERS

Property			Test Method
A.	Thickness		ASTM D1593, 30 mil, min Para 8.1.3
B.	Specific Gravity (minimum)		ASTM D792
C.	Minimum tensile properties (each direction)		ASTM D882
	1.	Breaking factor (1 in. wide)	Method A or B 69
	2.	Elongation at break (percent)	Method A or B 300
	3.	Modules (force at 100 percent elongation (lb/in. width)	Method A or B 27
D.	Tear resistance (lb, minimum)		ASTM D1004 8 Die C
E.	Low temperature		ASTM S1790 -20F
F.	Dimensional stability (each direction, percent change maximum)		ASTM D1204 + or -5 212 F, 15 min.
G.	Water extraction		ASTM D1239, 0.35 percent maximum
H.	Volatile loss		ASTM D1203, 0.7 percent maximum
I.	Resistance to soil burial (percent change maximum in original value)		ASTM D3083
	1.	Breaking factor -5	
	2.	Elongation at break -20	
	3.	Modulus at 100 percent elongation +10	
J.	Bonded Seam Strength (factory seam, breaking factor, ppi width)		ASTM D3083 55.2
K	Hodrostatic resistance		ASTM D751 82 Method A

Installation standards:

- Patches, repairs, and seams shall have the same physical properties as the parent material.

- Site considerations and preparation:

  a. The supporting surface slopes and foundation to accept the liner shall be stable and structurally sound including appropriate compaction. Particular attention shall be paid to the potential of sink hole development and differential settlement.

  b. Soil stabilizers such as cementations or chemical binding agents must not adversely affect the membrane.

- Only fully buried membrane liner installation shall be considered to avoid weathering.

- Unreinforced liners have high elongation and can conform to irregular surfaces and follow settlements within limits. Unreasonable strain reduces effective thickness and may reduce life expectancy by lessening the chemical resistance of the thinner (stretched) material. Every effort shall be made to minimize the strain (for elongation) anywhere in the flexible membrane liner.

- Installation of liner:

  a. Preparation of earth subgrade: The prepared subgrade shall be of soil types no larger than Unified Soil Classification System (USCS) sand (SP) to a minimum of four inches below the surface and free from loose earth, rock, fractured stone, debris, cobbles, rubbish and roots. The surface of the complete subgrade shall be properly compacted, smooth, uniform and free from sudden changes in grade. Importing suitable soil may be required.

  b. Maintenance of subgrade: The earth subgrade shall be maintained in a smooth, uniform and compacted condition during installation of the lining.

  c. Temperature: The desirable temperature range for membrane installation is 42□F to 78□F. Lower or higher temperatures may have an adverse effect on transportation, storage, field handling and placement, seaming and backfilling and attaching boots and patches may be difficult. Placing liner outside the desirable temperature range should be avoided.

  d. Wind: Wind may have an adverse effect on liner installation such as interfering with liner placement. Mechanical damage may result. Cleanliness of areas for boot connection and patching may not be possible. Alignment of seams and cleanliness may not be possible. Placing the liner in high wind should be avoided.

  e. Precipitation: When field seaming is adversely affected by moisture, portable protective structures and/or other methods shall be used to maintain a dry sealing

surface. Proper surface preparation for bonding boots and patches may not be possible. Seaming, patching and attaching "boots" shall be done under dry conditions.

f. Penetration of liner: Penetration of a flexible liner by any designed means shall be avoided. Where penetrations are necessary, such as horizontal and vertical pipes, it is essential to obtain a secure, liquid-tight seal between the pipes and the flexible liner. Liners shall be attached to pipes with a mechanical type seal supplied by the liner manufacturer, supplemented by a chemically compatible caulking or adhesives to effect a liquid-tight seal. The highest order of compaction shall be provided in the area adjacent to pipes to compensate for any settlement.

g. Size. The final cut size of the liner shall be carefully determined and ordered to generously fit the container geometry without field seaming or excess straining of the liner material.

h. Transportation, handling and storage: Transportation, handling and storage procedures shall be planned to prevent material damage. Material shall be stored in a secured area and protected from adverse weather.

i. Site inspection: A site inspection shall be carried out by the Onsite Sanitary Official and the installer prior to liner installation to verify surface conditions, etc.

j. Deployment: Panels shall be positioned to minimize handling. Seaming should not be necessary. Bridging or stressed conditions shall be avoided with proper slack allowances for shrinkage. The liner shall be secured to prevent movement and promptly backfilled.

k. Anchoring trenches: The liner edges should be secured frequently in a backfilled trench.

l. Field seaming: Field seaming, if absolutely necessary, shall only be attempted when weather conditions are favorable. The contact surfaces of the materials should be clean of dirt, dust, moisture, or other foreign materials. The contact surfaces shall be aligned with sufficient overlap and bonded in accordance with the suppliers recommended procedures. Wrinkles shall be smoothed out and seams should be inspected by nondestructive testing techniques to verify their integrity. As seaming occurs during installation, the field seams shall be inspected continuously and any faulty area repaired immediately.

m. Field repairs: It is important that traffic on the lined area be minimized. Any necessary repairs to the liner shall be patched using the same lining material and following the recommended procedure of the supplier.

n. Final inspection and acceptance: Completed liner installations shall be checked visually for punctures, rips, tears and seam discontinuities before placement of any

backfill. At this time the installer shall also manually check all factory and field seams with an appropriate tool. In lieu of, or in addition to, manual checking of seams by the installer shall also manually check all factory and field seams with an appropriate tool. In lieu of or in addition to manual checking of seams by the installer, either of the following tests may be performed:

1. Wet test: The lined basin shall be flooded to the four foot level with water after inlets and outlets have been plugged. Workmanship shall be accepted if leakage rate in a twenty-four hour period is no greater than 0.25 inch.

2. Air lance test: Inspect all seams (factory and field) for unbonded areas using an air nozzle to detect loose edges Riffles indicate unbonded areas within the seam, or other undesirable seam construction. Check all bonded seams using a minimum 50 pounds per square inch (gage) air supply directed through a three-quarters inch (typical) nozzle, held not more than two inches from the seam edge and directed at the seam edge.

5.11 PORTABLE TOILETS

All portable toilet facilities shall comply with the following requirements:

- They shall have water-tight chambers constructed of reinforced concrete, plastic, fiberglass, metal, or of other material of acceptable durability and corrosion resistance, approved by the Onsite Sanitary Official, and designed to facilitate the removal of the wastes.

- Blackwater shall be stored in an appropriate chamber until removal for final disposal elsewhere. Wastes shall be removed from the chamber whenever necessary to prevent overflow.

- Chemicals containing heavy metals, including but not limited to copper, cadmium and zinc, shall not be used.

- All surfaces subject to soiling shall be impervious, easily cleanable, and readily accessible.

- Toilet bowls shall be constructed of stainless steel, plastic, fiberglass, ceramic or of other material approved by the Onsite Sanitary Official.

- Waste passages shall have smooth surfaces and be free of obstructions, recesses or cross braces which would restrict or interfere with flow of black wastes.

- Biocides and oxidants shall be added to waste detention chambers at rates and intervals recommended by the chemical manufacturer and approved by the Onsite Sanitary Official.

- Chambers and receptacles shall provide a minimum storage capacity of fifty gallons per seat.

- Portable shelters housing chemical toilets shall display the business name of the licensed sewage disposal service that is responsible for servicing them.

6

LARGE AND ADVANCED TREATMENT SYSTEMS

The focus of Chapters 3 and 4 relates to onsite wastewater disposal systems designed to serve single family homes. This chapter addresses the requirements for the design of ~~Pre-Treatment~~ Large Systems, those systems that have a design flow of over 1000 gallons per day and Advanced Treatment Systems, those systems that provide secondary treatment to wastewater effluent.~~-.onsite wastewater treatment and disposal systems for proposed systems with hydraulic loading rates of 900 gallons per acre per day up to 2000 gallons per acre per day, and septic tank/ absorption field treatment and disposal systems having a treatment and disposal capacity of 1000 gallons per day of more.~~

6.1 DEFINITION OF LARGE AND ADVANCED TREATMENT SYSTEMS

~~A large system is any onsite wastewater disposal system which will be used to treat wastewater which varies in strength or quantity from domestic wastewater produced from a single family home.~~ An Advanced Treatment System is one that provides secondary treatment to wastewater effluent. A Large System is a septic system designed to receive over 1000 gallons per day but does not necessarily provide advanced treatment to wastewater effluent. Both Large Systems and Advanced Treatment Systems are considered Alternative Systems. [See note 52]

A. Community Systems

A community system which ~~will~~ serves more than one lot, more than one condominium unit, or more than one unit of a planned unit development is typically a Large or Advanced Treatment System. ~~considered a large system.~~

B. Apartments, Duplexes and Mobile Home Parks

Multifamily housing developments ~~will~~ typically require a Large or Advanced Treatment Systems for wastewater disposal. Separate onsite wastewater disposal systems may be provided for each individual multifamily housing development. Separate onsite wastewater disposal systems for individual multifamily housing developments shall sometimes be considered Large Systems depending on wastewater design flows.~~-~~

C. Commercial Establishments

Commercial establishments include restaurants, laundromats, hospitals, shopping centers, etc. ~~All~~ Many onsite wastewater systems for commercial establishments ~~will be considered large~~ are Large or Advanced Treatment Systems because of ~~the need to accurately quantify and classify the nature of the wastewater from these facilities.~~ their high design flow or strength of wastewater.

D. Industrial Wastewater Discharges

Industrial wastewater is water that has been used as part of a manufacturing or processing enterprise. Industrial wastewater often has a very high strength and/or does not have a nutrient balance similar to domestic wastewater. Industrial wastewater systems will be considered Large or Advanced Treatment Systems. The design of onsite wastewater disposal systems for industrial discharges is beyond the scope of this manual.

6.2 GENERAL REQUIREMENTS FOR LARGE AND ADVANCED TREATMENT SYSTEMS

Unless otherwise authorized by the Town Council, Large or Advanced Treatment Systems shall comply substantially with the following requirements:

1. The system shall be designed by a registered Civil Engineer or Registered Environmetnal Health Specialist experienced in the design of Wastewater Treatment Systems. Upon request, the designer Engineer shall provide the Onsite Sanitary Official with a Qualification and Experience record. [See note 53]

2. The characteristics of the wastewater to be treated shall be documented to the satisfaction of the Onsite Sanitary Official. At a minimum the following constituent concentrations in the wastewater shall be identified in the Site Evaluation Report.
   a. 5-day B.O.D.
   b. Total Suspended Solids.
   c. Total Nitrogen reported individually as Kjeldahl Nitrogen and Nitrate Nitrogen.
   d. Any other constituent that the Onsite Sanitary Official deems necessary to identify the character of the wastewater.

3. The quantity of the wastewater shall be established and documented in the Site Evaluation Report. Wastewater quantities shall be identified through the combined or individual methods outlined in Chapter 6.2.B., Chapter 6.2.C. and Table 6.1 in this Manual. The Onsite Sanitary Official shall make the final determination of the correct wastewater flow assignment for the proposed facility based on the above Chapters methods.

4. The gross wastewater hydraulic loading rate for a large an Advanced Treatment System on an existing any parcel lot with new construction shall not exceed 2000 gallons per acre per day. The gross wastewater hydraulic loading rate on any parcel that has a Large System, (not providing advanced treatment), shall not exceed 900 gallons per acre per day, except those areas in the downtown exemption zone. Gross area calculations for any parcel an existing lot with new construction shall include the area to the centerline of any abutting public road or public trail right of way.

5. The hydraulic capacity of a site to accept the daily wastewater flow shall be determined using a method(s) acceptable to the Town for all new systems designed to treat and disperse dispose over 900 gallons per acre per day except those parcels in the downtown exemption zone (see Figure 4.14).

6. A nitrogen loading prediction calculation on groundwater must be calculated for each newly designed Advanced Treatment System Large System Treating and disposing effluent treating and dispersing wastewater in quantities in quantities over of 900 gallons per acre per day or more and with a design flow in excess of 5000 gallons per day. The method utilized for calculation shall be the "Hantzche-Finnemore Equation" that is approved by the Central Region of the Regional Water Quality Control Board. The approved maximum level of concentration of Nitrate Nitrogen predicted in the ground water through the use of this

equation is 7.0 mg/l. Specific values utilized in the equation authorized by the Regional Water Quality Control Board are as follows: [See note 54]

a. % of Nitrate-Nitrogen loss due to Soil Denitrification is "0". (d-Value)
b. Average rainfall recharge rate is 75% of 52 ~~60~~ inches of rainfall on level ground. (R-value)
c. Background Nitrate-Nitrogen Concentration in ~~Rainfall Recharge~~ rainfall recharge is ~~2.0~~ 0.5 mg/l. (Nb-value)

7. Any Large System~~s~~ (having a ~~treatment and disposal capacity~~ design flow of over 1000 gallons per day)~~, and systems that exceed 900 gallons per day per acre~~ shall install both the original and replacement ~~disposal~~ dispersal fields at the time of ~~initial~~ construction. A diverter valve shall be installed between the two dispersal fields. ~~systems~~. Replacement dispersal areas shall be divided into relatively equal units and have the same dispersal capacity as the original field. The replacement dispersal area shall be located as near to the original dispersal area as is practical.

8. Effluent distribution shall alternate between the ~~absorption~~ dispersal area units.

9. ~~Absorption~~ Dispersal fields for systems designed to treat over 900 gallons per acre per day shall not be allowed on slopes greater than thirty (30) percent.

10. Duplex pumping systems or other acceptable means of alternating effluent distribution between ~~absorption~~ dispersal area units shall be provided.

11. The applicant shall provide a written assessment of the impact of the proposed system upon the quality of public waters and public health.

12. Ground water monitoring wells may be required for Large or Advanced Treatment System dispersal fields by the Onsite Sanitary Official. ~~shall be installed at the disposal site for all treatment and disposal systems that exceed a gross hydraulic loading rate of 900 gallons per day per acre.~~ There shall be a minimum of one well installed up gradient and two wells down gradient of the ~~disposal system~~ dispersal area. Additional wells may be required by the Onsite Sanitary Official depending on the location of the system. [See note 55]

13. Where there are groundwater monitoring wells, ~~A~~a ground water monitoring program will be required for each ~~disposal~~ dispersal area. Constituent analyses and frequency of analyses shall be as determined by the Onsite Sanitary Official. All costs for the monitoring program shall be borne by the discharger.

14. Operation and Maintenance of ~~the~~ Large or Advanced Treatment Systems shall be as outlined in Chapter 1.4.A., Alternative and Innovative ~~Pre~~ Advanced Treatment Systems, of this Manual.

15. Any onsite wastewater disposal system, whether existing, under repair or newly constructed, that receives high strength wastewater from a commercial food service building must have a a properly sized and functioning grease interceptor. Sizing and design criteria at a minimum shall be in accordance with the most current version of California Plumbing Code, or based

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on current industry standards as approved by the Onsite Sanitary Official. If the wastewater coming into the septic system has a BOD higher than 900 mg/l than the owner of the system must notify the State Regional Water Quality Control Board and submit a Report of Waste Discharge. The system will then be regulated by the Regional Water Quality Control Board as well as the applicable provisions in the Town of Paradise Local Agency Management Program. [see note 56]

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Construction of a Large or Advanced Treatment System shall be in substantial conformance with the approved plans and specifications and with any terms of the construction installation permit issued by the Onsite Sanitary Official. After completion, the professional who prepared the plans shall certify that the system was installed in substantial conformance with such plans.

A. Septic tank sizing ~~size~~

- For all projected daily wastewater flows ~~up to 1,500 gallons~~, the total septic tank operating level capacity shall ~~have a liquid capacity equal to~~ be at least ~~one and one-half~~ two times ~~the~~ the design flow capacity of the system. ~~daily wastewater flow, or 1,500 gallons, whichever is greater~~. This shall apply to all advanced treatment systems as well as all alternative and standard systems.

- ~~For projected daily wastewater flows greater than 1,500 gallons, the septic tank shall have a liquid capacity equal to 1,500 gallons plus seventy-five percent of the projected daily wastewater flow.~~

- Additional septic tank volume, even up to three times the design flow capacity, may be required by the Onsite Sanitary Official for industrial or other special wastes such as RV parks, restaurants, laundromats, etc.

- The quantity of daily wastewater flow shall be estimated using the guidelines in this manual.

B. Design flow

Design flow ~~means~~ is the maximum flow that may be reasonably expected to be discharged from a residential, commercial or institutional facility on any day of operation, and is expressed in gallons per day. The design flow ~~will~~ is not ~~be~~ considered ~~as~~ an average daily flow, but incorporates a factor of safety over the average flows to accommodate peak wastewater flows ~~or~~ of facilities. ~~that discharge greater than the average flows of wastewater either occasionally or on a regular basis. The design flows are based on empirical data collected over many years by numerous researchers. The design flows reflect disposal system designs proven to function adequately over long periods of time.~~ ~~As such, the~~ The design flows anticipate variations in flows among different establishments of the same class as well as flow variations over time in the same establishment. The design flows also assume wastewater with strengths typical of the class of establishment. The calculation of design flows based on water saving devices will not be allowed.

Each component of the disposal system shall be designed and constructed to adequately treat and dispose of the design flow discharged from the premises to be served.

The flows listed in Table 6.1 are minimum guideline standards for average facilities of the categories listed.

C. Methods for determining design flows

Flows from existing comparable facilities can be used in determining design flows. The design flow may be calculated by actual potable water meter readings, or facility wastewater influent or effluent meter readings if in fact the;

- Water records are from billing records of the service provider, or from water meters certified to be within two percent by the water purveyor, or, in the case of wastewater metering, the meter read values are certified "correct" by a Registered Engineer and approved by the Onsite Sanitary Official

Adjustments for peak days: The average daily flows shall be adjusted for flow days as follows:

- Daily monitoring: If the water meter records are recorded on a daily basis, the highest consecutive ten-day flows taken over the course of one month can be averaged and used for the design flow.

- Weekly monitoring: If the water meter records are recorded on a weekly basis a minimum of four weeks must be recorded.~~,~~ ~~the~~ The design flow shall be calculated by dividing ~~the number of days the facility was in use into~~ the highest weekly flow by 7 days and then multiplying by 1.2.

- Monthly monitoring: If the water meter records are recorded on a monthly basis, at least 4 months shall be recorded. ~~t~~The design flow shall be calculated by dividing the number of days the facility was in use into the highest monthly flow, and multiplying by 1.5.

- Quarterly monitoring: If the water meter records are recorded on a quarterly basis, a whole year shall be recorded. ~~the~~The design flow shall be calculated by dividing the number of days the facility was in use into the highest quarterly flow and multiplying by 2.0.

D. Disposal field hydraulic loading rates

~~Absorption~~ Dispersal field trenches for systems discharging ~~pretreated~~ secondary treated effluent (less than thirty milligrams per liter BOD_5 and TSS) shall be sized using the absorption trench bottom and sidewall area. The trench hydraulic loading rate shall not exceed ~~1.20~~ 1.0 gallons per square foot~~.~~/day, based on the design flow rate.

- For ~~large~~ systems with a design flow over 5000 gallons per day a mounding analyses similar to the methodology described in the "Assessment of Cumulative Impacts of Individual Waste Treatment & Disposal Systems" prepared by Ramlet Associates for the North Coast Regional Board, February 1982, will be required.

E. Loading rates for sand and gravel filter systems

Sand and gravel filter systems ~~proposed to serve a large system~~ shall be sized on the basis of projected peak daily sewage flow and the strength of the wastewater, using the following criteria:~~.~~

- The hydraulic loading rate to an intermittent dosing sand filter shall not exceed 1.5 gallons/ft^2/day. ~~per square foot□day.~~
- The hydraulic loading rate to a recirculating gravel filter shall not exceed five gallons/ft^2/day. ~~per square foot□day~~ (forward flow).
- The organic loading rate to either type of filter system shall not exceed 5 x 10^{-3} pound BOD_5 per ft^2/day. ~~square foot□day~~.

TABLE 6.1

DESIGN FLOWS FOR COMMERCIAL ESTABLISHMENTS

Type of Facility	Unit of Measure	Design Value (gal/d)
Airports	passenger + employee	5 15
Barber Shop	chair	100
Bathhouses and swimming pools	person	10
Beauty salon	chair	100
Bed and breakfast	establishment + Rental room	225 75
Boarding houses (meals)	house + boarder	225 50
Bus service areas	passenger + employee	5 5
Cafeteria, open general public	seat + employee	45 15
Cafeteria, private	meal/seat +	10

Type of Facility	Unit of Measure	Design Value (gal/d)
	employee	15
Camps:		
Campground with central comfort stations	person	35
With flush toilets, no showers	person	25
Construction camps (no meals served)	person	15
Resort camps with limited plumbing (night and day)	person	50
Luxury camp	person	100
Children's camps, (day use only)	camper + staff person	15 15
Children's camps, day and night	camper + staff person	20 15
Churches	seat	5
Country clubs	resident non-resident	100 25
Dance hall	attendee + staff person	5 15
Day care facilities, serving meals	child + adult	20 15
Day care facilities, not serving meals	child + adult	15 15
Delicatessen, food prepared and no seats	establishment + employee	50 15
Eating place, fast food and no full meals and no china service	inside seat + outside seat + employee	20 10 15
Fairgrounds	attendee, based	2

Type of Facility	Unit of Measure	Design Value (gal/d)
	on daily average	
Factories (with showers, exclusive of industrial wastes)	person per shift	35
Factories (without showers, exclusive of industrial wastes)	person per shift	15
Gyms, not associated with schools	participant + spectator + employee	10 3 15
Hospitals	bed	250
Hotels and motels with shared baths	bedroom + employee	80 15
Hotels with private baths	bedroom + employee	100 15
Institutions other than hospitals	bed space	125
Laundry, self service	machine + employee	500 15
Medical offices, clinics and dental offices	medical staff + patient + office employee	80 5 15
Mobile home parks	unit	125
Motels (with bath, toilet and kitchen)	bedroom	150
Motels with private baths (without kitchen)	bedroom	100
Parks and picnic areas, public restrooms, no showers	attendee + employee	5 15

Type of Facility	Unit of Measure	Design Value (gal/d)
Parks and picnic areas, public restrooms with showers	attendee + employee	10 15
Picnic parks (toilet wastes only)	picnicker	5
Picnic parks (with bathhouses, showers and flush toilets)	picnicker	10
Rooming houses, no meals	house + roomer	180 30
Rental cabins and cottages	bed + employee	50 15
Restaurants	seat	40
Restaurants (single service)	customer	2
Restaurants (with bars and/or lounges)	seat	50
Schools, elementary	student + teacher + administrative employee	7 15 15
Schools, junior high	student + teacher + administrative employee	9 15 15
Schools, senior high	student + teacher + administrative employee	12 15 15
Schools, boarding	student + teacher	75 15

Type of Facility	Unit of Measure	Design Value (gal/d)
	+ administrative employee	15
Service Stations	1st set of fuel pumps	500
	+ each additional set	300
	+ employee	15
Swimming pools and bathhouses	person	10
Shopping centers or stores, public restrooms and showers (Design for any eating places or butcher shop shall be determined and added to total design flow.)	water closet	400
	+ shower	20
	+ employee	15
	+ parking space	1
Tennis and racquetball courts (Design flows for any eating place to be determined and added to the total design flow.)	court	300
	+ employee	15
Theaters:		
Walk-in	per seat	5
Drive-in	car space	20
Travel trailer parks (without individual water and sewer hookups)	space	50
Travel trailer parks (with individual water and sewer hookups)	space	100
Visitors center	visitor	6
	+ employee	15
Worker:		
Construction (as semi-permanent camps)	person	50
Day, at school and offices	shift	15

Note:When full-time equivalent employees will be present at an establishment, estimate the maximum number of employees who may be present during a single day of operation and add additional fifteen gallons per employee per eight hour shift, except where otherwise indicated. The design flow for employees is based on the maximum number of employees present in a twenty-four hour period.

F. Aesthetics of Alternative and Advanced Treatment Systems

All Alternative and Advanced Treatment System above ground components shall be screened with aesthetically pleasing vegetative or manmade materials so as to reduce visibility from any public street. Components include but are not limited to above ground filter units, sand filter beds, tanks and air intake units. Above ground filter beds whose retaining walls are over two feet above finished grade and are visible from a public street shall be designed with landscaping, rock work or vegetative covering that screens the view of the filter. The aesthetic quality of the screening, landscaping, rock work or vegetative covering used and its effectiveness in fulfilling this requirement shall be reviewed administratively via the Town's design review process in conjunction with the wastewater permit approval process. Appeals of administrative design review decisions may be made to the Planning Commission.

All visual barriers or aesthetic components used to satisfy this requirement shall be maintained in good condition for as long as the alternative ~~large~~ system remains in place. For purposes of this requirement, above ground piezometers, ~~and~~ control panels and other small components shall not be required to be screened from public view. [See note 58]

7
INNOVATIVE APPLICATIONS

INNOVATIVE TREATMENT AND DISPERSAL ~~DISPOSAL METHOD~~ APPLICATIONS

Any onsite wastewater treatment and disposal system not described in this manual shall be considered under an innovative application permit. All innovative systems are considered alternative systems

A. General policies

Alternative technologies to those listed in this manual are encouraged, if it is a system which would benefit significant numbers of people within the Town of Paradise Onsite Wastewater Management Zone. Unproven and undocumented technologies will not be permitted. Only sound, well engineered systems will be accepted. The Onsite Sanitary Official shall require the submission of references.

No person shall construct or operate an innovative onsite wastewater treatment and disposal system without first obtaining a permit from the Onsite Sanitary Official.

~~An available alternative for wastewater treatment must be available if the system should fail.~~

For innovative systems that provide advanced treatment, ~~An~~ an operations, maintenance and monitoring program must be established subject to approval of the Regional Water Quality Control Board, and at the expense of the owner. As a minimum, the monitoring shall consist of ~~quarterly~~ semi-annual effluent BOD_5, TSS analyses, plus measurement of solids accumulation.

B. Application procedures

Application for innovative applications shall be made on forms provided by the town.

The application shall be complete, signed by the owner and be accompanied by the required fee.

- The application shall include detailed system design specifications and plans and any additional information the town considers necessary. All innovative systems shall be subject to Regional Water Quality Control Board approval.

- The owner shall agree, in writing, to hold the State of California, the County of Butte, the Town of Paradise, its officers, employees, and agents harmless of any and all loss and damage caused by defective installation or operation of the proposed system.

C. Criteria for approval

Sites may be considered for innovative application permits where:

- A specific acceptable backup alternative is available in the event of system failure.

- For ~~absorption~~ dispersal systems, soils in both original and system replacement areas are similar.

- The system design shall supply operations and maintenance instructions to both the owner and the town. It shall be the responsibility of the owner to maintain the system in accordance with the instructions and the operating permit. The town shall regularly inspect the system for proper operations and maintenance. Monitoring shall be performed by the town at the owner's expense.

D. Repair or replacement of system

If the town finds the operation of the system unsatisfactory, the owner, upon written notification from the town, shall promptly repair or modify the system, replace it with another acceptable system, or ~~as a last resort,~~ abandon the system.

8
LOCAL AGENCY MANAGEMENT PROGRAM

DEFINITIONS [See note 60]

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Absorption capacity: See mounding analysis.

Advanced treatment: Treatment provided to wastewater after primary treatment has occurred. The treatment enhances the aerobic environment of wastewater by introducing oxyen into it, thus promoting the microbial decomposition of organic pollutants. Advanced treatment reduces the level of constituents in wastewater including BOD and TSS. Advanced treatment is also commonly known as pretreatment, secondary treatment or supplemental treatment.

~~**Absorption trench:** A ditch or trench with vertical sides and substantially flat bottom with a minimum of twelve inches of clean, coarse filter material into which a single distribution pipe has been laid, the trench then being backfilled with a minimum of six inches of soil.~~

Aerobic: A condition in which molecular oxygen is present in the environment.

Aerobic media system: An advanced treatment system that uses a type of media to promote microbial attachment and growth so as to enhance the microbial decomposition of organic material in wastewater. Media substances include sand, gravel, textile fabric, plastic, and peat. The primary purpose of the media is to increase surface area for microorganisms to grow and receive increased oxygen exposure. Aerobic Media Systems are also known as Filter Systems.

Alteration: Any change in the physical configuration of an existing onsite wastewater disposal system or any of its component parts, including replacement, modification, additional or removal of disposal system components, installation, size, capacity, type or number of one or more components. The term "alter" shall be construed accordingly.

Alternative System: Any onsite wastewater disposal system other than the standard septic tank/gravity-fed ~~absorption~~ dispersal field described in Chapter 4. Any system installed under a variance or classified as innovative shall be considered an alternative system.

Anaerobic: A condition in which molecular oxygen is absent from the environment.

Applicant: The person who signs and submits an application for permit to construct, install or alter a disposal system.

~~**Aquifer recharge zone:** Any porous surface area that allows precipitation to infiltrate into an aquifer.~~

Bedrock: A solid and continuous body of rock, with or without fractures, or a weathered or broken body of rock fragments overlying a solid body of rock. It has less than 25% fines and can not be broken by hand pressure.

Bedroom: Any room within a dwelling unit, furnished or unfurnished, that may reasonably be expected to serve primarily as sleeping quarters.

Black wastewater: Wastewater derived from plumbing fixtures or drains that only receive excreta wastewater.

Bottomless sand filter: An unlined intermittent dosing sand filter that allows effluent to travel into the soil below the bed of sand.

Building drain: That portion of the lowest piping of a plumbing system that receives the discharge plumbing and other pipes inside the walls of a building and conveys it to the building sewer.

Capping fill: ~~-~~A dispersal field that is used at ~~Used to modify~~ a site that is lacking ~~in~~ effective soil depth above groundwater or~~, depth to groundwater, depth to~~ restrictive layers~~, or excessively permeable soil~~. The ~~absorption~~ dispersal trench ~~must be~~ is installed ~~in~~ a minimum of twelve inches into ~~natural~~ native soil. ~~, but~~ Approved cover soil is ~~may be~~ added to "cap" the system. ~~and, thus provide an acceptable effective soil depth~~ .

~~**Cesspool:** A covered excavation that receives wastewater or other organic wastes from a disposal system, and is designed to retain the organic matter and solids, but allows liquids to seep through the bottom and sidewalls.~~

Chroma: The relative purity or strength of color of soil; a quantity that decreases with increasing grayness. Chroma is one of the three variables of color as defined in the Munsell system of color classification.

Clay: See Soil texture

Clay pan: A dense, compact clay layer in the subsoil. It has a much higher clay content than the overlying soil horizon from which it is separated by an abrupt boundary. Clay pans are hard when dry and very sticky and very plastic when wet. They impede movement of water and air and growth of plant roots.

Community system: An onsite wastewater disposal system designed to serve more than one lot or parcel or more than one condominium unit or more than one unit of a planned unit development.

Conditions associated with saturation: A) Reddish brown or brown soil horizons with gray (chromas of two or less) and red or yellowish red mottles; or B) Gray soil horizons, or gray soil horizons with red, yellowish red, or brown mottles; or C) Dark colored highly organic soil horizons; or D) Soil profiles with concentrations of soluble salt at or near the ground surface.

Contour: An imaginary line of constant elevation on the ground surface; the corresponding line on a map is called a "contour line".

Criteria: Technical requirements upon which a ~~judgement~~judgment or decision may be based.

Curtain drain: A method of artificially lowering the water table by installation of a trench on the up-hill side of ~~the absorption~~ a ~~-~~dispersal field on sites with slopes greater than four percent. The trench ~~shall be twelve inches wide and approximately five foot deep with~~ has a perforated pipe in the bottom that collects and diverts water away from the ~~absorption~~ dispersal field area.

Design flow: The wastewater flow that may reasonably be expected to be discharged from a residential, commercial, or institutional facility on any day.

~~**Disposal area:** One or more absorption fields. The perimeter of the disposal area corresponds to the perimeter of the absorption field or a line circumscribing the outermost edges of the outermost absorption fields and includes the area between the absorption fields.~~

Dispersal field: One or more dispersal trenches, or dispersal beds where wastewater effluent is discharged for the sake of dispersing into the underlying soil strata. A dispersal field is also known as a drainfield, absorption field, disposal field or leachfield.

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Dispersal trench: A dispersal trench receives wastewater effluent for the purpose of dispersing the effluent through the soil media that surrounds the trench. It consists of a trench with vertical sides and flat bottom and a minimum of twelve inches of clean, rounded leach rock material. A distribution pipe lays flat toward the top of the leachrock column. The trench has a minimum of twelve inches of soil cover, or, in the case of pavement, a minimum of six inches of soil cover and the remaining six inches consisting of road base, concrete or asphalt.

~~**Disposal system cleaner:** Any solid or liquid material intended or used primarily for the purpose of cleaning, treating, degreasing, unclogging, disinfecting or deodorizing any part of a disposal system but excluding those liquid or solid products intended or used primarily for manual cleaning, scouring, treating, deodorizing or disinfecting the surface of common plumbing fixtures.~~

Distribution box: A watertight structure that receives septic tank effluent and is used to distribute such effluent in equal portions to two or more disposal fields or distribution pipes within a disposal field.

Distribution pipe: A perforated pipe or one of several perforated pipes used to carry and distribute septic tank effluent throughout the disposal field.

Distribution network: Two or more inter-connected distribution pipes.

Diverter valve: A device that permits alternating use of two or more disposal fields or the diversion of septic tank effluent.

Diversion ditch: A ditch to intercept and divert surface water runoff.

Dosing septic tank: A unitized device performing functions of both a septic tank and a dosing tank.

Dosing siphon: A hydraulic device designed to discharge rapidly the contents of a dosing tank between predetermined water or sewage levels.

Dosing tank: A watertight receptacle located between the septic tank and disposal field and equipped with a pump or siphon, to store and deliver doses of septic tank effluent to the disposal field.

Drainrock: Clean, washed gravel ranging from three-quarter to two and one-half inches in size, or clean crushed rock ranging in size from one and one-half to two and one-half inches.

Drainage area: An area from which the surface runoff is carried away by a single watercourse.

Drainage ditch: A ditch used to receive and divert receiving and diverting surface runoff or subsurface water.

Drop box: A component of a serial distribution system. The drop box allows overflow from one dispersal ~~absorption~~ trench to the next.

Dry well: A system that involves effluent being discharged from a septic tank into a cesspool.

Dwelling unit: Any structure or portion of a structure, permanent or temporary in nature, used or proposed to be used as a residence seasonally or throughout the year.

Effective ~~seepage~~ absorption area: The entire sidewall area ~~within~~ of a dispersal trench ~~an absorption trench or a seepage trench operating anaerobically from the bottom of the absorption trench~~ to a level two inches above the distribution pipe~~s~~. The bottom area ~~may be added when the absorption trench is designed to operate aerobically.~~ of a trench that receives secondary treated wastewater is also considered effective absorption area.

Effective size: The size or diameter of the particle or sand grain, in millimeters, in a sand mixture, below which ten percent by weight of the sand grains are smaller in diameter.

Effective soil depth: ~~That portion of the soil~~ Permeable soil that is effective in receiving and dispersing wastewater effluent from an onsite wastewater disposal system. ~~above a layer that limits the ability of the soil to provide treatment or disposal of septic tank effluent.~~ The effective soil depth is typically underlain by a limiting horizon which includes~~. Limiting horizons include~~ bedrock, ~~hydraulically restrictive soil horizons~~ dense clays ~~and parent material~~, excessively ~~course~~ coarse soils ~~horizons and parent material, and permanent~~ and seasonally high groundwater tables.

Effluent lift pump: A pump used to lift septic tank or other treatment facility effluent to a higher elevation.

Effluent sewer: Part of the system of drainage piping that conveys partially treated sewage from a septic tank or other treatment facility into a dispersal field. ~~distribution unit or an absorption facility~~ .

Emergency repair: Repair of a failing system where immediate action is necessary to relieve a situation in which sewage is backing up into a dwelling or building, or repair of a broken pressure sewer pipe.

Engineered fill: Importation of select soil placed deeper than twelve inches on a site for the express purpose of constructing a drainfield.

Escarpment: Any naturally occurring slope greater than fifty percent which extends vertically six inches or more as measured from toe to top, and which is characterized by a long cliff or steep slope which separates two or more comparatively level or gently sloping surfaces, and may intercept one or more layers that limit effective soil depth.

Existing onsite wastewater disposal system: Any installed onsite wastewater disposal system constructed in conformance with the rules, laws and local ordinances in effect at the time of construction.

Experimental systems: See Innovative Applications, Chapter 7.

Failing system: Any onsite wastewater dispsosal system which discharges untreated or incompletely treated wastewater ~~or septic tank effluent~~ directly or indirectly onto the ground surface or into ~~public~~ surface waters, including creeks, ponds or groundwater. Any onsite wastewater disposal system which has a cracked, deteriorated or leaking tank. Any onsite wastewater disposal system that is not performing as it was designed for the treatment and dispersal of wastewater, including dispersal fields not accepting wastewater at the rate for which it is designed or fot that which is flowing into it.

Fill material: Any soil, rock or other material placed within an excavation or over the surface of the ground. The term "fill or back-fill" is equivalent in meaning.

Finish grade: The surface elevation of the ground after completion of final grading.

Filter fabric: A woven or spun-bonded sheet material used to impede or prevent the movement of sand, silt and clay into filter material.

Five-day biochemical oxygen demand (BOD_5): The quantity of oxygen used in the biochemical oxidation of organic matter in five days at 20□ Centigrade under specified conditions and reported as milligrams per liter (mg/L).

Gleization: A process of intense reduction caused by long periods of soil saturation in the presence of organic matter while the soil temperatures are above biologic zero, forty-one degrees Fahrenheit.

Gleyed: A soil condition resulting from intense reduction, characterized by the presence of ferrous iron and neutral gray, green or blue colors that commonly change to brown upon exposure to air.

Gravel: See Soil texture

Gray wastewater: That portion of the wastewater generated within a residential, commercial or institutional facility that does not include discharges from water closets and urinals.

Grease trap: A device located inside a building in which the grease in wastewater is intercepted, congealed by cooling, accumulated and stored for pump-out and disposal.

Grease interceptor tank: A septic tank with the outlet tee extended to within twelve inches of the floor of the tank used to intercept and retain any grease that may be present in the wastewater.

Groundwater:

a. **Permanent Groundwater table**: The upper surface of a saturated zone that exists year-round. The thickness of the saturated zone, and, as a result, the elevation of the permanent groundwater table may fluctuate as much as twenty feet or more annually; but the saturated zone and associated permanent groundwater table will be present at some depth beneath land surface throughout the year.

b. **Groundwater aquifer:** A porus formation of ice contact and glacial outwash sand and gravel, or bedrock that contains significant recoverable quantities of water that is likely to provide drinking water supplies.

c. **Groundwater gradient:** For purpose of this manual, the groundwater gradient is assumed to follow the topographic gradient except for stratified drift and ablation till landscapes where the disposal system is assumed to be down gradient regardless of the topographical gradient.

d. **Groundwater table:** The upper surface of a zone of saturation.

Hazardous waste: Any chemical substance or material, gas, solid or liquid designated as hazardous by the U.S. Environmental Protection Agency pursuant to the United States Resource Recovery and Conservation Act. Public Law 94-580.

Holding tank: A closed watertight structure designed and operated in such a manner as to receive and store wastewater or septic tank effluent, but not to discharge wastewater or septic tank effluent to the surface or groundwater or onto the surface of the ground.

Horizon, soil: A layer within a soil profile differing from the soil above or below it in one or more soil morphological characteristics including color, texture, rock fragment content, structure and consistence of each soil horizon or parent material.

Horizontal reference point: A stationary, easily identifiable point to which horizontal dimensions can be related.

Hue: The dominant spectral color, one of the three variables of soil color defined within the Munsell system of color classification.

Infiltration rate: The rate water is absorbed by a soil surface whether that surface be the ground surface or interior of a trench lined with drainrock.

Innovative application: See Chapter 7.

Install: To assemble, put in place or connect components of a disposal system in a manner that permit their use by the occupants of the structure served.

Intermittent dosing sand filter: A filter with two feet or more of medium sand designed to filter and biologically treat septic tank or other treatment unit effluent from a pressure distribution system at an application rate not to exceed 1.5 gallons per square foot□day applied at a dose not to exceed twenty percent of the projected daily wastewater flow per cycle.

Invert: The floor, bottom or lowest portion of the internal cross-section of a closed conduit, used with reference to pipes or fittings conveying wastewater or septic tank effluent.

Large system: See Chapter 6.

Malfunctioning system: An improperly functioning or ~~A~~ non-operational onsite wastewater disposal system ~~or an improperly functioning disposal system~~, as indicated by, ~~though~~ but not limited to, any of the following events: (1) Contamination of nearby water wells or surface water bodies by wastewater of septic tank effluent as indicated by the presence of fecal bacteria where the ratio of fecal coliform to fecal streptococci is four or greater; (2) Ponding or outbreak of wastewater or septic tank effluent into portions of buildings below ground; (3) Seepage of wastewater or septic tank effluent into portions of buildings below ground; (4) Emanations of foul odors from any component of the ~~disposal~~ system; or (5) Back-up of wastewater into the building served which is not caused by a physical blockage of the internal plumbing.

Media Filter: A component of an advanced treatment system where wastewater effluent is passed through filter material multiples time to achieve a level of wastewater constituent reduction. Media filters rely on an aerobic environment that promotes microbial growth. Microbial decomposition of wastewater nutrients occurs on the filter media surface. Filter media may be sand, aggregate, textile, or other substances that provide a large amount of surface area.

Medium sand: A mixture of sand with 100 percent passing the No. 3/8 inch sieve, ninety to 100 percent passing the No. 4 sieve, sixty-two to 100 percent passing the No. 10 sieve, forty-five to

eight-two percent passing the No. 16 sieve, twenty-five to fifty-five percent passing the No. 30 sieve, five to twenty percent passing the No. 50 sieve, ten percent or less passing the No. 60 sieve, and four percent or less passing the No. 100 sieve.

Mineral soil: Any soil consisting primarily of sand, silt and clay rather than organic matter.

Mottles, drainage: Soil color patterns caused by alternating saturated (anaerobic) and unsaturated (aerobic) soil conditions. When saturation occurs while soil temperatures are above biological zero forty-one degrees Fahrenheit, iron and manganese will become reduced and exhibit subdued shades such as grays, greens or blues. When unsaturated conditions occur, oxygen combines with iron and manganese to develop brighter soil colors such as yellow and reddish brown. Soils which experience seasonally fluctuating water tables usually exhibit alternating streaks, spots, or blotches of bright colors (oxidized area) with dull or subdues colors (reduced areas). The longer a soil is saturated and in an anaerobic condition, the greater is the percentage of color which will be subdues. Soils which are never or are rarely exposed to free oxygen are considered totally reduced or gleyed. (see Appendix A).

Mounding analysis: A ~~hydraulic~~ hydrogeologic study of a proposed ~~drainfield~~ dispersal field area to determine ~~the capacity of the site~~ the capacity of the underlying soils to transmit water ~~through the soils and~~ off the site without surfacing. Words used to describe water flow through soil and away from a drainfield include site capacity, assimilation of flows, and absorption capacity.

Mottling: A color pattern observed in soil consisting of blotches or spots of contrasting color. The term "mottle" refers to an individual blotch or spot. Drainage Mottling is an indication of seasonal or periodic and recurrent soil saturation.

Munsell system: A system of classifying soil color consisting of an alpha-numeric designation for hue, value and chroma, such as "7.5YR6/2," together with a descriptive color name, such as "strong brown."

~~**Nonwater-carried waste disposal facility:** A system designed to uniformly distribute septic tank or other treatment unit effluent under pressure in an absorption facility or sand filter.~~

Normal high water line, riverline, stream, lake and pond: That line on the shore or bank of stream that is apparent from visible markings, changes in the character of soil, rock or vegetation resulting from submersion or the prolonged erosion action of the water.

Operate: To use or convey a structure or facility served by disposal system or to own a structure or facility where such use or occupation exits.

Owner: Any person who alone, or jointly, or severally with others: (1) Has legal title to any single lot, dwelling, dwelling unit, or commercial facility; or (2) Has care, charge or control of any real property as agent, executor, executrix, administrator, administratrix, trustee, commercial leasee, or guardian of the estate of the holder of legal title; or (3) Is the contract purchaser of real

property NOTE: Each such person as described in subsections (2) and (3) thus representing the legal title holder, is bound to comply with the provisions of these rules as if he were the legal title holder.

Parent material: The unconsolidated and more or less un-weathered mineral or organic matter from which the soil profile is developed.

Perimeter drain or tile dewatering: A method of artificially lowering the water table on sites with slopes less than twelve percent by installation of a trench that completely surrounds the entire absorption field. The trench shall be twelve inches wide and approximately five feet deep with perforated pipe in the bottom that collects and diverts water away from the absorption field area.

Person: An individual or his/her heirs, executor, administrator, assign or agents, a firm, corporation, association, organization, municipal or quasi-municipal corporation, or governmental agency. Singular includes plural and male includes female.

Pit privy: An alternative toilet placed over an excavation where human waste is deposited.

Portable toilet: Any self-contained chemical toilet facility that is housed within a portable toilet shelter and includes, but is not limited to construction-type chemical toilets.

Potable water: Water that does not contain objectionable pollution, contamination, minerals, or infective agents, is satisfactory for human consumption and is used for human consumption.

Pre-existing native ~~natural~~ ground surface: The original ~~former~~ level of the ground surface ~~in~~ before any man-made development occurred, typically in the form of soil being removed or soil being deposited at the site. ~~an area of disturbed ground prior to the disturbance.~~

Pressure distribution lateral: Piping and fittings in pressure distribution systems which distribute septic tank or other treatment unit effluent to filter material through small diameter orifices.

Pressure distribution manifold: Piping and fittings in a pressure distribution system which supply effluent from pressure transport piping to pressure distribution laterals.

Pressure distribution system: Any system designed to uniformly distribute septic tank or other treatment unit effluent under pressure in a dispersal field ~~an absorption facility~~ or sand filter.

Pressure transport piping: Piping which conveys septic tank or other treatment unit effluent to a dispersal field ~~pressure distribution manifold~~ by means of pressure, typically created by a pump.

Primary treatment: Primary treatment is the removal of solids from wastewater. It entails the settling of heavy solids and the floating of lighter solids within wastewater while it is placed in a static environment, such as in a septic tank. Wastewater effluent that is plumbed to flow out of a

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septic tank, where the heavier and lighter solids have been removed, has undergone primary treatment.

Public sewer: Municipal ~~or~~ sewerage system.

Public waters: Lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marches, inlets, canals, the Pacific Ocean within the territorial limits of the State of California, and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or slat, public or private (except those private waters which do not combine or effect a junction with natural surface or underground waters), which are wholly or partially within or bordering the State or within its jurisdiction.

Qualified designer: A registered civil engineer, certified professional soil scientist, registered ~~sanitarian~~ environmental health specialist, registered engineering geologist, or registered geologist with experience in designing onsite wastewater disposal systems. A qualified designer may perform soil tests, prepare site evaluation reports, and design onsite wastewater disposal systems. Firms performing satisfactory site evaluations at the time this manual is adopted are also considered to be qualified.

Realty improvement: Any new residential, commercial or industrial structure or other premises, including but not limited to condominiums, garden apartments, town houses, mobile homes, stores, office buildings, restaurants, and hotels, not served by an approved public sewer, the useful occupancy of which will require the installer erection of disposal systems. Each dwelling unit in a proposed multiple-family dwelling unit or each commercial unit in a commercial structure shall be construed to be a separate realty improvement.

Recirculating gravel filter: A gravel filter which processes liquid waste by mixing filtrate with incoming septic tank effluent and recirculating it several times through the filter material before discharge to a final treatment or absorption area.

Redundant ~~absorption~~ dispersal field system: A system in which two complete ~~absorption~~ dispersal fields are installed, the ~~absorption~~ dispersal trenches of each system alternate with each other and only one system operates at a given time.

Restrictive chemical material: Any chemical material that contains concentrations in excess of one part per hundred, by weight of any halogenated hydrocarbon chemical, aliphatic or aromatic, including, but not limited to trichloroethane, trichloroethylene, methylene chloride, tetrachoreoethlylene, halogenated benzenes and carbon tetrachloride, any aromatic hydrocarbon chemical, including but not limited to benzene, toluene and naphthalene; any phenol derivative in which a hydropsy group and two or more halogen atoms are bonded directly to a six-carbon aromatic ring, including but not limited to trichlorophenol or pentachloro-phenol; or acrolein, acrylonitrile or benzidene. Restrictive chemical material does not, however, include any chemical material that is biodegradable and is not a significant source of contamination of the groundwater of the State.

Restrictive soil layer: A soil horizon or zone within a soil profile that slows or prevents the downward or lateral movement of water.

Rock fragment: A rock fragment contained within the soil that is greater than two millimeter equivalent spherical diameter or that is retained on a two millimeter sieve.

Sand: See Soil texture.

Sand filter surface area: The area of the level plane section in the medium sand horizon of a conventional sand filter located two feet below the bottom of the filter material containing the pressurized distribution piping.

Sand filter system: The combination of septic tank or other treatment unit, dosing system with effluent pump and controls, or dosing siphon, piping and fittings, sand filter, and absorption facility used to treat and dispose of sewage.

Saprolite: Weathered material underlying the soil that grades from thoroughly decomposed rock to rock that has been weathered sufficiently so that it can be broken in the hands or cut with a knife. It does not include hard bedrock or hard fractured bedrock. It has rock structure, but behaves like soil. It is considered soil in determining soil depth.

Seasonal or temporary high groundwater table: The upper limit of the shallowest seasonal groundwater table that occurs in the soil. This zone may be determined by identification of soil drainage mottling or by wet-season monitoring. A high groundwater level that is not maintained for over two weeks, but is a temporary spike due to extreme rainfall, is not regarded as a seasonal high groundwater table.

Secondary Treatment: A process of wastewater treatment that is provided after primary treatment where small suspended solids and other organic materials undergo a biological process that removes them from the wastewater. Typically secondary treatment entails naturally occurring microorganisms given an accelerated amount of oxygen, thus promoting their metabolic digestion of organic pollutants in wastewater.

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Seepage bed: An absorption system having disposal trenches wider than three feet.

Seepage pit: A "cesspool" which has a treatment facility such as a septic tank ahead of it

Seepage trench system: A system with disposal trenches with more than six inches of filter material below the distribution pipe.

Septage: All sludge, scum, liquid and any other material removed from a septic tank or disposal field.

Septic tank: A watertight receptacle that receives the discharge of untreated wastewater, and is designed and constructed so as to permit settling of settleable solids from the liquid collection of the scum, partial digestion of the organic matter and discharge of the liquid portion into a disposal field.

Septic tank effluent: Primary treated wastewater discharged through the outlet of a septic tank.

Serial distribution: A method of distributing septic tank effluent between a series of ~~-~~dispersal ~~absorption~~ trenches so that each successive ~~absorption~~ trench receives septic tank effluent only after the preceding ~~absorption~~ trench~~es have~~ has become full to overflowing.

Setback distance: The nearest horizontal distance between a component of a disposal system and selected site features or structures.

Single-family dwelling unit: A structure or realty improvement intended for single-family use.

Site evaluation: The practice of investigating, evaluating and reporting basic soil and site conditions that apply to wastewater treatment and dispersal ~~disposal and disposal system design~~ in compliance with ~~this~~ code.

Site evaluator: A certified professional soil scientist (CPSS), registered civil engineer, certified engineering geologist, registered geologist, ~~or a~~ registered ~~sanitarian~~ environmental health specialist or other individual as approved by the Onsite Sanitation Division, that has ~~with~~ adequate knowledge and training in ~~small waste disposal~~ soil science pertaining to onsite wastewater disposal system designs ~~and soil science or other individuals approved by the onsite management district.~~ See also qualified designer.

Slope: The rate of fall or drop in feet per 100 feet of the ground surface, expressed as a percent.

Sludge: A relative dense suspension of wastewater solids that settle to the bottom of a septic tank, are relatively resistant to biological decomposition, and that collect in the septic tank over a period of time.

Small flow wastewater construction service: (1) The installation of onsite sewage disposal systems (including the placement of portable toilets, or any part thereof; or (2) The pumping out or cleaning of onsite sewage disposal systems (including portable toilets), or any part thereof; or (3) The disposal of material derived from the pumping out or cleaning of onsite sewage disposal systems (including portable toilets); or (4) Grading, excavating, and earth-moving work connected with the operations described in subsection (1) of this section, except streets, highways, dams, airports or other heavy construction projects and except earth-moving work performed under the supervision of a builder or contractor in connection with and at the time of the construction of a building or structure; or (5) The construction of a drain and sewage lines from five feet outside a building or structure to the service lateral at the curb or in the street or alley or other disposal terminal holding human or domestic sewage.

Soil: The collection of natural bodies on the earth's surface, in places modified or even created of earthy materials, containing living matter and capable of supporting plants out-of-doors.

Soil material: Soil as well as any naturally occurring unconsolidated mineral deposit that is not bedrock.

Soil permeability rating: That quality of the soil that enables it to transmit water or air, as outlined in the United States Department of Agriculture Handbook, Number 18, entitled Soil Survey Manual.

Soil profile: A vertical cross-section of the undisturbed soil showing the characteristic soil horizontal layers or soil horizons of the soil that have formed as a result of the combined effects of parent material, topography, climate, biological activity, and time.

Soil saturation: The state when all the pores in the soil are filled with water. Water will flow from saturated soils into an observation hole.

Soil structure: The naturally occurring arrangement, within a soil horizon, of sand, silt and clay particles, rock fragments and organic matter, that are held together in clusters or soil aggregates.

Soil texture: The amount of each soil separate in a soil mixture. Field methods for judging the texture of a soil consist of forming a cast of soil, both dry and moist, in the hand and pressing a ball of moist soil between thumb and finger. The major textural classifications are defined as follows:

1. Sand: Individual grains can be seen and felt readily. Squeezed in the hand when dry, this soil will fall apart when the pressure is released. Squeezed then moist, it will form a cast that will hold its shape when the pressure is released, but will crumble when touched.

2. Sandy loam: Consists largely of sand, but has enough silt and clay present to give it a small amount of stability. Individual sand grains can be readily seen and felt. Squeezed in the hand when dry, this soil will readily fall apart when the pressure is released. Squeezed when moist, it forms a cast that will not only hold its shape when the pressure is released, but will withstand careful handling. The cast formed of moist soil and be handled freely without breaking.

3. Silt loam: Consists of a moderate amount of fine grades of sand, a small amount of clay, and a large quantity of silt particles. Lumps in a dry, undisturbed state appear quite cloddy, but they can be pulverized readily, the soil then feels soft and floury. When wet, silt loam runs together in puddles. Either dry or moist, casts can be handled freely without breaking. When a ball of moist soil is pressed between thumb and finger, it will not press out into a smooth, unbroken ribbon, but will have a broken appearance.
4. Clay loam: Consists of an even mixture of sand, silt and clay, which breaks into clods or lumps when dry. When a ball of moist soil is pressed between the thumb and finger, it will form a thin ribbon that will readily break, barely sustaining its own weight. The moist soil is plastic and will form a cast that will withstand considerable handling.

5. Silty clay loam: Consists of a moderate amount of clay, a large amount of silt, and a small amount of sand. It breaks into moderately hard clods or lumps when dry. When moist, a thin ribbon or one-eight inch sustain its weight and will withstand gentle movement.

6. Silty clay: Consists of even amounts of silt and clay and very small amounts of sand. It breaks into hard clods or lumps when dry. When moist, a thin ribbon or one-eighth inch or less sized wire formed between thumb and finger will withstand considerable movement and deformation.

7. Clay: Consists of large amounts of clay and moderate to small amounts of sand. It breaks into very hard clods or lumps when dry when moist, a thin, long ribbon or one-sixteenth inch wire can be molded with ease. Fingerprints will show on the soil, and a dull to bright polish is made on the soil by a shovel.

These and other soil textural characteristics are also defined as shown in the United States Department of Agriculture Textural Classification Chart (Figure A.1) which is hereby adopted as part of these rules. This textural classification chart is based on the Standard Pipetter Analysis as defined in the United States Department of Agriculture, Soil Conservation Service Soil Survey Investigations Report No. 1.

Soil with rapid or very rapid permeability:

A. Soil which contains thirty-five percent or more of course fragments two millimeters in diameter or larger by volume with intersectional soil of sandy loam texture or coarser as defined herein and as classified in Soil Textural Classification Chart (Figure A.1).

B. Coarse textured soil (loamy sand or sand as defined herein and as classified in Soil Textural Classification Chart).

C. Stones, cobbles, gravel and rock fragments with too little soil material to fill interstices larger than 1 mm in diameter.

~~**Strength of wastewater:** The concentration of pollutants in wastewater as measured by BOD_5, COD, and TSS.~~

Subsurface sewage treatment: The physical, chemical or bacteriological breakdown ~~and aerobic treatment~~ of wastewater through aerobic treatment in the unsaturated zone of the soil~~ above any temporarily perched groundwater body~~.

Temporary high ~~or perched~~ groundwater table: The upper surface of a saturated zone that exists only on a seasonal ~~or periodic~~ basis, typically during winter and/or early spring. ~~Perched water typically occurs immediately above a restrictive soil horizon. Like a permanent groundwater table, the~~ The elevation of a temporary high groundwater table may fluctuate but is only regarded as significant for dispersal field design if it is present more than a two week period. ~~However, a temporary groundwater table and associated saturated zone will dissipate (dry up) for a period of time each year.~~

Total suspended solids (TSS): Solids in wastewater that can be removed readily by standard filtering procedures in a laboratory and reported as milligrams per liter (mg/L).

Variance: Written authorization issued by the Town of Paradise that permits some act or condition otherwise impermissible in the Onsite Wastewater Management Zone.

Value: The relative lightness or intensity of a color, one of the three variable of soil color defined within the Munsell system of classification.

Vault Privy: An alternative toilet that retains human waste in a sealed vault.

Wastewater: Any liquid waste containing animal or vegetable matter in suspension or solution or the water carried wastes from the discharge of water closets, laundry tubs, washing machines, sinks, dishwashers, or other source of water carried wastes of human origin. This term specifically excludes industrial, hazardous or toxic wastes and materials.

Wastewater discharge requirements: Wastewater discharge requirements are issued by the California Regional Water Quality Control Board, Central Valley Region, for discharge of wastewater to the environment.

Wastewater strength: The concentration of pollutants in wastewater as measured by BOD_5 (Biochemical Oxygen Demand), TSS (Total Suspended Solids), Nitrogen compounds and FOG (Fats, Oils and Grease). High strength wastewater has a 30-day average concentration of BOD greater than 300 mg/l and/or TSS greater than 330 mg/l and/or FOG concentration greater than 100 mg/l.

Water well: A bored, drilled or driven shaft or dug hole, that extends below the seasonal groundwater table and is used as a drinking water supply.

APPENDIX A
SOIL PROFILE TERMINOLOGY

A. General

The relative amounts of the sizes of mineral particles in a soil are referred to as soil texture. All soils are comprised of sand, silt and clay. The soil texture classification set forth in this section is based upon the U.S. Department of Agriculture twelve soil textural classes. However, for the purpose of this code, a site evaluator can adequately describe soil texture based upon the twelve general soil textural classes described in Figure A-1.

B. Mottling

Mottling terms: The site evaluator shall estimate the abundance, size, and contrast of mottling using the volume estimation charts provided in Munsell charts and using the following terms in (Mottle abundance) and (Mottle contrast):

- Mottle abundance: Mottle abundance means the percentage of the exposed soil surface occupied by mottles and is described as follows:
- Few: Mottle abundance is "few" where the mottles color occupies less than two percent of the exposed soils surface
- Common: Mottle abundance is "common" where the mottles color occupies from two to twenty percent of the exposed soil surface.
- Many: Mottle abundance is "many" where the mottles color occupies more than twenty percent of the exposed surface.

Mottle contrast: Mottle contrast means the difference in color between the soil mottle and the background color of the soil and is described as follows:

- Faint: Mottle contrast is "faint" where mottles are evident but only recognizable under close examination.
- Distinct: Mottle contrast is "distinct" where mottles are readily seen but not striking.
- Prominent: Mottle contrast is "prominent" where mottles are obvious and mottles are one of the outstanding features of the soil horizon.

FIGURE A.1

C. Soil Texture

A standard procedure to report soil texture is presented in this section.

Sandy loam texture: The texture is "sandy loam" where the soil contains much sand, but has enough silt and clay to make it somewhat sticky. Individual sand grains can be readily seen and felt.

- Dry: Dry soil aggregates are easily crushed. Squeezed when dry, it will form a cast that will fall apart. Very faint velvety feeling initially but as rubbing is continued, the gritty feeling of sand dominates.

- Moist: If squeezed when moist, a cast can be formed that will bear careful handling without falling apart. Does not form a ribbon between the thumb and forefinger.

Loam texture: The texture is "loam" where the soil has a relatively even mixture of sand, silt and clay. A loam feels somewhat gritty, yet fairly smooth and highly plastic.

- Dry: Dry soil aggregates are crushed under moderate pressure; clods can be quite firm. When pulverized, loam has a velvety feel that becomes gritty with continued rubbing.

- Moist: Squeezed when moist, it will form a cast that can be handled quite freely without breaking. Very slight tendency to ribbon between the thumb and forefinger. The ribbon surface is rough.

Silt loam texture: The texture is "silt loam" where the soil is medium-textured soil.

- Dry: Dry soil aggregates are firm but may be crushed under moderate pressure. Clods are firm to hard. Silt loam may appear cloddy, but the clods are readily broken. It will form casts that can be handled freely without breaking. When pulverized, smooth, flour-like feel dominates.

- Moist: Squeezed when moist, it will form casts that can be handled freely without breaking. Slight tendency to ribbon between the thumb and forefinger. The ribbon has a broken effect or rippled appearance.

Silt texture: The texture is "silt" where the soil is medium textured and feels floury when dry and nonsticky when moist.

Silty clay loam: The texture is "silty clay loam" when the soil is a fine-textured soil.

- Dry: Dry soil aggregates are very firm. Silty clay loams usually breaks into clods or lumps that are hard when dry.

- Moist: Squeezed when moist, it will form a thin ribbon that will break readily, barely sustaining its own weight. The moist soil is plastic and will form a cast that will stand

considerable handling. When hand kneaded it does not crumble readily, but tends to become a heavy, compact mass. It is sticky when moist.

Silty clay texture: The texture is "silty clay" where the soil is fine-textured.

- Dry: Usually forms very hard clods or lumps when dry.

- Moist: Squeezed when moist, it will form a long flexible ribbon. A silty clay soil leaves a "slick" surface when rubbed with a long stroke and firm pressure. Silty clay tends to hold the thumb and forefingers together, due to its stickiness. When placed between the teeth silty clay has a smooth slick feeling.

- Wet: Quite plastic when wet. It can be very sticky when wet.

D. Rock Fragments

Intent: This section provides a standard procedure to modify the soil texture description based upon the size of rock fragments and the volume percentage of rock fragments in the soil profile and on the surface of the site.

General: Where the soil profile contains fifteen to thirty-five percent by volume of rock fragments, the soil texture description shall be modified using the appropriate adjectives set forth in Soil Survey manual.

Terms for reporting rock fragment size: The rock fragment size terms for modifying the soil texture description are as follows:

Gravelly: "Gravelly" is used where the rock fragments range from 0.1 to 3.0 inches in diameter (i.e. gravelly sandy loam, gravelly loam, etc.)

Cobbly: The "cobbly" is used where the rock fragments range from 3 to 10 inches in diameter (i.e. cobbly sandy loam, stony loam, etc.).

Bouldery: "Bouldery" is used where rock fragments are larger than 10 inches in diameter.

E. Terms for Reporting the Percentage of Rock Fragments

The rock fragment abundance terms for modifying the soil texture description are as follows:

Very: Where the soil profile contains thirty-six to sixty percent by volume of rock fragments, the word "very" is used along with the appropriate rock fragment size term is to be incorporated with the textural name (i.e. Very gravelly sandy loam, very cobbly sandy loam, very stony sandy loam, etc.)

Extremely: Where the soil profile contains sixty-one to ninety percent by volume of rock fragments, the word "extremely" is used along with the appropriate rock fragment size terms is to be

incorporated with the textural name (i.e. extremely gravelly sandy loam, extremely cobbly sandy loam, extremely stony sandy loam, etc.).

Surface stones: Where the surface of the site contains more than fifty percent by area of large stones if not proposed to be removed, the site shall be considered excessively coarse and require the disposal field to be the stones.

F. Soil Consistence

Intent: This section provides a standard procedure to report soil consistence in the field. For the purposes of this code, however, consistence describes the resistance a soil horizon presents to a pocket penetrometer. This is described as "consistence in place". It is not unusual for a soil to be described as "firm in place" but to be friable when crushed between the thumb and forefinger. The soil that is firm in place will restrict the downward movement of septic tank effluent, even though it may be friable when removed. It is important to note that dry soils may exhibit greater resistance to a pocket penetrometer than when moist. If possible, soil consistence should be measured in a moist state. Soil consistence shall be described based upon the following:

Loose soil: The consistence is "loose" where a soil horizon has a single grain structure and offers resistance to a pocket penetrometer of less than 0.25 ton per square foot. Soil does not adhere when pressed together.

Friable soil: The consistence is "firm" where a soil horizon has a platy, prismatic or massive structure. Resistance to a pocket penetrometer is 0.75 to 1.5 ton per square foot. Soil coheres when pressed together.

Firm soil: The consistence is "firm" where a soil horizon has a platy, prismatic or massive structure. Resistance to a pocket penetrometer is 0.75 to 1.5 ton per square foot.

Very firm soil: The consistence is "very firm" where a soil horizon has a platy, prismatic or massive structure. Resistance to a pocket penetrometer is greater than 1.5 ton per square foot.

Cemented soil: The consistence is "cemented" where a soil horizon has a hard consistence caused by some cementing substance other than clay minerals, such as carbonate, silica, or oxide or salts or iron and aluminum. Cementation is usually altered very little by wetting.

G. Soil Structure

Intent: This section provides a standard procedure to define soil structure. Soil structure refers to the shape of the natural soil aggregates. Soil structures are described as follows:

Spherical structure: The structure is "spherical" where the soil aggregates have more or less equal dimensions and lack sharp corners, sharp edges or well defined faces. This term includes crumb and granular structure as defined by the U.S. Department of Agriculture.

Subangular structure: The structure is "subangular blocky" where soil aggregates have more or less equal dimensions and possess well defined flat or somewhat curved faces, sharp corners and sharp edges.

Prismatic structure: The structure is "prismatic" where soil aggregates have one axis distinctly longer than the other two and are oriented with the long axis in an upright vertical position.

Platy structure: The structure is "platy" where soil aggregates have one axis distinctly shorter than other two and are oriented with the short axis in an upright vertical position.

Massive structure: The structure is "massive" where the soil consists of dense, compact mass and shows no recognizable natural soil aggregates or structural faces.

Single grain structure: The structure is "single grain" where the soil consists of loose individual sand grains that will not bind together into recognizable soil aggregates.

H. Saprolite

Saprolite is derived from a German word meaning rotten rock. It is soft, highly weathered material that many thousands of years ago was bedrock. Today it may have somewhat the appearance of bedrock, however it behaves like soil in treating effluent. It can be crushed with finger pressure, has clay skins, has moderate permeability, and usually contain roots. In this manual, saprolite is considered as soil.

I. Bedrock

Intent: This section provides a standard procedure to recognize the presence of bedrock. Bedrock affects the ability of a system to treat septic tank effluent, thus plays a significant role in the performance of a disposal system.

Recognition criteria: Criteria for the recognition of bedrock shall include, but shall not be limited to any solid and continuous body of rock, with or without fractures.

J. Excessively Course Soil Horizons

Intent: This section provides a standard procedure for the recognition and reporting of excessively coarse soil horizons. Excessively coarse soil horizons provide less opportunity for the treatment of septic tank effluent and thus, these soil horizons play a significant role in the performance of a disposal system.

Recognition criteria: Criteria for the recognition of excessively coarse soil horizons are as follows:

Greater than fifty percent rock fragments: Soil horizons that have a rock fragment content greater than fifty percent by volume shall be considered excessively coarse.

Coarse to very coarse sands: Sandy textured soil horizons that are composed primarily of coarse to very coarse sand (from one-half to two millimeters in diameter) and lack detectable amounts of two percent or more) fines as defined by U.S. Department of Agriculture.

If in doubt: When doubt exists as to whether a soil horizon should be considered excessively coarse, the soil horizon shall be considered excessively coarse.

K. Hydraulically Restrictive Soil Horizons

Intent: This section provides a standard procedure to recognize and report hydraulically restrictive soil horizons. Hydraulically restrictive soil horizons slow down the vertical movement of septic tank effluent and thus these soil horizons play a significant role in the performance of a disposal system.

Recognition criteria: Criteria for recognition of hydraulically restrictive soil horizons shall include, but not be limited to any soil horizon which can not accept two gallons per square foot□day.

Cemented horizons: Any cemented soil horizon that remains hard when soaked in water shall be considered hydraulically restrictive.

L. Seasonal Groundwater Table

Intent: This section provides a standard procedure to recognize seasonal groundwater tables.

General: The two most widely recognized features that reflect prolonged wetness in soils when soil temperatures are above biologic zero are gleying and mottling. Simply described, gleyed soils are predominately neutral gray in color and occasionally greenish or bluish gray.

Continuous saturated soils: In gleyed soils, the distinctive colors result from a process known as gleization. Prolonged saturation of mineral soil converts iron from its oxidized (ferric) form to its reduced (ferrous) state. Soils that are always saturated are uniformly gleyed throughout the saturated zone. These soils often show evidence of oxidizing conditions only along root channels.

Alternately saturated and aerated: Soils that are alternately saturated and aerated during the year are usually mottled in part of the soil that is seasonally wet. Mottles are spots or blotches of different colors or shades of colors interspersed with the dominant (matrix) color. The abundance, size and color of the mottles usually reflect the duration of the saturation period. Mineral soils predominantly grayish with brown or yellow with gray mottles are saturated for shorter periods. Mineral soils that are never saturated are usually bright colored and are not usually mottled.

Recognition criteria: Criteria for the recognition of seasonal groundwater table shall include, but not be limited to any soil horizon within or below a soil profile that exhibits common drainage mottling, shall be considered a seasonal groundwater table. The upper limit of the seasonal groundwater table shall be determined by one of the following means:

Common mottling: The highest level at which common drainage mottling is observed.

M. Disturbed Ground

Intent: This section provides a standard procedure to recognize disturbed ground.

General: When placement of a disposal field is proposed in an area of disturbed ground, the type and depth to the most limiting soil horizons as well as a variety of additional factors must be considered. Types of soil disturbance include, but are not limited to, filled areas, excavated areas, re-graded areas, artificially drained areas and pre-existing disposal fields.

Recognition criteria: A site shall be considered disturbed ground when any of the following conditions are present:

Displaced or man-made objects: Displaced or man-made objects, such as tree stumps, branches, plant stems, leaves, building debris or trash of man-made origin, are observed below the ground surface in the profile pits.

Unexplained soil horizons: Soil horizons are absent or mixed in a manner that cannot be explained as a result of natural processes.

Buried "A" or "O" horizons: Observation holes reveal A-horizons or O-horizons that are buried by layers of soil or other material. (Note: Natural buried soil horizons may occur.)

Mounds or depressions: Mounded areas or depressions in the land surface are observed that do not conform with the surrounding topography and that show signs of recent disturbance such as lack of vegetation, weedy vegetation, severe erosion, wheel ruts, etc.

Subsurface drains: Subsurface drains or their remnants are observed in profile pits or in the outlets of drains are observed at the surface.

Disposal systems: Components of an existing disposal system, or remnants of an abandoned disposal system are present below the site of a proposed first time disposal system.

Determination of the pre-existing natural ground surface: When evidence is found that the surface of the ground may have been modified by a disturbance such as addition of fill material, removal of soil horizons or regrading, the pre-existing natural ground surface shall be identified based on the following criteria:

Buried "A" or "O" horizons: When a buried A-horizon or O-horizon is present, the pre-existing natural ground surface shall be taken as the top of the A-horizon or the bottom of the O-horizon.

Extrapolation: When a buried A-horizon or O-horizon is not present, the level of the pre-existing natural ground surface shall be determined by extrapolation from adjacent areas beyond the limit of soil disturbance. When this method is relied upon, the nature of the pre-existing topography as well as the nature of the ground disturbance shall be described, using topographic contour maps and soil profiles where appropriate.

Suitability of disturbed ground: In cases where disturbed soil or other fill material are present at the site, the suitability of this material shall be evaluated based upon the following criteria and characteristics, fill or disturbed soils must be relatively free of foreign materials and may contain only trace amounts of the following materials or any other materials that are subject to disintegration or change in volume in order to be considered suitable: tree stumps, plant stems, leaves, food or animal remains or wastes, wood chips, sawdust or any organic materials that may be subject to decay; trash, discarded furniture, buildings or demolition debris or any bulky objects containing large voids or subject to collapse or reorientation; or cans, bottles, drums or any containers that are empty or filled with liquids.

Existing subsurface groundwater drains: Ground containing subsurface groundwater drainage systems or the remnants of abandoned subsurface groundwater drainage systems is unsuitable for the installation of a disposal field, unless the groundwater drains are removed, the outlets of the groundwater drainage system are permanently sealed, or adequate separation can be maintained.

N. Soil Color

Intent: To provide a standard procedure for the evaluation of soil colors.

General: Soil colors often reveal much about a soil's wetness. Site evaluators examining the soil shall report the approximate soil color in accordance with the Munsell soil color chart. The standardized Munsell soil colors are identified by three components: hue, value and chroma. The hue is related to one of the main spectral colors: red, yellow, green, blue or purple, or various mixtures of these principal colors. The value refers to the degree of lightness, while the chroma notation indicated the color strength or purity. In the Munsell soil color book, each hue has its own page, each of which is further subdivided into units of value (on the vertical axis) and chroma (on the horizontal axis). Because accurate reproductions of soil colors are expensive, the Munsell soil color book contains a limited number of hues, values and chromas. The soil matrix or mottle colors are determined by comparing the soil with individual color chips in the soil color book.

Recognition criteria: Color is best determined in soils that are or have been moistened. The colors of the topsoil are valuable in determining the drainage condition of a site.

Gleying: Gleying (bluish, greenish, or grayish colors) immediately below the A-horizon is an indication of a saturated soil. Gleying can occur in both mottled and unmottled soils. Gleyed soil conditions can be determined by using the gley page of the "Munsell Soil Color Charts" (Caution: Gleyed conditions normally extend throughout saturated soils. Beware of soils with gray E-horizons due to leaching and not to saturation; these latter soils can often be recognized by bright-colored layers below the E-horizon.

Matrix chromas of two or less: Matrix chromas of two or less are considered low chromas and are often diagnostic of soils saturated for long periods. They are used to establish water tables.

Iron and manganese concretions: During the oxidation-reduction process, iron and manganese in suspension are sometimes segregated as oxides into concretions or soft masses. Manganese

concretions are usually black or dark brown, while iron concretions are usually yellow, orange or reddish brown.

Sandy and gravelly soils: Soil color in saturated sandy soils may not follow the color patterns just described.

Bright colored mottles and a low chroma matrix: Soils that have brightly colored mottles and a low chroma matrix are indicative of alternating saturated and unsaturated soil conditions.

APPENDIX B
GROUNDWATER MONITORING GUIDELINES

The Onsite Sanitary Official may require a groundwater level monitoring program as part of the site evaluation process to ensure adequate separation between the bottom of the ~~disposal~~ dispersal trenches and the water table. Monitoring shall be done at a time of the year when the highest seasonal groundwater table occurs. Some sites are subject to significant year to year fluctuations in the highest seasonal groundwater table.

Sites to be monitored shall be carefully checked for groundwater drainage tile and open ditches that may have altered natural seasonal groundwater table. Where such factors are involved, information on the location, design, ownership and maintenance responsibilities for such groundwater drainage systems shall be provided. Documentation shall be provided to show that the groundwater drainage network has an adequate outlet and will be maintained.

The Onsite Sanitary Official shall witness the excavation and installation of the piezometers. The Onsite Sanitary Official may require a maximum of fifteen days prior to written notice for the purpose of witnessing the location and installation. The Town may waive the witnessing requirements. Failure of the Town personnel to be present when fifteen days prior written notice shall be construed to be a waiver of witnessing requirements. The piezometers ~~tubes~~ shall be installed where possible with an auger rather than a backhoe. Larger backhoe pits give a false high reading in fine textured soils. Illustrations of typical piezometer installations are shown in Figures B.1., ~~and~~ B.2., and B.3.

Installation shall be made on or before November 1. Groundwater level observations shall be made thereafter every fourteen days or less until April 1, or until the site is determined by the Onsite Sanitary Official to be unacceptable, whichever comes first.

When monitoring discloses that a site is acceptable, data giving test locations, ground elevations at the monitoring wells, soil profile descriptions, dates observed, depths to observed water tables and soil water temperatures for those dates as well as supporting data indicating that monthly precipitation amounts (see Table B-1) are within the normal range shall be submitted to the Onsite Sanitary Official in a written report.

TITLE B-1

TEN YEAR RAINFALL FOR BUTTE COUNTY
INTENSITY IN INCHES PER HOUR

Mean Annual Rainfall	One Day	Twelve Hours	Six Hours	Three Hours	Two Hours	Sixty Min.	Thirty Min.	Fifteen Min.	Ten Min.	Five Min.
16	0.08	0.13	0.17	0.24	0.30	0.44	0.58	0.83	1.02	1.39
18	0.09	0.14	0.20	0.27	0.34	0.50	0.66	0.93	1.15	1.56
20	0.10	0.16	0.22	0.31	0.37	0.55	0.73	1.03	1.27	1.74
22	0.11	0.17	0.24	0.34	0.41	0.61	0.80	1.14	1.40	1.91
24	0.12	0.19	0.26	0.37	0.45	0.67	0.87	1.24	1.53	2.08
26	0.13	0.20	0.28	0.40	0.49	0.72	0.95	1.34	1.66	2.26
28	0.14	0.22	0.30	0.43	0.52	0.78	1.02	1.45	1.78	2.43
30	0.15	0.24	0.33	0.46	0.56	0.83	1.09	1.55	1.91	2.61
32	0.16	0.25	0.35	0.49	0.60	0.89	1.17	1.65	2.04	2.78
34	0.17	0.27	0.37	0.52	0.64	0.94	1.24	1.76	2.17	2.95
36	0.18	0.28	0.39	0.55	0.67	1.00	1.31	1.86	2.29	3.13
38	0.19	0.30	0.41	0.58	0.71	1.05	1.38	1.96	2.42	3.30
40	0.20	0.31	0.43	0.61	0.75	1.11	1.46	2.06	2.55	3.47
42	0.21	0.33	0.46	0.64	0.79	1.17	1.53	2.17	2.67	3.65
44	0.22	0.34	0.48	0.67	0.82	1.22	1.60	2.27	2.80	3.82
46	0.23	0.36	0.50	0.70	0.86	1.28	1.68	2.37	2.93	3.99
48	0.24	0.38	0.52	0.73	0.90	1.33	1.75	2.48	3.06	4.17
50*	0.25	0.39	0.54	0.76	0.93	1.39	1.82	2.58	3.18	4.34
52	0.26	0.41	0.56	0.79	0.97	1.44	1.89	2.68	3.31	4.52
54	0.27	0.42	0.59	0.82	1.01	1.50	1.97	2.79	3.44	4.69
56	0.28	0.44	0.61	0.86	1.05	1.55	2.04	2.89	3.57	4.86
58	0.29	0.45	0.63	0.89	1.08	1.61	2.11	2.99	3.69	5.04
60	0.30	0.47	0.65	0.92	1.12	1.66	2.19	3.10	3.82	5.21
62	0.31	0.49	0.67	0.95	1.16	1.72	2.26	3.20	3.95	5.38
64	0.32	0.50	0.69	0.98	1.20	1.78	2.33	3.30	4.08	5.56
66	0.33	0.52	0.72	1.01	1.23	1.83	2.40	3.41	4.20	5.73

Mean Annual Rainfall	One Day	Twelve Hours	Six Hours	Three Hours	Two Hours	Sixty Min.	Thirty Min.	Fifteen Min.	Ten Min.	Five Min.
68	0.34	0.53	0.74	1.04	1.27	1.89	2.48	3.51	4.33	5.91
70	0.35	0.55	0.76	1.07	1.31	1.94	2.55	3.61	4.46	6.08
72	0.36	0.56	0.78	1.10	1.35	2.00	2.62	3.72	4.59	6.25
74	0.37	0.58	0.80	1.13	1.38	2.05	2.70	3.82	4.71	6.43
76	0.38	0.60	0.82	1.16	1.42	2.11	2.77	3.92	4.84	6.60
78	0.38	0.60	0.83	1.17	1.43	2.13	2.79	3.95	4.88	6.65
80	0.39	0.62	0.85	1.20	1.47	2.18	2.86	4.06	5.00	6.82
82	0.40	0.63	0.87	1.23	1.51	2.23	2.93	4.16	5.13	6.99
84	0.41	0.65	0.90	1.26	1.54	2.29	3.00	4.26	5.25	7.16
86	0.42	0.66	0.92	1.29	1.58	2.34	3.08	4.36	5.38	7.33
88	0.43	0.68	0.94	1.32	1.62	2.40	3.15	4.46	5.50	7.51
90	0.44	0.69	0.96	1.35	1.65	2.45	3.22	4.56	5.63	7.68

***** PARADISE STATISTICS

The normal annual precipitation varies from approximately thirty-two inches at the lower elevations of the town limits to approximately sixty-four inches at the higher elevations. This rainfall is concentrated mainly in the months of December, January and February with storms of generally smaller intensity occurring in October, November, March and April. Precipitation is generally in the form of rainfall with only one or two significant snowfalls per year.

FIGURE B.1

FIGURE B.2

APPENDIX C
HYDRAULIC TESTING OF SOIL

The Onsite Sanitary Official may require hydraulic testing of disposal area soils as part of the site evaluation process. The hydraulic tests shall either be a percolation test, infiltration test, or absorption test, as described below.

A. Percolation Test

1. Test Procedure [See note 61]

~~a. Construct three holes, six-inch diameter, spaced over the area to be considered for the absorption field and repair area.~~

~~b. The depth of the hole should be the maximum depth of the proposed disposal trenches.~~

~~c. Carefully pick the surface of the hole to remove all smeared surfaces.~~

~~d. Place two inches of pea gravel in the bottom of the hole.~~

~~e. Place a four-inch perforated pipe in the center of the hole.~~

~~f. Place pea gravel around the pipe.~~

~~g. Fill hole to the top of four-inch pipe with water the night before the test.~~

~~h. The next morning, fill water to top of the four-inch pipe. Allow water to drain.~~

~~i. Fill to a four-inch mark above Point A shown on Figure C.1.~~

~~j. Measure the time it takes for the water level to drop four inches.~~

~~k. Repeat Steps i and j five times.~~

~~l. Report rate of drop in min/in. Adjust rates to compensate for the volume of gravel in the hole. An example is shown below.~~

~~m. If test cannot be repeated five times, conclude test after five hours.~~

a. Construct 4 holes, six-inches in diameter, 2 in the area to be considered for the absorption field and 2 in the replacement absorption field area. (A lesser amount may be approved by the Town Onsite Sanitation Division upon approval).

b. The depth of the hole shall be the maximum depth of the proposed absorptive surface whether it is trenches or infiltrative bed.

c. Carefully scrape the surface of the hole to remove all smeared surfaces. Remove the scrapings.

d. Place 2 inches of pea gravel in the bottom of the hole.

e. Place a four-inch perforated pipe in the center of the hole. The perforated pipe shall be long enough to store at least 10 vertical inches of water above the gravel at the bottom of the hole.

f. Place pea gravel around the outside of the pipe to a height of at least 10 inches above the gravel at the bottom of the hole.

g. Begin presoaking the hole a minimum of 18 and maximum of 24 hours before the actual percolation test is performed. Do this by keeping the pipe full of water 10 inches above the gravel at the bottom of the hole for at least 4 hours. After 4 hours the hole should be allowed to drain naturally.

h. 18 to 24 hours after the presoak began, the percolation testing must be performed. Percolation testing must not be performed if presoaking has not been completed.

i. Begin the percolation testing by filling the pipe 6 inches above the gravel (Point A shown on Figure C.1).

j. Measure the distance that the water level drops in 30 minutes. After recording this distance refill, to the 6 inch mark. Continue measuring the water drop in 30 minute intervals for 3 hours. If all 6 inches drops out before 30 minutes, this is a fast percolation rate. If this occurs refill and measure the drop every 10 minutes over a one-hour testing period. Always refill to the 6 inch mark after each reading.

k. Continue this process for 3 hours (or 1 hour for a fast 'perk' as described above), until the last 2 measurements are within 1/8th an inch of each other or until 5 hours have elapsed, (or 2 hours for a fast 'perk').

l. Calculate the percolation rate in min/in. using the average of the last 2 measurements taken. Adjust the rate to compensate for the volume of gravel in the hole by using a 1.6 multiplication factor on the calculated percolation rate.

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FIGURE C.1

2. Example of Gravel Volume Compensation Calculations

a. Calculate the volume of the hole without gravel or pipe.

$$Y = \pi r^2 h$$

where: y = volume of hole without gravel (ft^3)
π = 3.14
r = hole radius (0.25 ft)
h = depth of infiltration zone (1 ft)

$y = 0.196\ ft^3$ for gravel filled percolation test

b. Calculate the volume of the 4 in. pipe

$$Vp = \pi r_p^2\ hp$$

where: V_p = volume of pipe (ft^3)
r_p = radius of pipe (0.17 ft)
h_p = depth of pipe in infiltration zone (0.83 ft)

$V_p = 0.075\ ft^3$ for gravel filled percolation test

c. Calculate the volume of the void space in the gravel

$$Vg = (Y-Vp)n$$

where: Vg = volume of gravel (ft^3)
n = gravel porosity (0.40)

$Vg = 0.048\ ft^3$ for gravel filled percolation test

d. Calculate the volume of the void space with the pipe and gravel in place.

$$x = Vp + Vg$$

$x = 0.123\ ft^3$ for gravel filled percolation test

e. Calculate the adjustment factor to compensate for the gravel.

$$A.F. = \frac{Y}{X}$$

where: A.F. = adjustment factor

A.F.= 1.6

f. Multiply the test results (min/in.) by the adjustment factor to compensate for the gravel in the hole.

B. Infiltration Test

1. General Test Procedure [See note 62]

   a. Carefully drive ~~ten-twenty-four~~ a 20 to 24 inch diameter steel ring ~~three-quarter~~ 2 inches into the soil surface as shown in Figure C.2. Make sure the soil surface has been scraped clean of loose duff and organic material.

   b. Place a small board or rock to act as a splash plate.

   c. Begin presoaking the surface a minimum of 18 and maximum of 24 hours before the actual infiltration testing is performed. Do this by keeping the ring full of water above the bottom of the hole, for at least 3 hours. After 3 hours the hole should be allowed to drain naturally. ~~water to ring keeping water level one inch or so above surface for thirty minutes.~~

   d. On the next day the testing shall begin. Pre-soak one more time by adding water to the ring, keeping the level at least one inch above the surface for 30 minutes. After ~~thirty minutes of soaking~~ this second pre-soak, begin measuring ~~measure~~ the amount of water level drop in 30 minute intervals.~~time required for water to drop one inch~~. If rates are very rapid~~,~~ measure the amount of drop every 15 minutes. ~~add a known quantity of water and determine the amount of time required for the soil to absorb the water.~~

   e. Continue to measure the rate of drop ~~over~~ for a minimum ~~two~~2-hour period and until the last 2 readings indicate a stabilized infiltration rate~~.~~ Measurements are done in inches and converted to gallons.

   f. Report results in gal/ft^2/-hr.

2. Test Procedure for Weathered Bedrock

   Follow the same steps as listed above, except dig a basin one-half inch into the bedrock instead of using the infiltration rings. Carefully pick the surface and remove all loose soil.

C. Absorption Test

An Absorption test is a method of determining the capacity of a site to accept the daily wastewater flow. It consists of constructing a short segment of a disposal trench, maintaining water in the trench for several days, and then excavating the soil to determine where the water has traveled and how much area was required to absorb the water. A typical absorption test is illustrated in Figure C.~~3~~2. A shallow trench of adequate length (six to ten feet) is excavated in the location where the actual disposal field trenches are to be placed. The bottom and sidewalls of the trench are picked to remove any smeared soil. A wooden box is placed in the trench and clean gravel is placed around the box. A float is installed in the box to maintain a constant head of water. Water applied to the trench is metered so that an accurate accounting can be

maintained. The trench is then filled with water to a given height and the water level is maintained at that height throughout the test period (typically two to six days). As water is applied to the trench, a portion of the water flows vertically. Another portion water moves laterally. To determine the acceptance rate of the underlying soil strata, the horizontal extent to which the water spreads under saturated flow conditions is defined. The extent of the spread (or plume) is cross section area through which flow takes place, the total water applied, the water remaining in the trench, in the soil column above the area defined by the plume, and in the capillary fringe, the soil acceptance rate and the saturated coefficient of permeability can be determined.

Absorption tests shall be conducted by a qualified designer. A thorough knowledge of soils and soil hydraulics is required to accurately interpret the results.

FIGURES C.2 AND C.3 (TWO FIGURES ON ONE PAGE)

APPENDIX D
SURFACE AND GROUNDWATER MONITORING PROGRAM

The following surface and groundwater monitoring program is recommended for the Town of Paradise Onsite Wastewater Management Zone.

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A. Surface Water

- Collect and analyze surface water samples ~~bimonthly~~ semi-annually from all ~~twenty-two~~ sampling stations for total coliform, fecal coliform~~, fecal streptococcus,~~ and nitrate. ~~Carry this sampling program through the dry season of 1992 (ie. July, September, November 1992) then re-evaluate the monitoring program for on-going operations of the Onsite Wastewater Management Zone.~~

- Collect additional samples ~~upstream of stations 16S and 33S~~ as needed to more accurately determine sources of bacterial pollution if any are indicated from the original sampling set. Analyze for all surface water parameters listed above.

- Compile all analytical results into a database for evaluation of long-term trends in water quality.

B. Groundwater Monitoring

- Disinfect and purge all monitoring wells prior to any further analyses. See Figure D-1 for Typical Groundwater Monitoring Well.

- Collect samples from the existing private wells and monitoring wells on a semi-annual basis.

- Analyze groundwater samples for total coliform, fecal coliform and nitrate.

- Continue to record depth to groundwater in each well prior to purging and record the pH, temperature and specific conductance of the groundwater with a properly calibrated field instrument.

FIGURE D.1

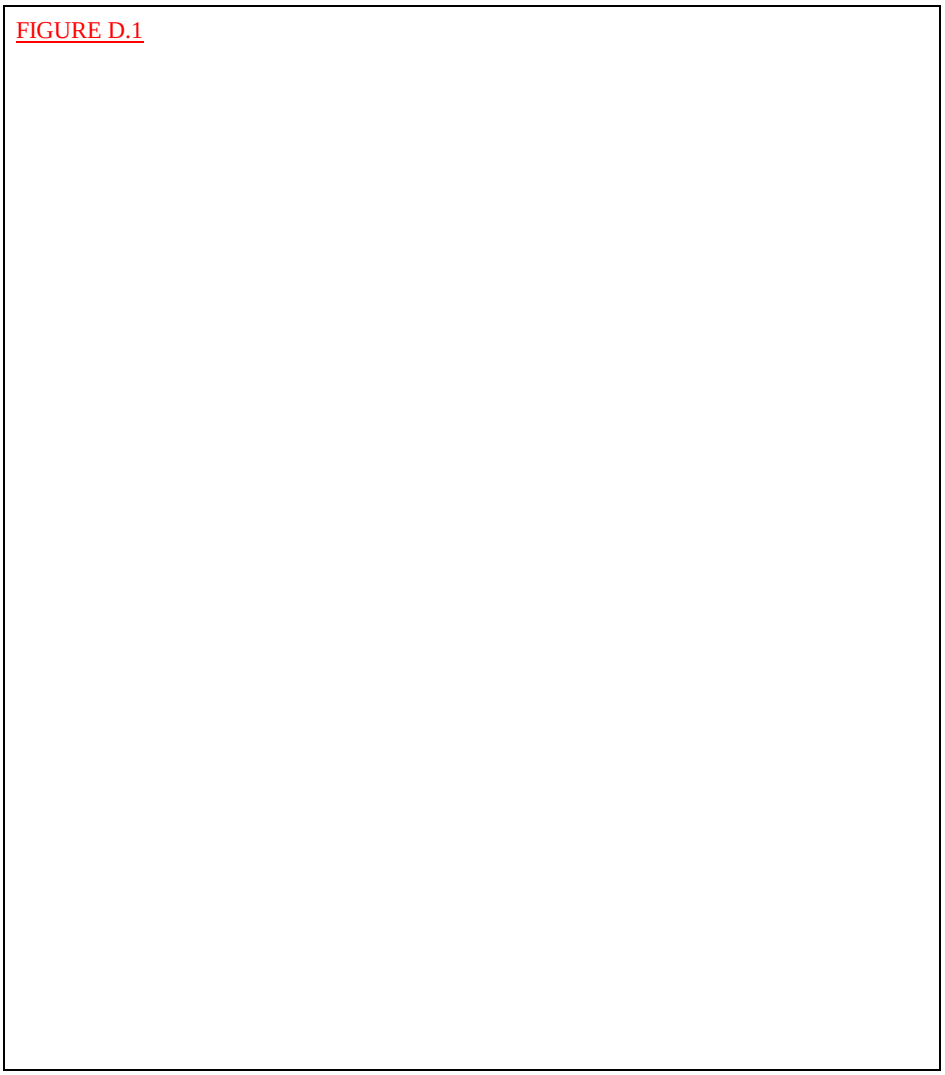

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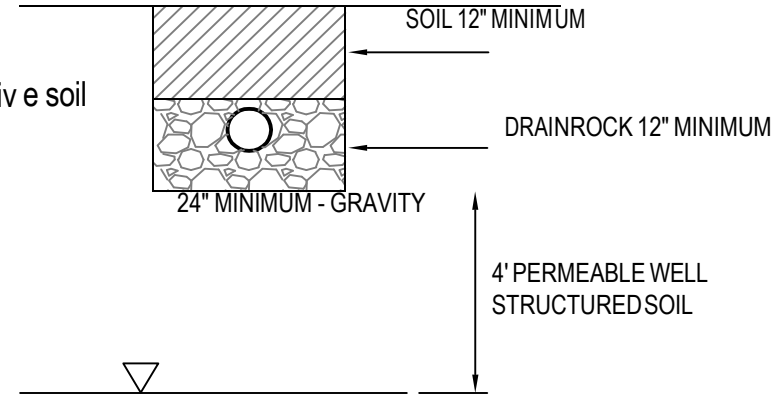
Exhibit "B"

Town of Paradise Manual for the Onsite Treatment of Wastewater

Figure revisions

PRIMARY TREATMENT

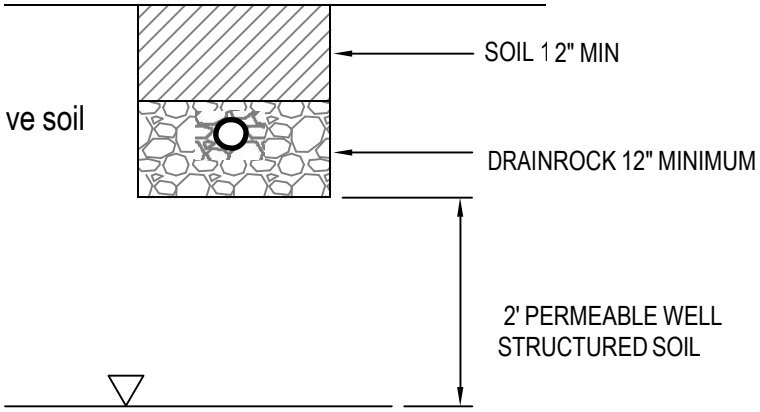
1. Maximum trench depth is 48" into nativ e soil
2. Maximum drain rock depth is 30"



MAXIMUM HEIGHT OF TEMPORARY
HIGH GROUNDWATER OR
SOIL/ROCK RESTRICTIVE LAYER

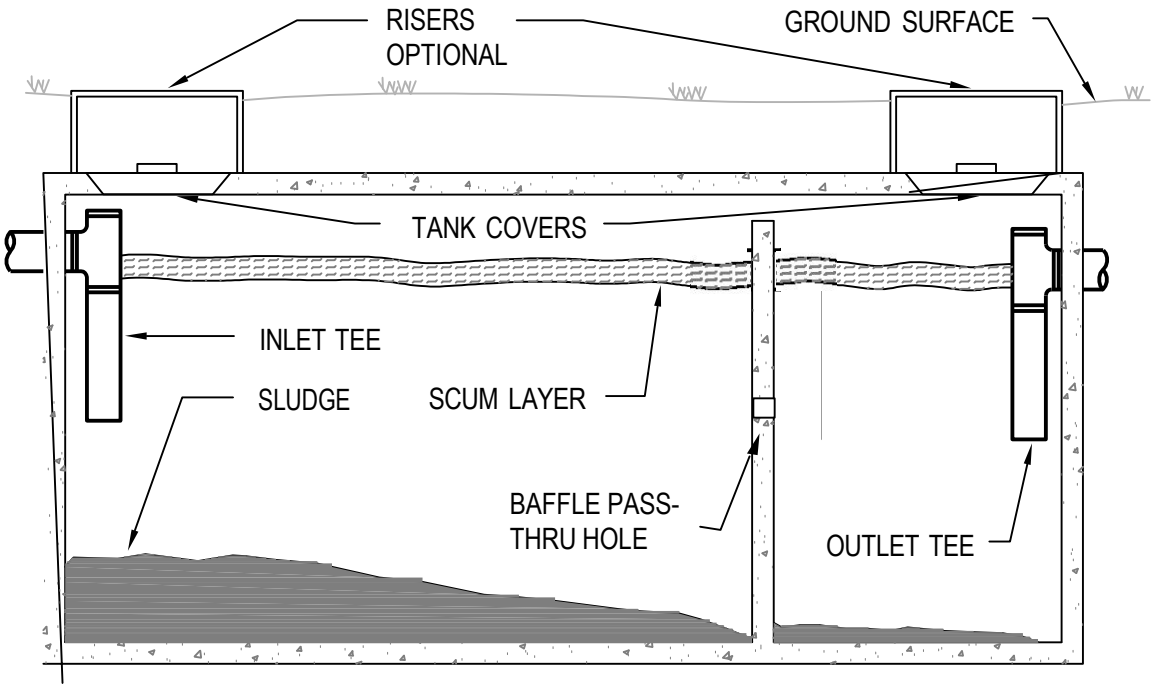
SECONDARY TREATMENT W/ PRESSURE DISTRIBUTION

1. Maximum trench depth is 48" into nati ve soil
2. Maximum drain rock depth is 30"

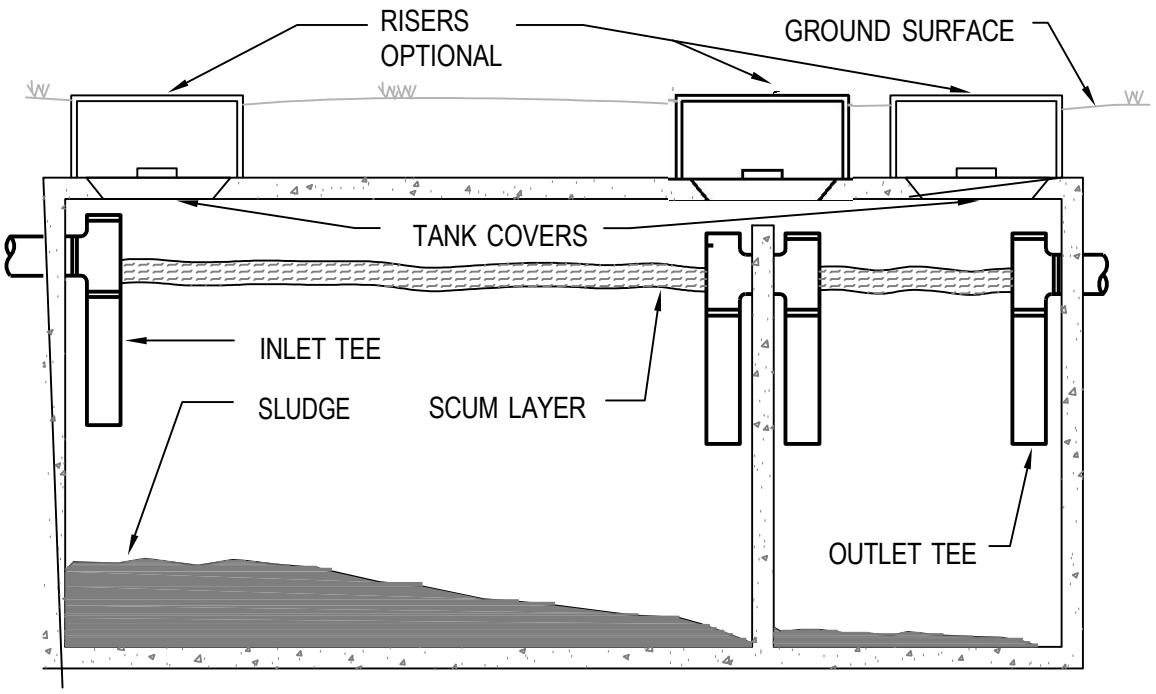


MAXIMUM HEIGHT OF TEMPORARY
HIGH GROUNDWATER OR
SOIL/ROCK RESTRICTIVE LAYER

TOWN OF PARADISE ONSITE SANITATION DIVISION	Revised: 03-01-16	DISTANCE BETWEEN DISPERSAL TRENCH BOTTOM AND RESTRICTIVE LAYERS PRIMARY & SECONDARY TREATTMENT	**FIGURE** **4.1**



- STANDARD SEPTIC TANK

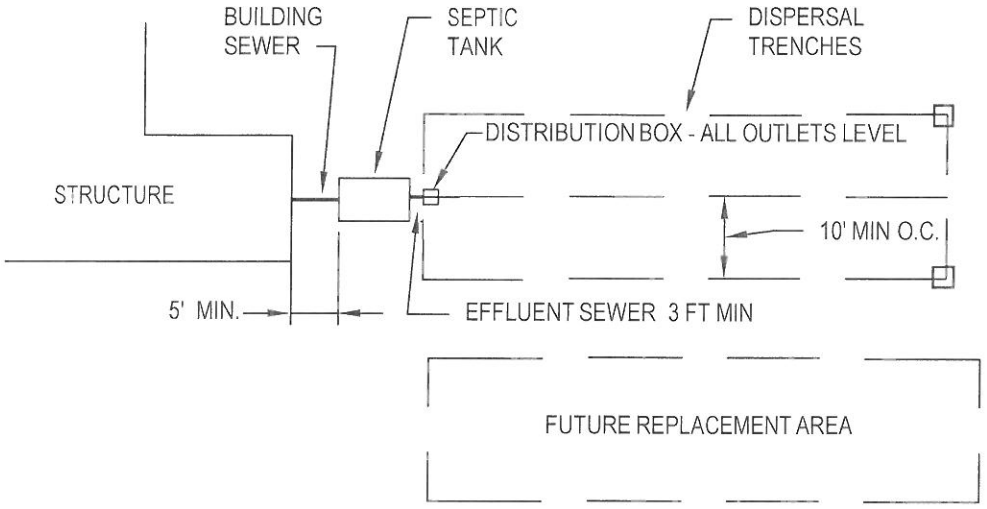


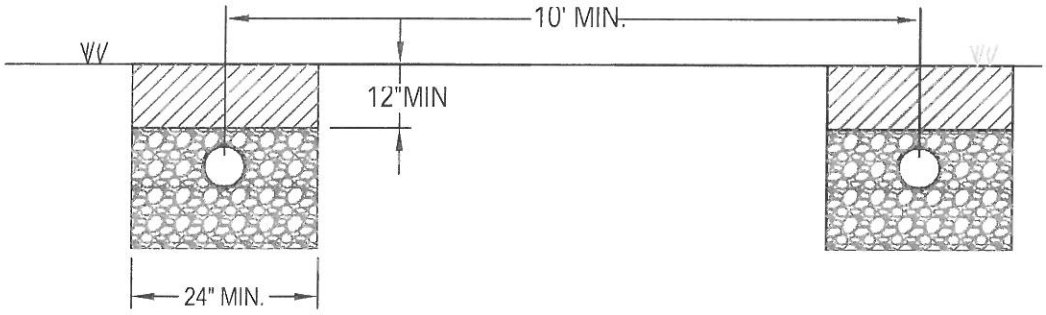
- STANDARD SEPTIC TANK WITH 2ND COMPARTMENT DRAW-DOWN

TOWN OF PARADISE ONSITE SANITATION DIVISON	Revised 03-01-16	SEPTIC TANK WITH SANITARY T BAFFLE	**Figure** **4.2**

DISPERSAL FIELD REQUIREMENTS

1. THE DISPERSAL TRENCH ENDS CAN BE CONNECTED IF LEVEL WITH EACH OTHER
2. MAXIMUM TRENCH DEPTH INTO NATIVE SOIL IS 48"
3. MAXIMUM LEACHROCK DEPTH IS 30"
4. DISTRIBUTION BOXES REQUIRED AT END OF EFFLUENT SEWER AND ANY DIRECTION CHANGE OVER 90 DEGREES

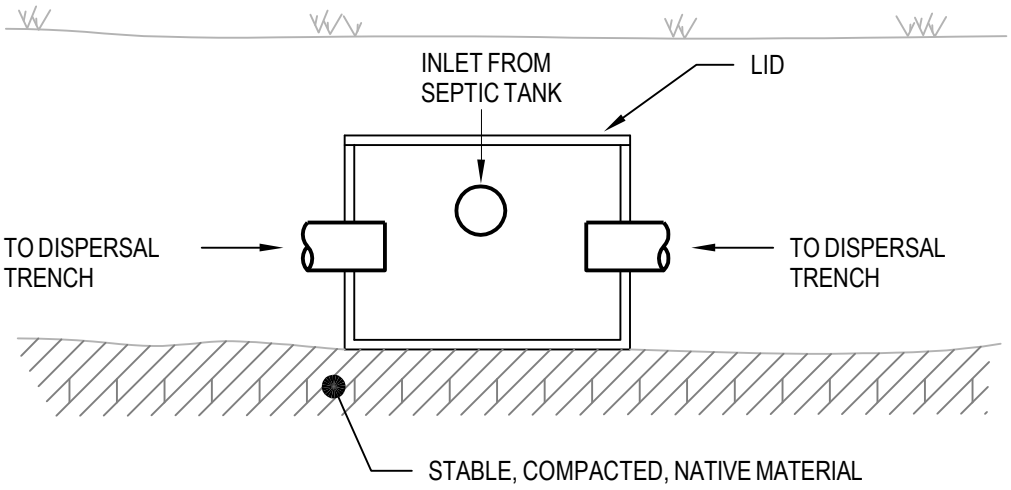




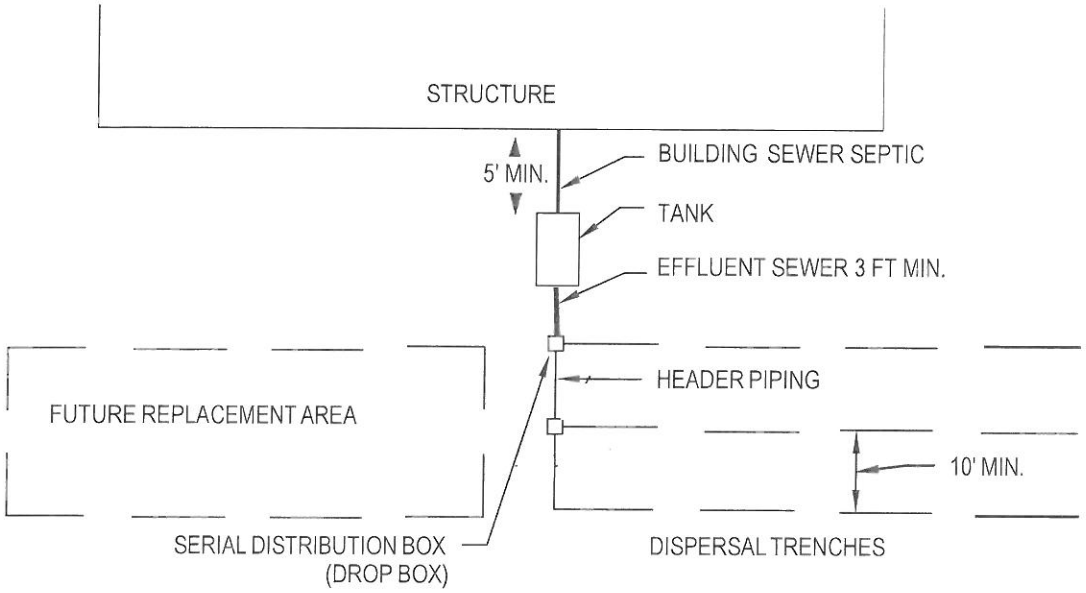
GRAVITY DISPERSAL

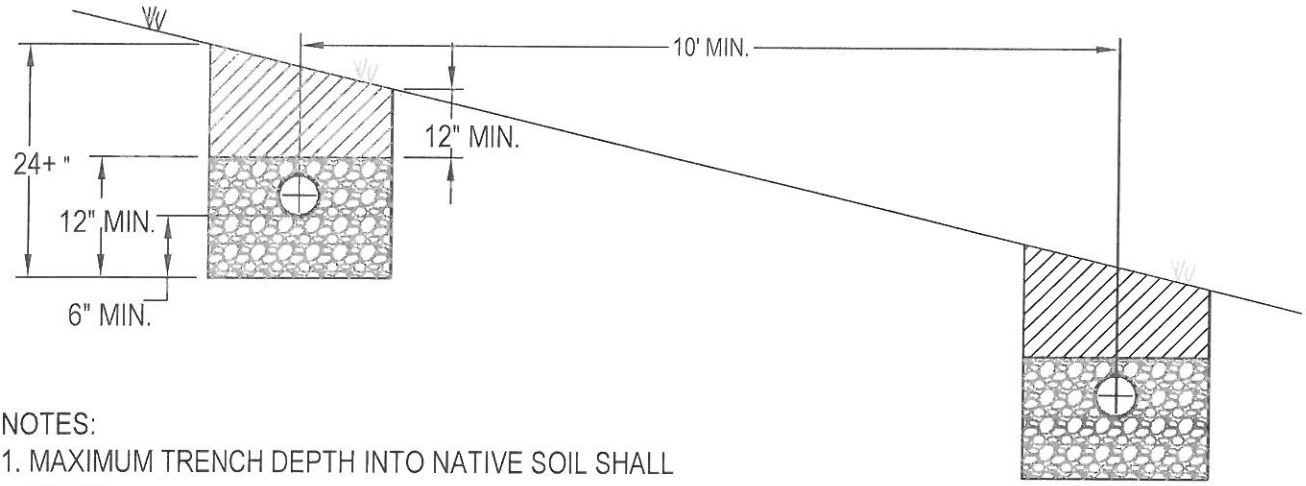
NOT TO SCALE

TOWN OF PARADISE ONSITE WASTEWATER MANAGEMENT ZONE	Revised: 03-01-16	TYPICAL EQUAL DIST. SYSTEM	Figure 4.3



DISTRIBUTION BOX- EQUAL

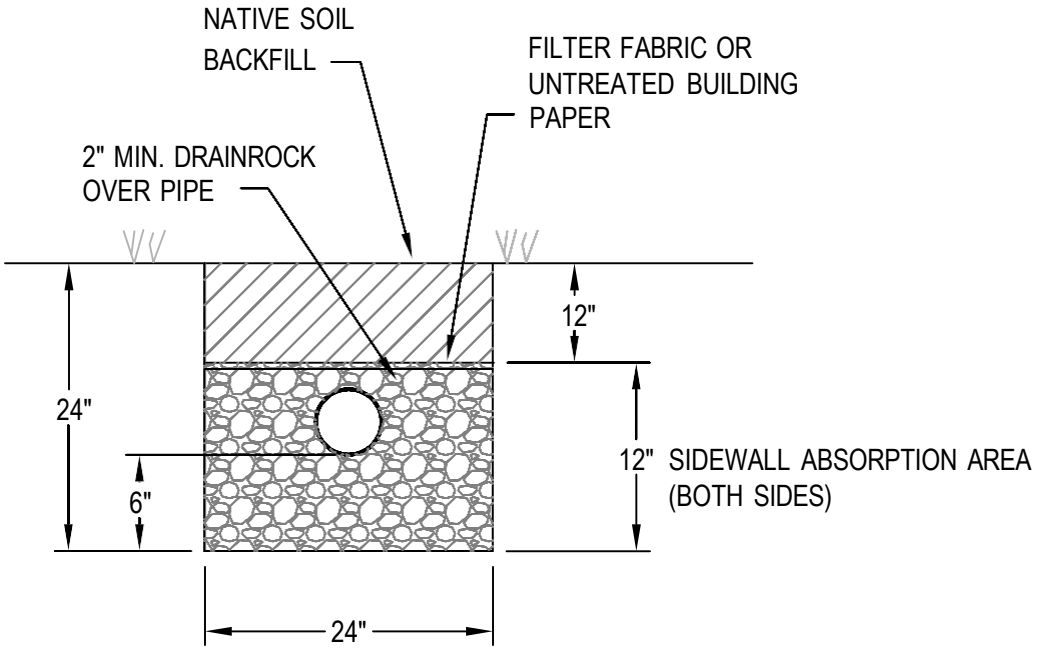




NOTES:
1. MAXIMUM TRENCH DEPTH INTO NATIVE SOIL SHALL BE 48".
2. MAXIMUM LEACHROCK DEPTH IS 30".

NOT TO SCALE

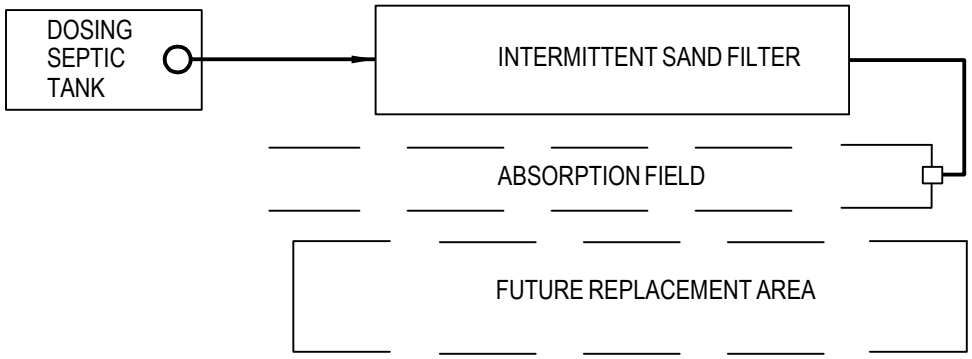
TOWN OF PARADISE ONSITE WASTEWATER MANAGEMENT ZONE	Revised: 03-01-16	TYPICAL SERIAL DISTRIBUTION WITH DROP BOXES	Figure 4.5



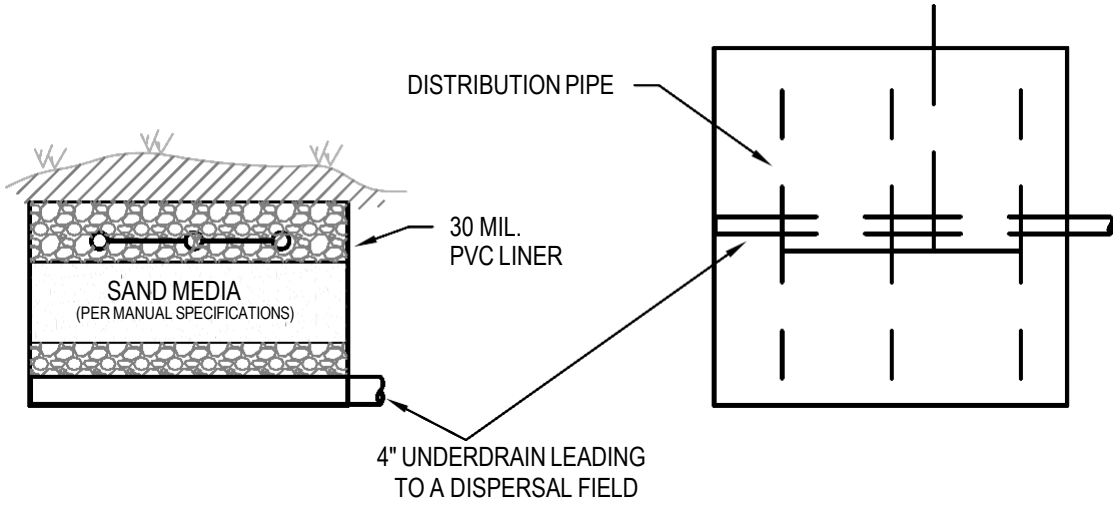
1. Maximum trench depth is 48" into native soil
2. Maximum drain rock depth is 30"

NOT TO SCALE

TOWN OF PARADISE ONSITE WASTEWATER MANAGEMENT ZONE	Revised: 03-01-16	STANDARD GRAVITY DISPERSALTRENCH	**Figure** **4.6**



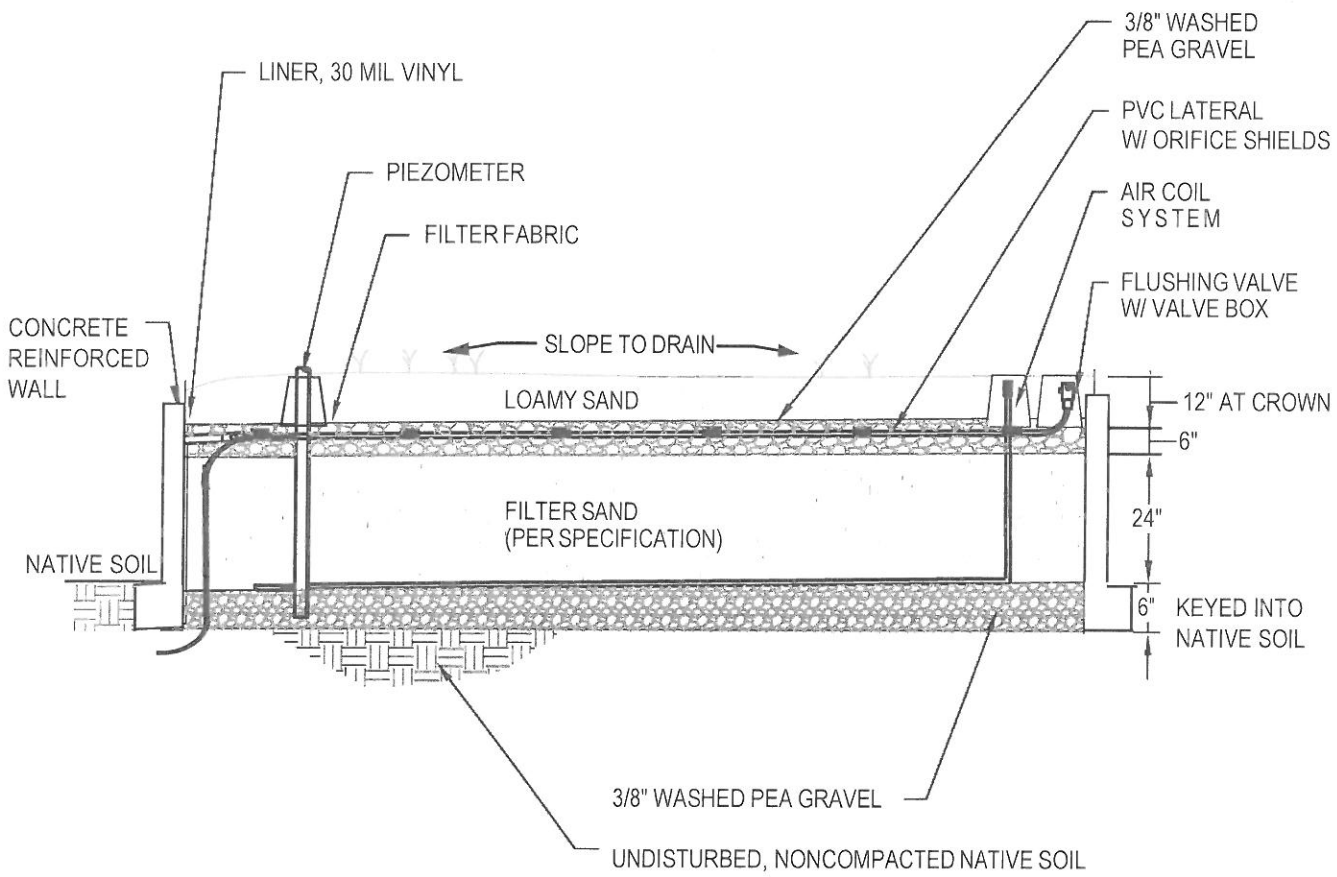
SYSTEM SCHEMATIC



TYPICAL CROSS SECTION

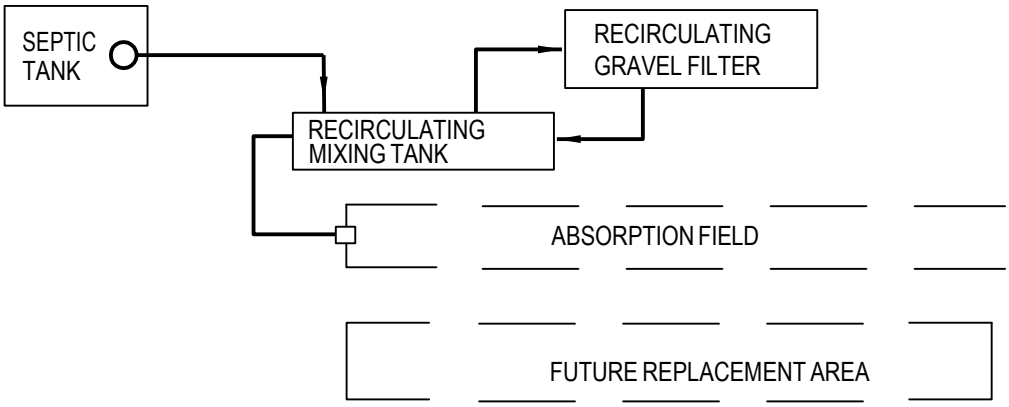
PLAN VIEW

TOWN OF PARADISE ONSITE WASTEWATER MANAGEMENT ZONE	Revised: 03-01-16	TYPICAL INTERMITTENT DOSING SANDFILTER	**Figure** **4.7**

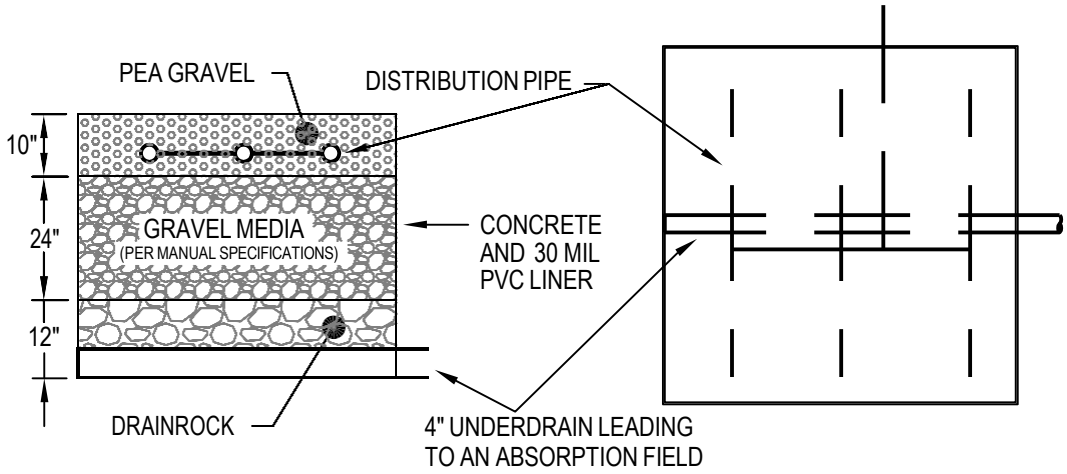


NOT TO SCALE

TOWN OF PARADISE ONSITE WASTEWATER MANAGEMENT ZONE	Revised: 03-01-16	BOTTOMLESS SAND FILTER BED	Figure 4.8



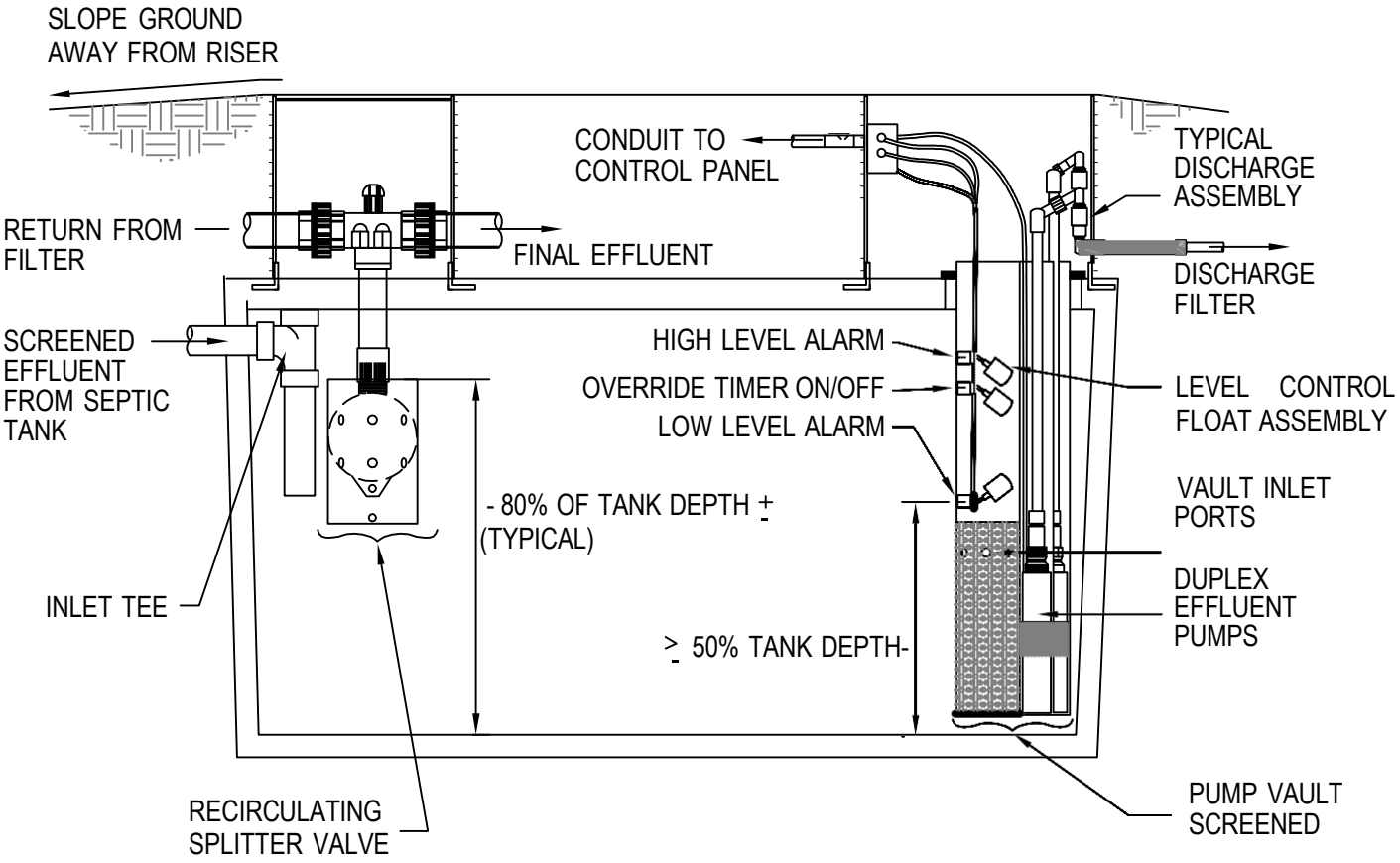
SYSTEM SCHEMATIC



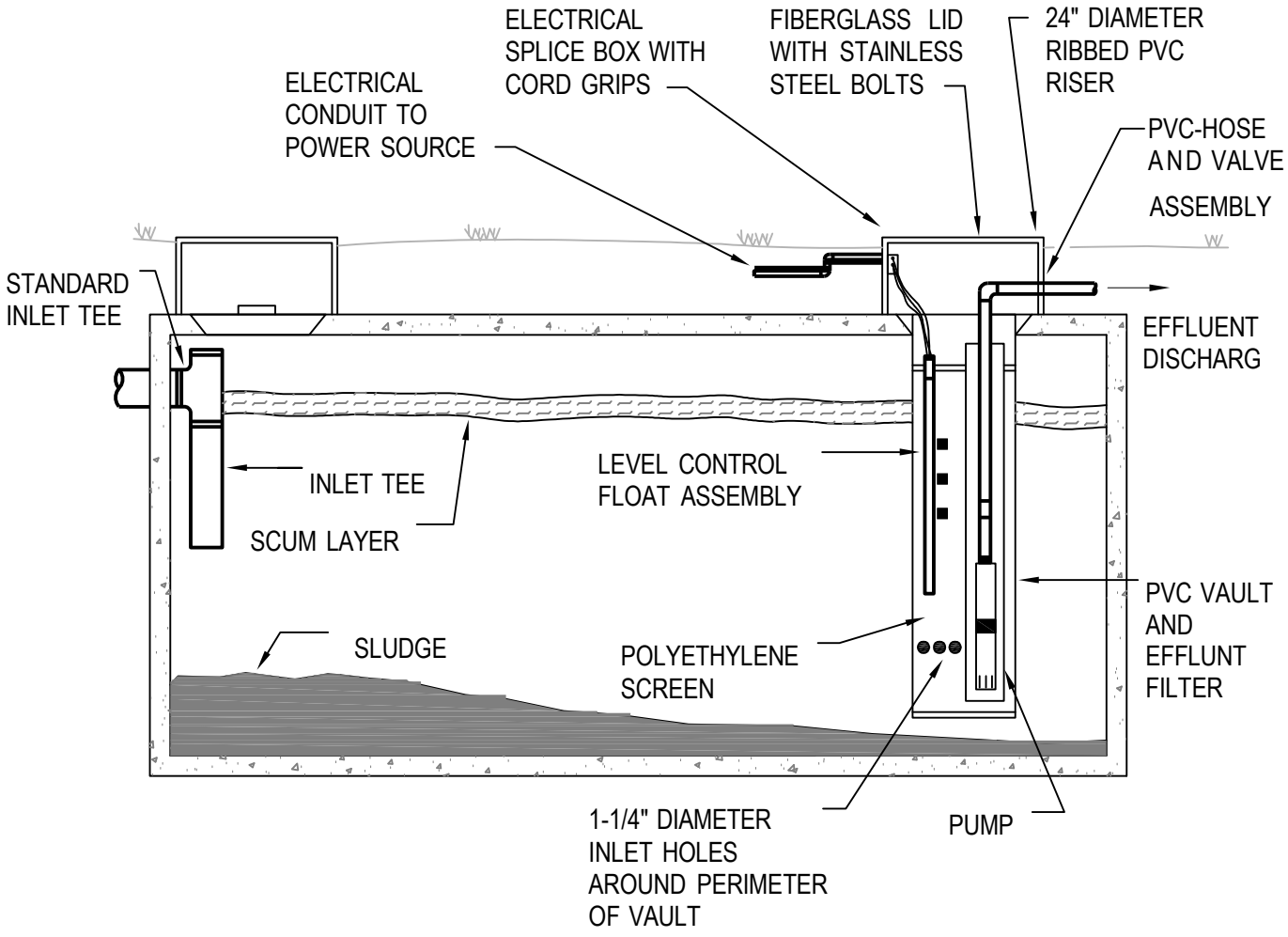
TYPICAL CROSS SECTION

PLAN VIEW

TOWN OF PARADISE ONSITE WASTEWATER MANAGEMENT ZONE	Revised: 03-01-16	RECIRCULATING GRAVEL FILTER TYPICAL	**Figure** **4.9**

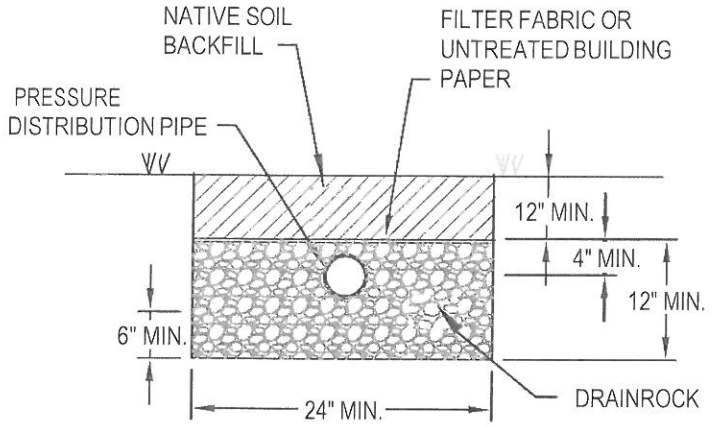


TOWN OF PARADISE ONSITE WASTEWATER MANAGEMENT ZONE	Revised: 03-01-16	RECIRCULATING RECIRCULATING TANK TYPICAL	**Figure** 4.10



TOWN OF PARADISE ONSITE WASTEWATER MANAGEMENT ZONE	Revised: 03-01-16	DOSING SEPTIC TANK TYPICAL	Figure 4.1

NOTES;
1. MAXIMUM TRENCH DEPTH IS 48"
2. MAXIMUM ROCK DEPTH IS 30"



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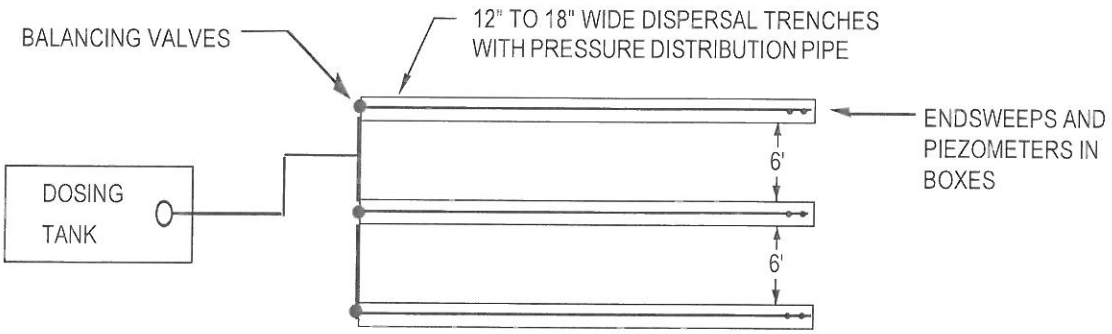
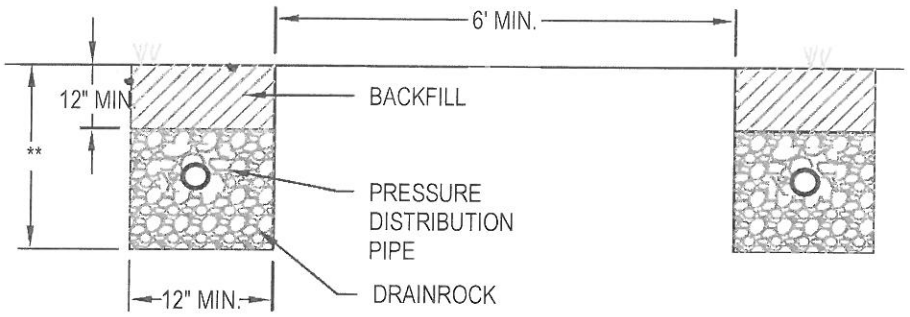
TOWN OF PARADISE ONSITE WASTEWATER MANAGEMENT ZONE	Revised: 03-01-16	PRESSURIZED DISPERSAL TRENCH	Figure 4.12





NOTES:

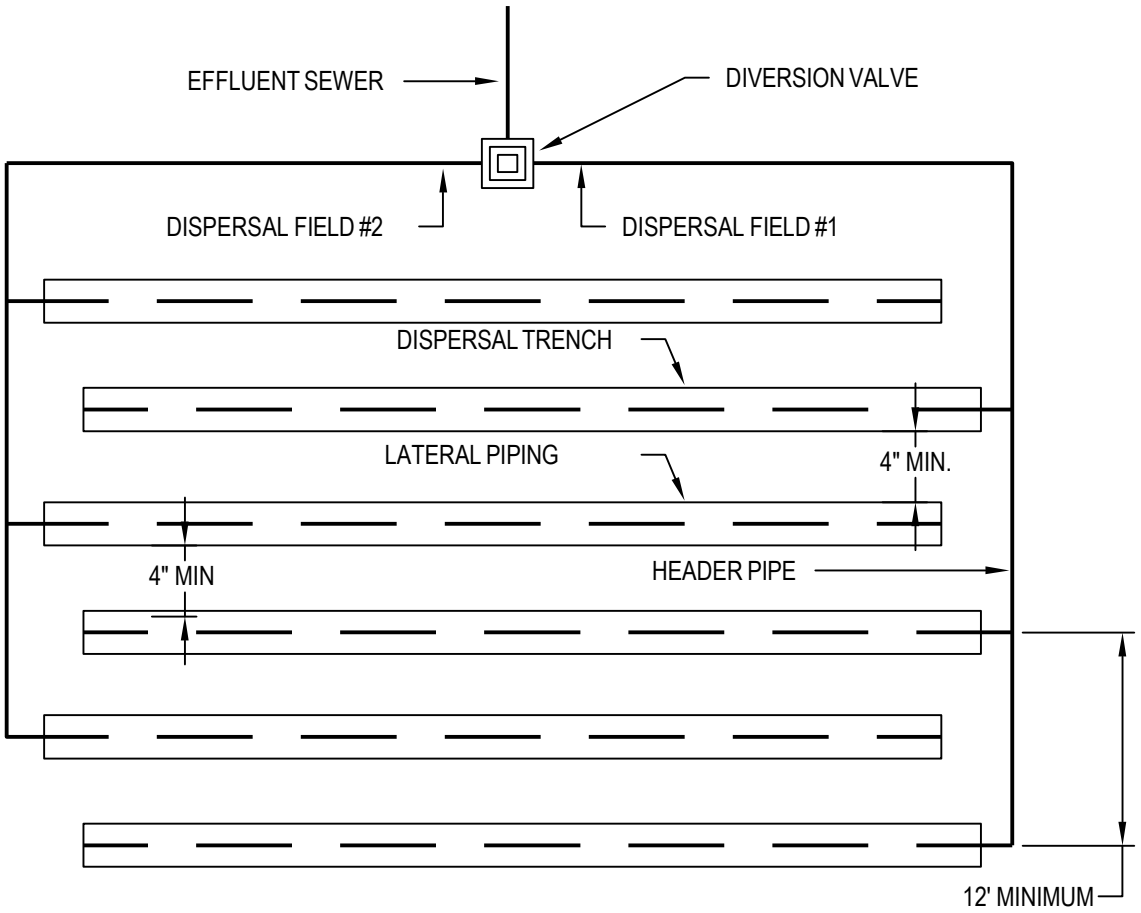
1. MAXIMUM TRENCH DEPTH SHALL BE 48".
2. MAXIMUM TOTAL ROCK DEPTH IS 30".
3. SYSTEM SHALL BE PRESSURE DOSED.
4. WIDTH SHALL BE 12" MINIMUM TO 18" MAXIMUM

NOT TO SCALE

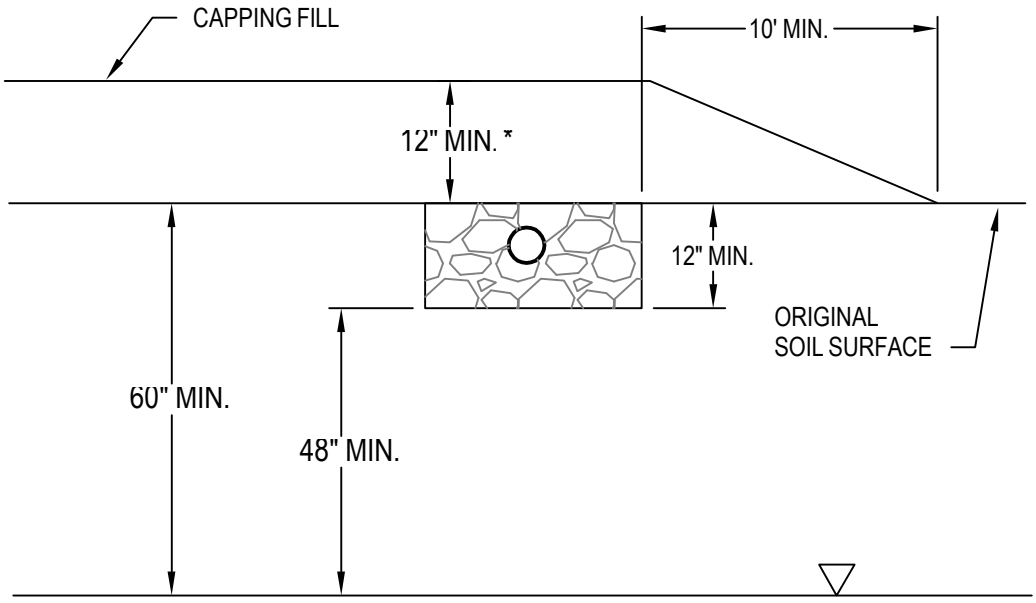
TOWN OF PARADISE ONSITE WASTEWATER MANAGEMENT ZONE	Revised: 03-01-16	NARROW DISPERSAL TRENCH -TYPICAL	Figure 4.13

DOWNTOWN PARADISE
GROSS HYDRAULIC LOADING RATE SHALL
NOT EXCEED 1350 GALLONS/ACRE/DAY

TOWN OF PARADISE ONSITE WASTEWATER MANAGEMENT ZONE	Created: 03-01-16	DOWNTOWN PARADISE HYDRAULIC LOADING RATE ADJUSTMENT AREA	**Figure** **4.14**



TOWN OF PARADISE ONSITE WASTEWATER MANAGEMENT ZONE	Revised: 03-01-16	REDUNDANT SYSTEM	**Figure** 4.1

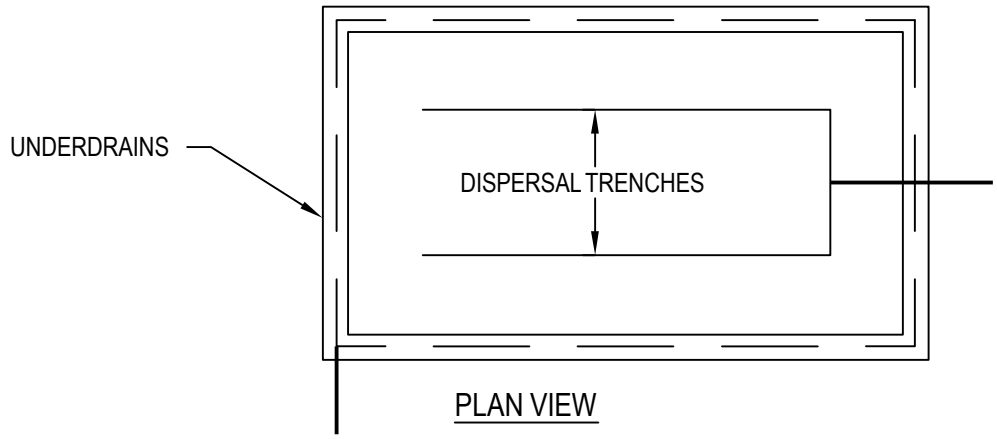


TEMPORARY HIGH OR PERMANENT WATER TABLE
OR SOIL RESTRICTIVE LAYER

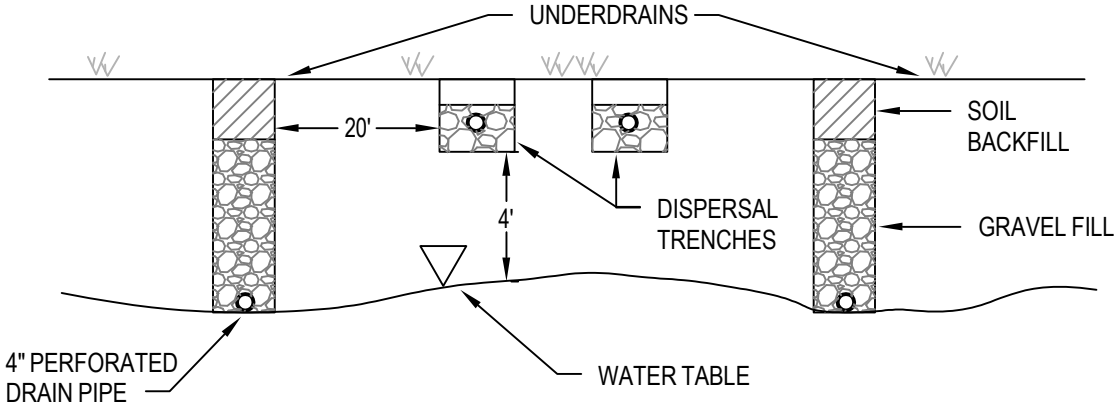
* 16" DEPTH BEFORE SETTLING

TOWN OF PARADISE ONSITE WASTEWATER MANAGEMENT ZONE	Revised 03-01-16	CAPPING FILL TYPICAL	**Figure** **4.1(** 388

NOTES:
1. MAXIMUM ABSORPTION TRENCH DEPTH IS 48".
2. MAXIMUM ABSORPTION TRENCH ROCK DEPTH IS 30".



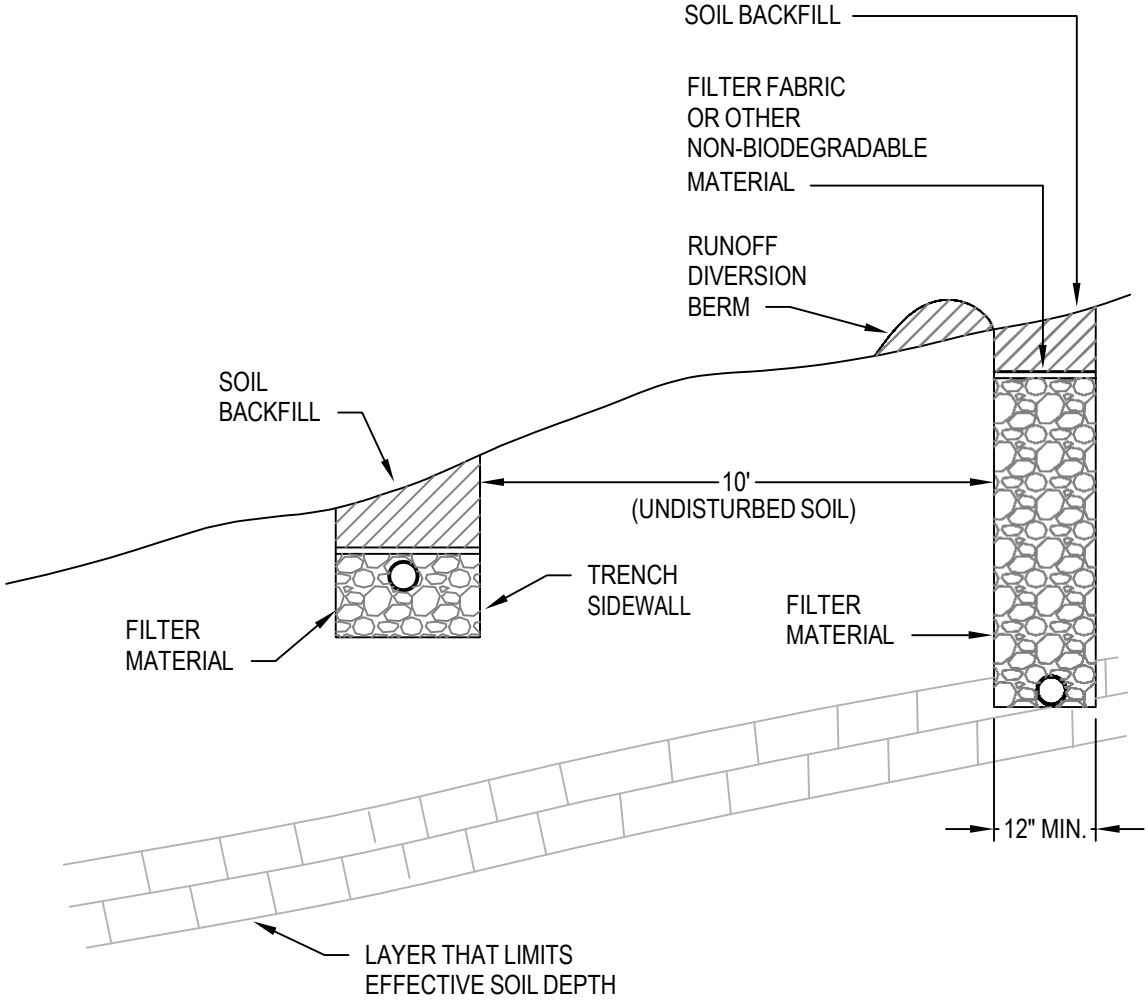
PLAN VIEW



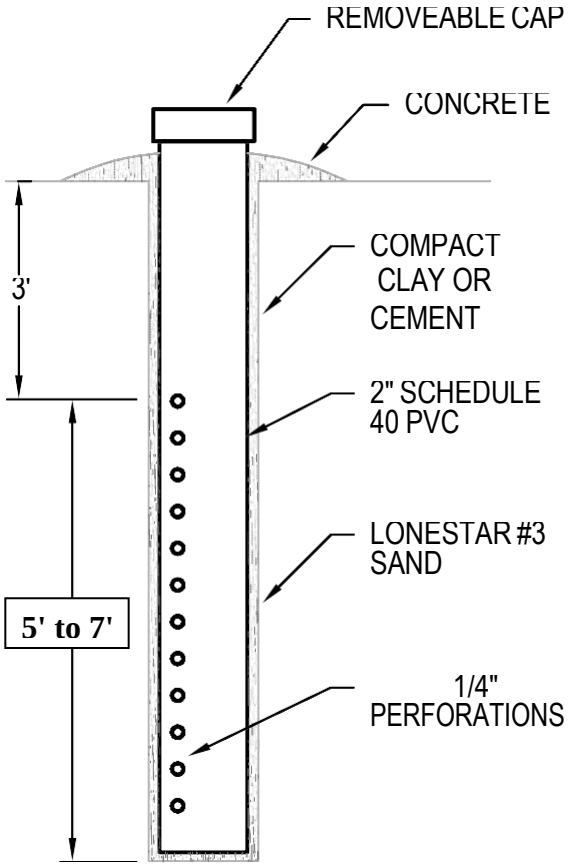
CROSS SECTION

TOWN OF PARADISE ONSITE WASTEWATER MANAGEMENT ZONE	Revised: 03-01-16	PERIMETER DRAIN	**Figure** **4.1**

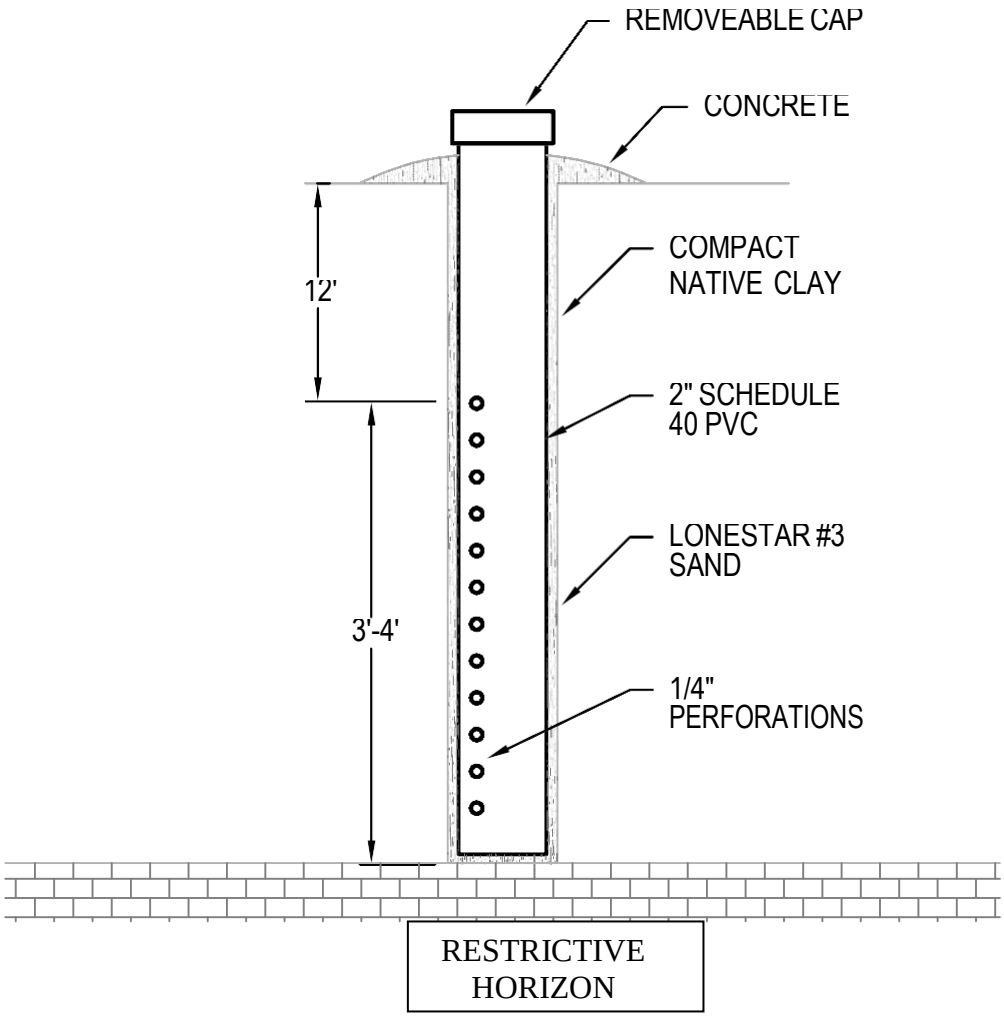
NOTES:
1. MAXIMUM ABSORPTION TRENCH DEPTH IS 48".
2. MAXIMUM ABSORPTION TRENCH ROCK DEPTH IS 30".



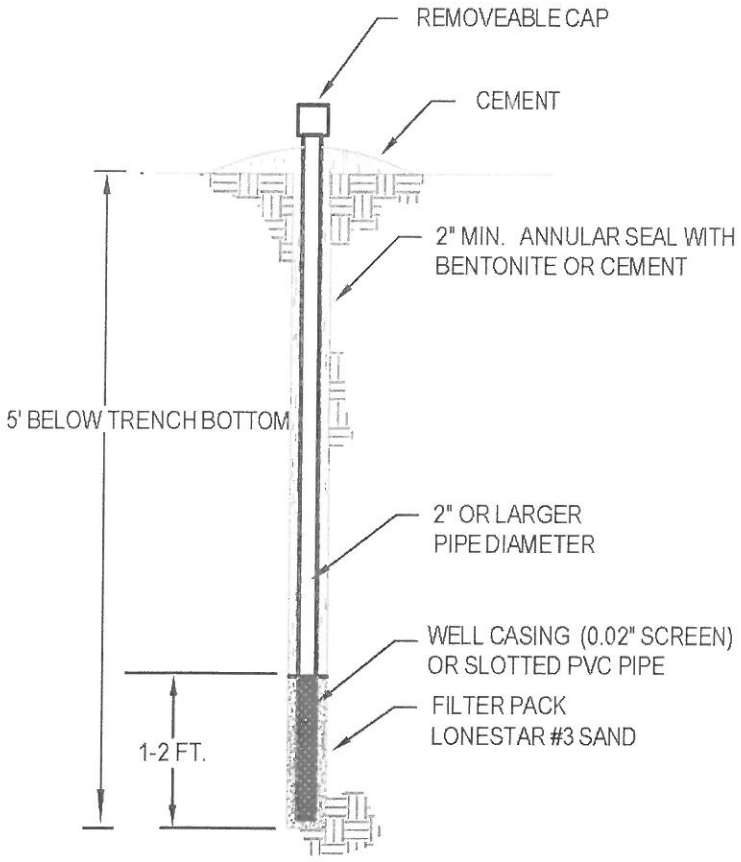
TOWN OF PARADISE ONSITE WASTEWATER MANAGEMENT ZONE	Revised; 03-01-16	CURTAIN DRAIN TYPICAL	**Figure** **4.10**



TOWN OF PARADISE ONSITE WASTEWATER MANAGEMENT ZONE	Revised: 03-01-16	PIEZOMETER TYPICAL	Figure B

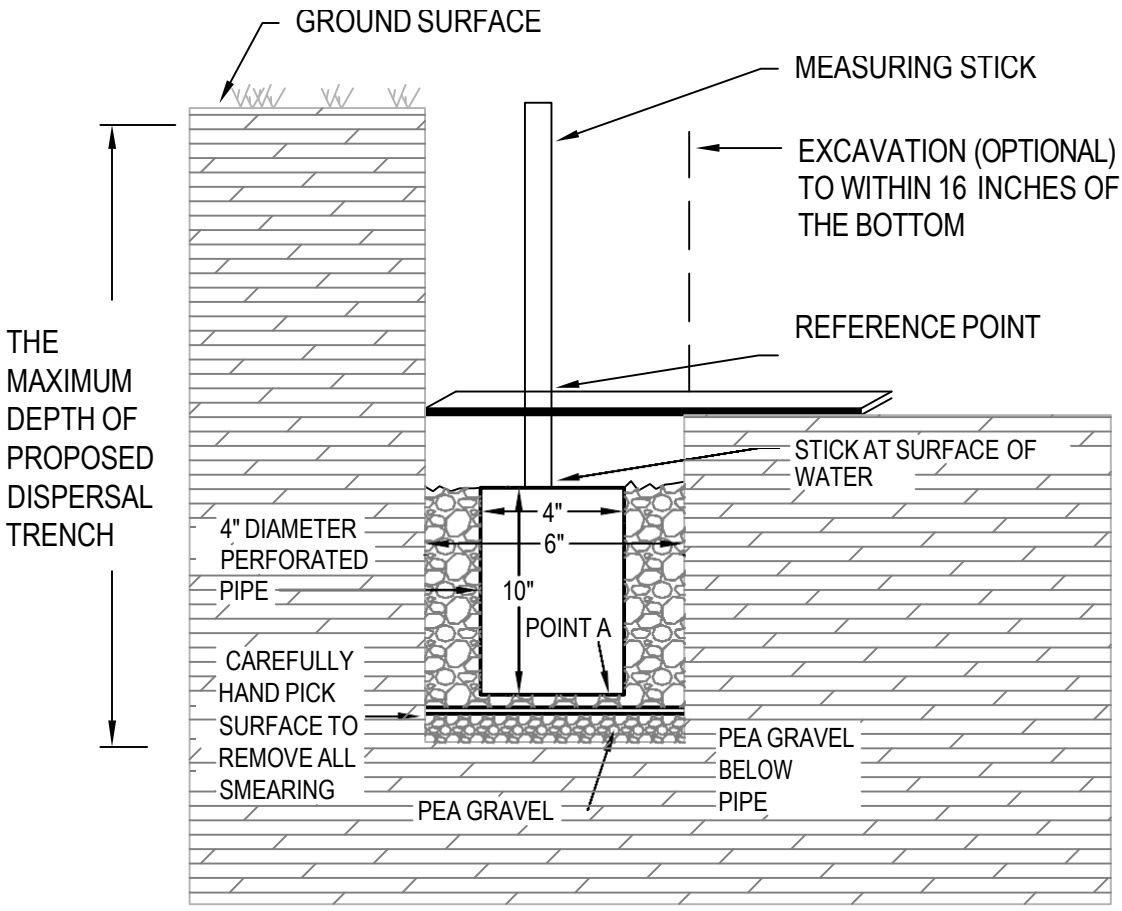


TOWN OF PARADISE ONSITE WASTEWATER MANAGEMENT ZONE	Revised: 03-01-16	PIEZOMETER TYPICAL	**Figure** **B-2**



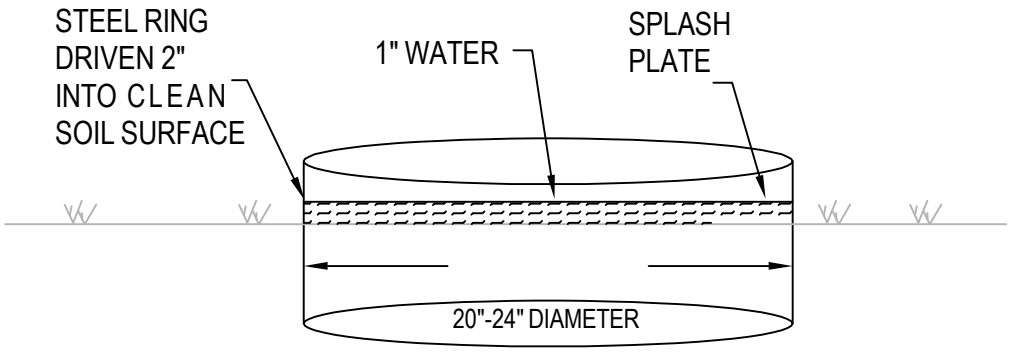
NOT TO SCALE

TOWN OF PARADISE ONSITE WASTEWATER MANAGEMENT ZONE	Revised: 03-01-16	FIELD PIEZOMETER TYPICAL	**Figure** **B.3**

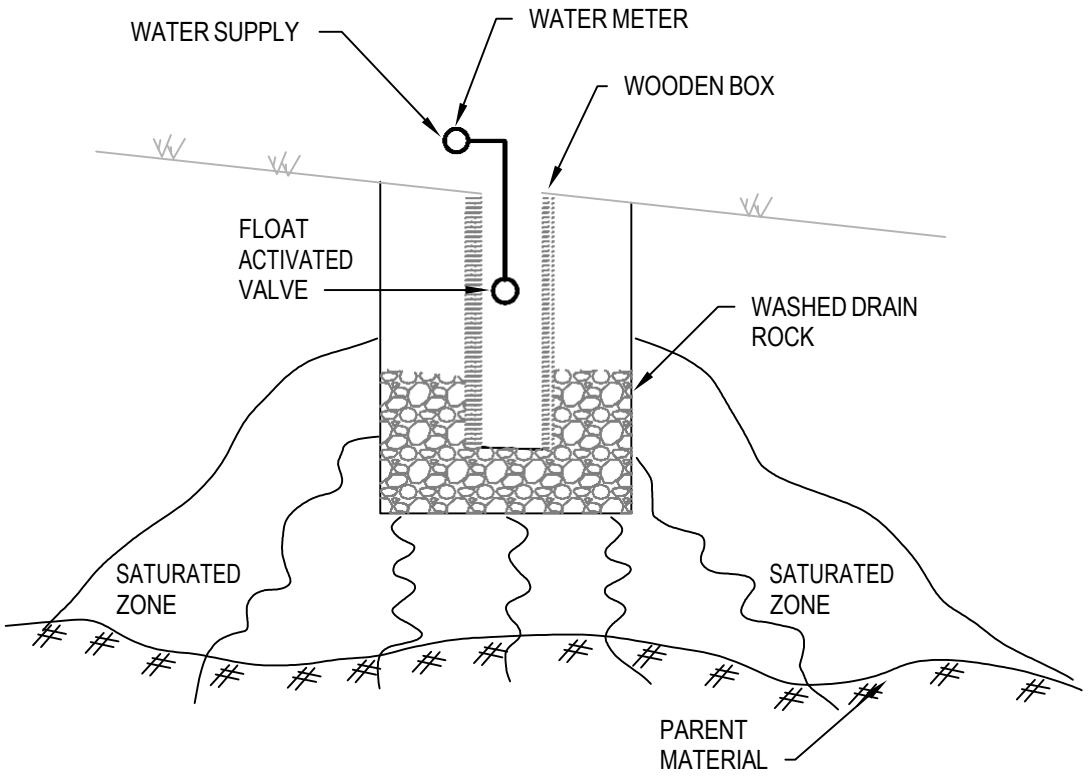


NOTES;
1. A GRAVEL CORRECTIVE FACTOR OF 1.6 MUST BE APPLIED TO CALCULATE PERCOLATION RATE.
2. FOR SHALLLOW SOILS TESTING AN EXCAVATION TO THE SIDE OF THE PERCOLATION HOLE IS NOT REQUIRED.

TOWN OF PARADISE ONSITE WASTEWATER MANAGEMENT ZONE	Revised: 03-01-16	PERCOLATION TEST	**Figure** **C-1**



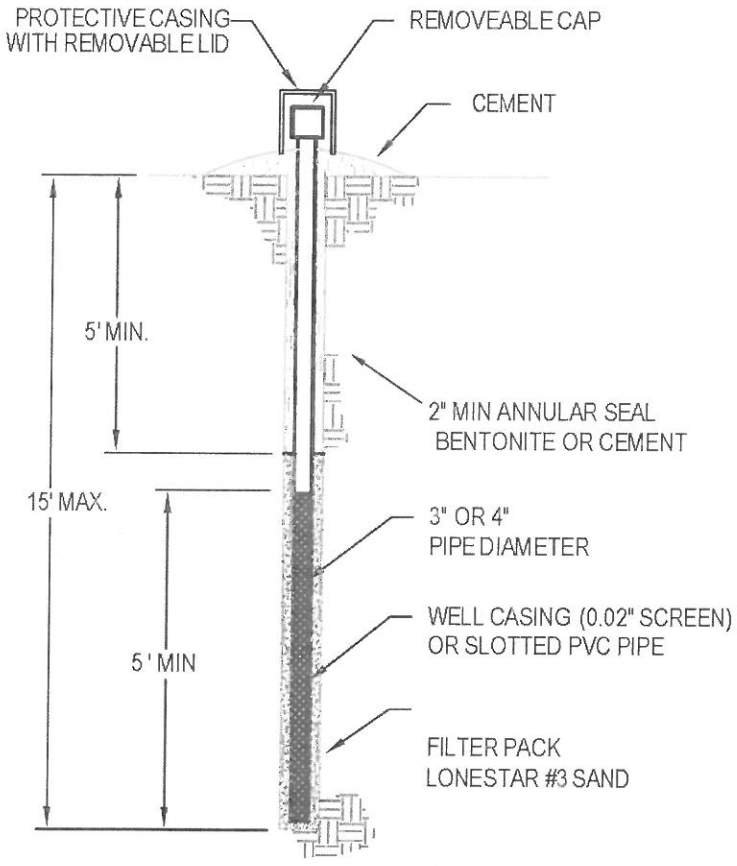
INFILTRATION RING TEST



NOT TO SCALE

ABSORPTION TEST

TOWN OF PARADISE **ONSITE WASTEWATER MANAGEMENT ZONE**	Revised: 03-01-16	INFILTRATION TEST ABSORPTION TEST TYPICAL	**Figure** **C-2**



NOT TO SCALE

TOWN OF PARADISE ONSITE WASTEWATER MANAGEMENT ZONE	Revised: 03-01-16	GROUND WATER MONITORING WELL TYPICAL	Figure D.1

ATTACHMENT B April 12, 2016

PROPOSED SUBSTANTIVE CHANGES TO THE MANUAL

PROPOSED SUBSTANTIVE CHANGES TO THE TOWN OF PARADISE MANUAL FOR THE ONSITE TREATMENT OF WASTEWATER

Title Page

[1] An addition is included on this page indicating an approved revision was made to the Manual on April 12, 2016

Chapter 1 PERMITS

1.2 SITE EVALUATION REPORT

[2] 1.2.A. The submittal to the Town of a Site Evaluation Report for the assessment of a parcels' ability to receive an onsite wastewater disposal system is a process that has evolved over the years. Although accurate in its intent, the description provided in this section of the Manual was substantially lacking in its mention of the 'Land Use Review' process. As per the Town's current fee schedule, the 'Land Use Review' is a service provided to an applicant by which a parcel is reviewed for onsite sewage disposal feasibility. The revisions proposed in this section provide better description to the established Land Use Review process.

[3] 1.2.D. See comments on 1.9 below regarding the Gross Hydraulic Loading requirements.

[4] 1.2.D. The term 'absorption field' is used throughout the Manual and has been changed to 'dispersal field'. The term 'absorption field' is an old term which the onsite wastewater industry is evolving away from. 'Dispersal field' is a better term for depicting the migratory nature of wastewater as it flows through soil and it evokes more environmental awareness. The substitution of 'absorption field' for 'dispersal field' is made throughout this Manual revision.

1.4 OPERATING PERMIT

[5] 1.4 A provision is placed in the Manual indicating the new State requirement that all onsite wastewater treatment systems that have projected flows over10,000 gallons per day (gpd) must obtain a permit from and be regulated by the Regional Water Quality Control Board. As depicted in the State Onsite Wastewater Treatment System Policy, Section 6.1.1, this is a new state law effective in 2013. This addition to the Manual is required for a LAMP.

[6] 1.4.A. The term "pre-treatment" system is changed to "advanced treatment" system. "Pre-treatment" is not accurate terminology to use for depicting the type of treatment provided to wastewater after it undergoes primary treatment in a septic tank. "Advanced treatment" is much more depictive of the relationship this type of treatment has with standard treatment provided in a septic tank. It is also used in other portions of this regulation, therefore this change will reduce confusion and provide consistency throughout the Manual.

[7] 1.4.A. The sampling requirement for influent sampling (wastewater coming into a system) for advanced treatment systems is removed. The reason is that influent sampling is not typically needed because it is generally known what typical wastewater constituent strengths are. The most important sampling is for the wastewater strength *after* it has been treated to determine if the treatment process is effective. The removal of these three sampling tests is a cost savings for septic system owners.

[8] 1.4.C.3. The requirement to have a septic system evaluated whenever a complaint is made is excessive and in many cases unnecessary. The complaint investigation conducted by the Town often reveals the extent of a septic system problem and a private evaluation is not necessary. This revision requires a septic system evaluation *only* when it is deemed necessary by the Town for the investigation of the complaint. This revision represents a cost savings to septic system owners.

[9] 1.4.D. This section states that the Town of Paradise will evaluate alternative systems twice each year at the owner's expense. This practice has seldom been executed by the Town and is unnecessary based on the required quarterly reports already performed by the private service providers. This revision removes the requirement for the Town to conduct semiannual inspections on alternative systems and represents a cost savings to septic system owners. [See also 1.4.E.].

[10] 1.4. E. This section of the Manual states that all alternative septic systems must be evaluated once a year. Annual evaluations are not necessary for all alternative systems such as some residential 'capping fills' and 'pump only' systems. This revision allows some alternative systems to receive an Operating Permit longer than a year, thus allowing them a lower evaluation frequency. This revision represents a cost savings to septic system owners.

1.5 USE OR MODIFIATION OF AN EXISTING SYSTEM

[11] 1.5. The language in this section discusses the process for the Town to determine if a septic system is adequate in size and construction for a different use. This process is commonly termed, "Land Use Review", but that phrase is not in the language. Therefore the term, "Land Use Review" is inserted into this section. No other substantive changes are made.

1.8 LICENSING TO PERFORM WASTEWATER DISPOSAL SERVICES

[12] 1.8.A. This section of the Manual requires septage pumpers to obtain a license from the Town for performing wastewater disposal services. The Butte County Environmental Health Department has always required septage pumper certification for businesses that pump in the Town of Paradise. Therefore the Town has never initiated a separate program for licensing septage pumpers but required that pumpers maintain their certification with the County. This revision eliminates the requirement for septage pumpers to obtain a Town license and stipulates the requirement for septage pumpers to obtain certification with the County and provide annual evidence of that certification.

[13] 1.8.A. This revision requires that all septage pumpers maintain a valid septic system evaluators license issued by the Town of Paradise and in accordance with Chapter 5.14 of the Paradise Municipal Code. Prior to this revision it was not required in code that septage pumpers obtain an evaluators license, it was only required that they report when pumping was done. Certified evaluators are required to report any failed septic systems conditions they see when they are pumping a tank, including systems that are overflowing and discharging to the surface. This requirement assures that a thorough standard of reporting failed septic systems is maintained. Currently there are no known septic tank pumpers working in the Town of Paradise that are not certified evaluators with the Town.

1.9. GROSS HYDRAULIC LOADING RATE OF A PARCEL

[14] The addition of this section in the Manual is proposed so as to provide clarity to the requirements stipulated in Chapter 6; that every parcel must comply with the gross hydraulic loading rate of 900 gpd/acre for primary treated wastewater, or 2000 gpd/acre for secondary treated wastewater. No change in substance is created by this addition, only clarity, except for the following:

It is proposed that an area of the 'downtown' portion of the Town of Paradise be allowed a gross hydraulic loading rate higher than the prescribed 900 gpd/acre limit for primary treated wastewater. The rate proposed for this area is 1350 gpd/acre, which is the standard rate with a 1.5 multiplier. By allowing this higher rate in this area of historically undersized parcels septic system repairs will be more financially feasible and some new construction will be possible where once it was impossible. This area is predominantly zoned commercial and thus a more 'business friendly' regulatory position is taken by this addition to the Manual. A map is provided in the Manual (Drawing 4.14) which shows this Downtown Adjustment Area.

Chapter 2 VARIANCES

No substantive revisions are proposed.

Chapter 3 SELECTION OF APPROPRIATE ONISTE WASTEWATER SYSTEMS

[15] At the introduction of this chapter, a revision is proposed that removes from the Manual the provision that the Manual is only applicable to septic systems repairs, subdivisions and lot splits. This revision will bring the Manual into compliance with the Paradise Municipal Code, Section 13.04.035, and require that all onsite sewage disposal systems fall under the authority of the Manual.

[16] Table 3.1. A revision to the required setback between a public water well and a septic tank or dispersal field is proposed for this table. The new setback distance of 150 feet is now required by the California Onsite Wastewater Treatment Policy. The prior setback distance was 100 feet.

Chapter 4 DESCRIPTION OF ONSITE SYSTEMS

4.1 STANDARD SYSTEMS

[17] 4.1. & 4.1.D. Serial distribution is discussed in these sections. The revision is to allow serial distribution only when it is impractical to provide equal distribution. Serial distribution is a

leachfield design for multiple dispersal trenches where at the beginning the first trench receives all the effluent. Eventually, that trench clogs and fails and the effluent 'overflows' into the successive leachtrench and so on and so on. Serial distribution is not the most effective leachfield design for treating wastewater and providing longevity to a dispersal field. With this revision serial distribution will only be allowed if equal distribution is not practical. Equal distribution is plumbing that allows all portions of a dispersal field to receive equal amounts of effluent, at the same time. Equal distribution provides much better treatment to wastewater and more longevity to the life of a dispersal field.

[18] 4.1.A. Language revisions are made that provide clarity in understanding what a 'seasonal' or 'temporary high' groundwater table is and what is only a momentary spike in groundwater levels due to heavy rainfall. If a high groundwater level is not maintained for over two weeks than that level is not considered significant for designing a leachfield.

[19] 4.1.A. An amendment is made into the text of this section which supports the gross hydraulic loading rate of wastewater onto parcels in the Town. This rate is 900 gpd/acre for primary treated wastewater. Gross hydraulic loading rates are discussed in the newly proposed Section 1.9 (see above) and also in Chapter 6 of the Manual.

[20] 4.1.B. A revision is made to the minimum length of the effluent sewer, which is the solid pipe that transports wastewater effluent out of a septic tank. That length has been changed from one foot to three feet. One foot is impractical and typically requires the distribution box at the other end of the effluent sewer to be set on septic tank backfill material. Backfill has a tendency to settle and therefore the distribution box can lose stability. Changing this requirement to three feet assures that distribution boxes are set stable and remain level.

[21] 4.1. C. A revision is made to allow distribution boxes to also include the presence of an access riser over them to mark their location. Current code requires distribution boxes to be marked by a steel post, concrete marker or other durable material.

Also, a revision is made to allow vehicular traffic over distribution boxes if the box is constructed to withstand the weight. The prior code did not allow traffic loads on top of distribution boxes.

[22] 4.1.E. A revision is made to the protocol for sizing dispersal trenches that use 'chamber' units instead of leachrock. The prior language did not include how to size dispersal trenches if chamber units are used. (Chamber units are typically plastic domes that are placed in a dispersal trench in lieu of leachrock).

[23] 4.1.E. The Manual allowed a tolerance level of plus or minus two inches in 100 feet of distribution piping (leachpipe). This has been revised to allow a tolerance of minus two inches per 100 feet of leachpipe. The reason for this is because water does not 'run uphill' and leachpipe that has a plus two inch tolerance will have the 'water' flow out of it in the first five feet, thus rendering the pipe ineffective for promoting even distribution throughout the trench.

[24] Table 4.1. This table is revised to include a reduced dispersal trench sizing for one and two bedroom residences. The table previously only had sizing for three bedroom residences and up.

[25] Table 4.1. This table has been adjusted in the footnotes to depict that a long term application rate (soil application rate) of .5 gpd/ft^2 is required for designing dispersal trenches. This application rate is a conservative median of the ranges previously provided in these footnotes. It is also a rate that has long standing precedent for what has been used throughout the Town and shown to be effective for creating long lasting dispersal fields.

[26] Table 4.2. The amendment to this table is that a maximum leachrock depth of 30 inches is prescribed. Prior to this amendment the Manual had no maximum depth prescribed. Because soil depth in the Town is very limited, and because of the underlying lava cap, an excessive amount of leachrock places a dispersal trench too deep and too close to this impervious layer. Soils become less permeable with depth, anaerobic conditions are enhanced and clogging mats occur in deep rock trenches more abundantly. The new State Policy prescribes an effective depth of 24 inches of leachrock and therefore, to remain conservative and within a range of acceptability, 30 inches is proposed here. Thirty (30) inches of drainrock is customarily the typical maximum depth possible on any project in the because of the relatively shallow soils depths.

[27] Table 4.2. Soil backfill on any dispersal trench has been changed from 6 inches to 12 inches. 6 inches is often not a sufficient amount of soil cover after several years. Erosion from excessive rains, landscaping and compaction from vehicles are all reasons why 12 inches of backfill is more suitable for leachtrench design in Paradise. Current field practice is that 12 inches of soil cover is almost always placed.

[28] Table 4.2. A maximum depth of 48 inches for a dispersal trench is the standard already in the Manual. A revision to this requirement will stipulate that this maximum depth is into ***native*** soils. The distinction made with the insertion of the word "native" is that there are many areas where there is soil fill over native soils. By clarifying the maximum trench depth with, "into native soil" a site with 2 feet of 'fill' on top of native soil could have a maximum trench depth of 6 feet total, because only 4 feet of it would be into the native soil. This adjustment allows for more versatility for sites with soil fill and increases the opportunity for more effective construction or repairs of septic systems.

4.2 ADVANCED TREATMENT SYSTEMS

[29] Introduction; Advanced treatment systems are no longer called Pre-treatment Systems. See prior note [6] for explanation.

[30] Introduction; Language is inserted that supports the already existing requirements found in Chapter 6 of the Manual for gross hydraulic loading rates allowed for primary treated (septic tank only) and secondary treated (advanced treatment) effluent. (See note 14 also).

[31] 4.2.A. A change is made to the amount of soil necessary beneath a bottomless sand filter dispersal system. There are many of these types of systems in the Town and they have become a widely used alternative to the more expensive type of advanced treatment systems. They can be

used when there is little room for a dispersal field and a lack of soil depth. Prior regulation required 4 feet of permeable soil beneath a bottomless sand filter. This revision changes the standard to 3 feet of soil. This revision allows some of those lots that suffer from lack of soil and space to be developed or repaired with this less expensive type of advanced treatment system.

[32] 4.2.E. Recirculating gravel, textile or media filters.
Since this code was originally created textile filters have been created and their use has been promoted. Because of that, the addition of the terms "textile" and "media" to the types of recirculating filters this section addresses is necessary to keep up with technology.

The dispersal fields that were built to receive effluent from an advanced treatment systems were previously required to have the same amount of soil beneath it that a standard system had, which is 4 feet. This requirement is now proposed at 2 feet of soil above high groundwater or impervious (rock) layers. The reason for this is that wastewater effluent that has undergone secondary treatment needs less soil for processing after it is discharged into a dispersal field. This revision allows several previously undevelopable lots to have onsite wastewater treatment systems constructed on them as well as some previously developed lots to have more effective repairs made to failing systems.

Containers for gravel, textile or media filters were previously allowed to be flexible membrane in the Manual. This was when the filter was constructed in soil. Flexible membranes are not rigid enough to withstand external sidewall and bottom forces such as growing tree roots, rocks in the backfill and the hydraulic forces of water. This revision requires rigid, solid construction for the filter container.

[33] 4.2.F. Other types of advanced treatment systems.
A revision is made to this section which addresses the review of advanced treatment systems that are not in the Manual and basically unknown by Town staff in regard to their ability to perform. As part of the review any system that has certification with the NSF/ANSI standards and testing organization will be regarded favorably.

[34] 4.2.G. Advanced treatment system disposal fields
The soil application rate into dispersal fields serving advanced treatment systems is changed from 1.20 gallons/ft^2/day to 1.0 gallons/ft^2/day. This revised application rate is more conservative and is what has been used in the design of systems in the Town for the past 20+ years. This rate is also closer in compliance with standards produced by the State Water Resources Control Board, which is the reviewing agency for the Town's LAMP. Those standards indicate that the higher rate may not be accepted.

Also an amendment to this section provides direction on how to calculate absorptive surface in a dispersal bed (in contrast to a dispersal trench). The calculations will exclude the use of the sidewall area of a dispersal bed. The reason for this is that a bed is typically very large compared to a trench and receives much more effluent per square foot of total dispersal area. Allowing sidewall to be counted as absorptive area in a bed would allow too much wastewater to be discharged into an already hyper-saturated dispersal area.

4.3 PRESSURE DISTRIBUTION

[35] 4.3.B. Requirements

Orifice spacing in pressure distribution dispersal trenches is commonly 2 feet for all soils in the Town. There are typically no soils that percolate at a slower rate; therefore the discussion regarding this is unnecessary and somewhat inaccurate. The text at the end of this section is therefore removed.

4.4 NARROW DISPERSAL TRENCHES

[36] 4.4.B Requirements
Narrow dispersal trench minimum width is changed from 6 inches to 12 inches. Six (6) inches has been shown to be too narrow to effectively construct a narrow trench. Soil sloughing into the trench during excavation and also during drainrock placement is the primary problem. The difficulty in constructing a six inch narrow dispersal trench to a satisfactory standard makes them inappropriate to remain in the Manual.

A maximum width for narrow dispersal trench is provided as an amendment where previously there wasn't one. Because 24 inches is the standard trench width and because narrow trenches are allowed closer spacing than standard trench spacing a maximum width of 18 inches is proposed.

Prior - 4.5 DEEP ABSORPTION TRENCH SYSTEM
[37] This entire section is proposed to be removed. Deep absorption trenches are not installed in the Town because there are few areas where site conditions are so extreme that a standard system cannot be installed. Standard systems already allow up a 5 foot trench depth for repairs, if proper soil conditions exist, so this section is redundant and unnecessary.

4.6 REDUNDANT SYSTEMS

[38] 4.6.C. Operation and maintenance instructions
This regulation is revised to stipulate that Redundant Septic Systems are no longer required to be inspected by the Town. Redundant systems are not complicated nor require a higher level of oversight that would be provided by Town inspections. These systems are also required to be inspected by service providers, therefore it is redundant and costly to have the Town inspect them as well. This revision will not remove the inspections required by a service provider but will remove the unnecessary inspections by the Town.

4.6 STEEP SLOPE SYSTEMS

[39] 4.6.A. General Conditions for approval
The minimum soil depth on Steep Slope Systems is changed from 6 feet to 6.5 feet. This is done because the minimum trench depth for Steep Slope Systems is already prescribed as 30 inches (2.5 feet). Typically a minimum trench depth is 2 feet but for steep trenches it is a little deeper because of the lack of soil on the downhill side of trench. Because 4 feet of soil is necessary beneath all dispersal trenches, then 6.5 feet (4 + 2.5) of minimum soil depth is necessary for Steep Slope Systems.

PRE-CONSTRUCTED ADVANCED TREATMENT SYSTEMS.

[40] 4.14. To maintain the distinction between 'factory made' advanced treatment systems and those that are constructed during time of installation (such as a sand filter), the descriptive term

"package" has been used. This term is outdated and no longer conveys the intended meaning. Therefore it is replaced with the term "pre-constructed" [advanced treatment systems].

4.15 GRAYWATER SYSTEMS
[50] 4.16. To more accurately synchronize with State terminology, the term "Graywater Disposal System" is changed to "Graywater System". Also, in the description of the type of wastes not allowed in graywater systems, liquid waste from "toilets" is added for obvious reasons.

Chapter 5 COMPONENT AND EQUIPMENT SPECIFICATIONS

5.2 DOSING SEPTIC TANK ASSEMBLIES
[51] More clarity is provided in the introduction of this section by stipulating that a dosing septic tank must be a second compartment draw-down tank. It also limits the use of second compartment draw-down tanks to systems that are 300 gpd or less and those that do not receive wastewater from commercial food operations. The downside to allowing 'dosing' septic tanks is that a pump inside a tank reduces the tank's capacity because the on/off levels are set lower than the standard liquid operating level in a tank. In addition, a pump inside a septic tank tends to create turbulence in the tank, reduces static conditions and promotes more solids to flow out into the dispersal field.

Chapter 6 LARGE AND ADVANCED TREATMENT SYSTEMS

[52] 6.1. DEFINITION OF LARGE AND ADVANCED TREATMENT SYSTEMS
More clarity is provided in this section and chapter regarding what type of systems it is intended to address. The term "Large System" is re-defined to make it compatible with the intent of this chapter and definitions found in other chapters of the Manual.

[53] 6.2.1. In accordance with California Code and in a manner consistent with Section 1.2 of the Manual, a "Registered Environmental Health Specialist" is added regarding what certified professionals can design Large or Advanced Treatment Systems.

[54] 6.2.6. In designing an advanced treatment system a nitrogen loading analysis is required. Current groundwater and creek monitoring have not indicated problems with Nitrogen 'pollution' from onsite wastewater discharges. Substantial rainfall and soil conditions seem to be effectively treating nitrogen influx from septic systems. For this reason it is not necessary to provide a study of nitrogen loading for the design of smaller septic systems. The revision proposed is that this Nitrogen analysis be only required for projects with wastewater flows over 5000 gallons per day.

[55] 6.2.12. Prior language in this section required ground water monitoring wells for all advanced treatment systems that exceeded 900 gpd. This requirement was initially instigated by the State many years ago. History has shown that most of the existing wells do not provide measurable levels of groundwater or significant data that assists in the analysis of groundwater close to the septic system. Many of these systems are not large and groundwater monitoring is not warranted. A revision is proposed that removes the mandatory requirement for these wells and allows them to be optional (at the discretion of the Onsite Sanitary Official).

[56] 6.2.15. A new requirement for septic systems is added as required in the new California Onsite Wastewater Treatment System Policy (Item 2.4). That requirement is that all systems, new and old, that receive high strength wastewater from commercial food service buildings must

have a properly sized grease interceptor. Any system that has wastewater with a BOD level over 900mg/l must also submit a Report of Waste Discharge with the Regional Water Quality Control Board and be regulated by them.

[57] 6.2.A. Septic Tank Sizing. Prior requirements for septic tank sizing in the Manual were mathematically incorrect and largely ignored by knowledgeable designers. The sizing criterion is proposed to match current industry standards. Septic tank capacity sizing would be two (2) times the design flow for any septic system with the provision that if there is a higher strength wastewater it may be increased to three (3) times the design flow.

[58] 6.2.F. Aesthetics of Alternative and Advanced Treatment Systems.
The requirement to have aesthetically pleasing septic systems that have above-ground components is increased so as to include this requirement for alternative systems and not just advanced treatment systems. Typically, it is only advanced treatment systems that have above-ground components but it is foreseeable that some alternative treatment systems that don't provide advanced treatment could also have above-ground components that need to be visually screened.

Chapter 8 LOCAL AGENCY MANAGEMENT PROGRAM

[59] A new chapter is proposed to be added to the Manual: LOCAL AGENCY MANAGEMENT PROGRAM.
This chapter will contain those portions required by the new State Onsite Wastewater Treatment System Policy that are not yet in Town regulation. This new chapter will deal mostly with required administrative aspects of the Towns Onsite Wastewater program. This chapter is only created as a place mark and future submittals to the Town Council will occur for its' content.

Chapter 9 DEFINITIONS

[60] DEFINITIONS
Several new definitions are added to this chapter including those for advanced treatment, aerobic media system, dispersal field, dispersal trench, media filter, primary treatment, secondary treatment and wastewater strength. Some terms with definitions are removed because they are not found in the Manual and are seldom used in the industry.

APPENDIX A - SOIL PROFILE TERMINOLOGY

No substantive revisions are proposed.

APPENDIX B - GROUNDWATER MONITORING GUIDELINES

No substantive revisions are proposed.

APPENDIX C - HYDRAULIC TESTING OF SOIL

[61] A. Percolation Test.
The percolation testing procedure has been revised to provide an improved pre-soaking procedure for the soil area being tested. It has also been changed to use time as the interval between measurements instead of the distance of the descending water level in the percolation hole. These changes will provide more accuracy for how soil will behave when a dispersal field is built on it.

[62] B. Infiltration Test.
The infiltration testing procedure has been revised to provide an improved pre-soaking procedure for the soil area being tested. It has also been changed to use time as the interval between measurements instead of the distance of the descending water level in the ring. These changes provide more accuracy for how the soil will behave when a dispersal field is built upon it.

APPENDIX D - SURFACE AND GROUNDWATER MONITORING PROGRAM
No revisions are proposed

FIGURES - Standard Drawings
Twenty five (25) standard drawings in the Manual, or 'Figures' as they are labeled, have been re-drawn with slight revisions including additional labeling for better comprehension. A few of the code changes as proposed are reflected in these revisions, such as the minimum length of effluent pipe as it exits a septic tank. One new drawing has been added; The Downtown Paradise Hydraulic Loading Rate Adjustment Area, Figure 4.14. All other changes are made to provide better clarity and understanding. All other Figures in the Manual remain unchanged.

Attachment C:

Central Valley Regional Water Quality Control Board

25 February 2015

Doug Danz
Environmental Health Director
Town of Paradise
5555 Skyway
Paradise, CA 95969-4931

REVIEW CRITERIA, LOCAL AGENCY MANAGEMENT PROGRAMS (LAMPS) FOR TIER 2 ONSITE WASTEWATER TREATMENT SYSTEMS

On 19 June 2012, the State Water Resources Control Board (State Board) adopted *Policy for the Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems* (Policy). The Policy requires your agency to determine if it will comply with the prescriptive Tier 1 requirements of the Policy or, elect to implement Tier 2 requirements by submitting a Local Agency Management Program (LAMP). If your agency wishes to, it would submit its LAMP to the Central Valley Regional Water Quality Control Board (Central Valley Water Board) for review and approval following a public comment period[1]. Since many of the agencies within the Central Valley Water Board have expressed their desire to pursue the Tier 2 option, staff has developed the attached checklist to serve two purposes:

- Serve as a guide to the agency as it develops a LAMP, and
- Assist Board staff to expedite their review of the proposed LAMPs.

The checklist was developed by Central Valley Water Board staff in cooperation with the California Conference of Directors of Environmental Health and State Water Resources Control Board staff. It summarizes OWTS Policy requirements for LAMPs and is to be used and completed during development of your LAMP. For your convenience, we can e-mail you the checklist as a spreadsheet.

The checklist was developed to ensure that a LAMP will comply with Section 9 of the OWTS Policy. To aid in determining compliance with the Policy, we request that you develop your LAMP in two parts; *Program* and *Codes*. The *Program* part should describe your agency's means of complying with the OWTS, and must include adequate detail, including technical information, to support how all the criteria work together to protect water quality and human health (Section 9.5, OWTS Policy). The *Codes* part should be a complete, detailed compilation

[1] Approved, the final version will serve as a conditional waiver of Waste Discharge Requirements, pursuant to §13269 California Water Code. For details, see: http://www.waterboards.ca.gov/water_issues/programs/owts/docs/owts_policy.pdf.

of appropriate supporting local codes and ordinances that demonstrate your agencies legal authority to fully implement the LAMP to ensure compliance with the OWTS Policy.

We encourage you to work with Central Valley Water Board staff during development of your LAMP to ensure it fully complies with the OWTS Policy. The following are staff contacts for this program:

- Redding Office: Eric Rapport (530) 224-4998, or erapport@waterboards.ca.gov,
- Rancho Cordova Office: Anne Olson at (916) 464-4740 or aolson@waterboards.ca.gov,
- Fresno Office: Dale Harvey at (559) 445-6190 or dharvey@waterboards.ca.gov.

We look forward to working with you on this very important program for the Central Valley Water Board.

Clint E. Snyder, P.G.
Assistant Executive Officer

EJR: lmw

Attachment: Checklist

cc + attch.: Tim O'Brien, State Water Resources Control Board, Sacramento (all)
Robert Busby, Central Valley Regional Water Quality Control Board, Rancho Cordova (Local Agencies in R5S)
Lonnie Wass, Central Valley Regional Water Quality Control Board, Fresno (Local Agencies in R5F)

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Completeness Checklist for LAMPs

	GENERAL REQUIREMENTS FOR LAMPs			
OWTS Policy Section	**OWTS Policy Section Summary**	**Region 5 Comments (These do not replace your review of the OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)**	**Relevant LAMP Section**	**Legal Authority/ Code Section**
3.3	Annual Reporting	For Section 3.3 et seq., describe your program for annual reporting to Central Valley Regional Water Quality Control Board (Central Valley Water Board) staff in a tabular spreadsheet format.		
3.3.1	Complaints	Include numbers and locations of complaints, related investigations, and means of resolution.		
3.3.2	OWTS Cleaning	Include applications and registrations issued as part of the local cleaning registration pursuant to California Health and Safety Code §117400 et seq.		
3.3.3	Permits for New and Replacement OWTS	Include numbers and locations of permits for new and replacement OWTS, and their Tiers.		
3.4	Permanent Records	Describe your program for permanently retaining records, and means of making them available to Central Valley Water Board staff within 10 working days of a written request.		
3.5	Notifications to Municipal Water Suppliers	Describe your program for notifying public well and water intake owners, and the California Department of Public Health. Notification shall be as soon as practicable, but no later than 72 hours upon discovery of a failing OWTS, as described in Sections 11.1 and 11.2, within setbacks described in Sections 7.5.6 through 7.5.10.		
9.0	Minimum OWTS Standards	This Section is an introduction; we require no specific LAMP Section citation here.		Not applicable
9.1	Considerations for LAMPs	For Section 9.1 et seq., provide your commitment to evaluate complaints, variances, failures, and inspections in Section 9.3.2 (Water Quality Assessment), and your proposed means of assessment to achieve this Policy's purpose of protecting water quality and human health.		
9.1.1	Degree of vulnerability due to local hydrogeology	*Describe your commitment, and proposed means to identify* hydrogeologically vulnerable areas for Section 9.3.2, *after compiling monitoring data.* Discuss appropriate related siting restrictions and design criteria to protect water quality and public health. Qualified professionals ("Definitions," page 9 in the Policy) should identify hydrogeologically vulnerable areas. *Such professionals, where appropriate during a Water Quality Assessment, should generally consider locally reasonable percolation rates of least permeable relevant soil horizons, best available evidence of seasonally shallowest groundwater (including, but not limited to, soil mottling and gleying, static water levels of nearby wells and springs, and local drainage patterns), threats to receptors (supply wells and surface water), and potential geotechnical issues (including, but not limited to, potentially adverse dips of bedding, foliations, and fractures in bedrock).*		
9.1.2	High quality waters and other environmental conditions requiring enhanced protection	Describe special restrictions to meet water quality and public health goals pursuant to all Federal, State, and local plans and orders. *Especially consider appropriate alternatives to those provided in Section 7.8, Allowable Average Density Requirements under Tier 1. See also: State Water Resources Control Board Resolution No. 68-16.*		

9.1.3	Shallow soils requiring non-standard dispersal systems	*We interpret "shallow" soils generally to mean thin soils overlying bedrock or highest seasonal groundwater. Dependent on threats to receptors, highest seasonal groundwater can locally include perched and intermittent saturated zones, as well as the shallowest local hydraulically unconfined aquifer unit. See Section 8.1.5 for Minimum Depths to Groundwater under Tier 1.* Qualified professionals should make appropriate determinations on the design and construction of non-standard dispersal systems due to shallow soils.		
9.1.4	High domestic well usage areas	*Our key potential concerns are nitrate and pathogen transport toward receptor wells, especially in areas with existing OWTS already prone to soft failures (OWTS failures not evident at grade). Appropriate qualified professionals should consider reasonable pollutant flow paths toward domestic wells, at minimum based on; publically available nitrate concentrations in local wells, published technical literature on local wastewater and non-wastewater nitrate sources, well constructions, pumping demands, and vulnerability of wells due to local hydrogeology. For pathogens, qualified professionals should ensure that field methods are sufficient to mitigate the potential for false positives.*		
9.1.5	Fractured bedrock	*Where warranted, appropriate qualified professionals should assess permeability trends of water-bearing fractures, and related potential pathways of effluent toward receptors, including but not limited to, domestic wells and surface water. The professionals should also consider potential geotechnical issues. We suggest consideration of fractured bedrock in concert with percolation rates of overlying soils; either very high or low percolation rates might warrant siting restrictions or non-standard dispersal systems. See also State Water Resources Control Board Order WQ 2014-0153-DWQ, Attachment 1, page 1-3, Item A-3.*		
9.1.6	Poorly drained soils	*Appropriate qualified professionals should give criteria for determination of representative percolation rates, including but not limited to, general site evaluation, trench logging, pre-soak and measurement methods of percolation tests, and acceptable alternatives for percolation tests.*		
9.1.7	Vulnerable surface water	*Our key potential concern is eutrophication of fresh surface water. While typically with relatively low mobility in groundwater and recently informally banned in dishwater detergents, phosphate is a common cause. At minimum, describe appropriate qualified professionals who will consider potential pathways of wastewater-sourced phosphate and other nutrients toward potentially threatened nearby surface bodies.*		
9.1.8	Impaired water bodies	*Wolf Creek, Nevada County, and Woods Creek, Tuolumne County will require Tier 3 Advanced Protection Management Programs. This applies to Nevada, Placer, and Tuolumne Counties. See Attachment 2 of the OWTS Policy.*		
9.1.9	High OWTS density areas	*Where nitrate is an identified chronic issue, at minimum, consider nitrogen loading per area; for example, see Hantzsche and Finnemore (1992), Crites and Tchobanoglous (1998), and more recent publications as appropriate.*		
9.1.10	Limits to parcel size	At minimum, consider hydraulic mounding, nitrate and pathogen loading, and sufficiency of potential replacement areas.		

9.1.11	Areas with OWTS that predate adopted standards	This refers to areas with known, multiple existing OWTS.		
9.1.12	Areas with OWTS either within prescriptive, Tier 1 setbacks, or within setbacks that a Local Agency finds appropriate	This refers to areas with known, multiple existing OWTS.		
9.2	Scope of Coverage:	For Section 9.2 et seq., provide details on scope of coverage, for example maximum authorized projected flows, allowable system types, and their related requirements for site evaluation, siting, and design and construction requirements.		
9.2.1	Installation and Inspection Permits	Permits generally cover procedures for inspections, maintenance and repair of OWTS, including assurances that such work on failing systems is under permit; see Tier 4.		
9.2.2	Special Provision Areas and Requirements near Impaired Water Bodies	*Wolf Creek, Nevada County, and Woods Creek, Tuolumne County will require Tier 3 Advanced Protection Management Programs. This applies to Nevada, Placer, and Tuolumne Counties. See Attachment 2 of the OWTS Policy.*		
9.2.3	LAMP Variance Procedures	Variances for new installations and repairs should be in substantial conformance to the Policy, to the greatest extent practicable. Variances cannot authorize prohibited items in Section 9.4.		
9.2.4	Qualifications for Persons who Work on OWTS	Qualifications generally cover requirements for education, training, and licensing. *We suggest that Local Agencies review information available from the California Onsite Water Association (COWA), see*: http://www.cowa.org/		
9.2.5	Education and Outreach for OWTS Owners	Education and Outreach generally supports owners on locating, operating, and maintaining OWTS. At minimum, ensure that you will require OWTS designers and installers to provide owners with sufficient information to address critical maintenance, repairs, and parts replacements within 48 hours of failure; *see also Tier 4.* Also, provide information to appropriate volunteer groups. *At minimum, we suggest providing this information on your webpage.*		
9.2.6	Septage Disposal	Assess existing and proposed disposal locations, and their adequacy.		
9.2.7	Maintenance Districts and Zones	*These generally refer to Homeowners Associations, special maintenance districts, and similar responsible entities. Requirements for responsible entities should generally reflect the Local Agency's judgment on minimum sizes of subdivisions that could potentially cause environmental impacts. LAMPs should ensure that responsible entities have the financial resources, stability, legal authority, and professional qualifications to operate community OWTS.*		
9.2.8	Regional Salt and Nutrient Management Plans	Consider development and implementation of, or coordination with, Regional Salt and Nutrient Management Plans; *see also State Board Resolution 2009-0011:* http://www.waterboards.ca.gov/centralvalley/water_issues/salinity/laws_regs_policies/rw_policy_implementation_mem.pdf		
9.2.9	Watershed Management Groups	Coordinate with *volunteer well monitoring programs* and similar watershed management groups.		

9.2.10	Proximity of Collection Systems to New or Replacement OWTS	Evaluate proximity of sewer systems to new and replacement OWTS. *See also Section 9.4.9.*		
9.2.11	Public Water System Notification prior to permitting OWTS Installation or Repairs	Give your notification procedures to inform public water services of pending OWTS installations and repairs within prescribed setback distances.		
9.2.12	Policies for Dispersal Areas within Setbacks of Public Wells and Surface Water Intakes	Discuss supplemental treatments; see Sections 10.9 and 10.10. A Local Agency can propose alternate criteria; *however we will need rationale in detail.*		
9.2.13	Cesspool Discontinuance and Phase-Out	Provide plans and schedule.		
9.3	Minimum Local Agency Management Responsibilities:	For Section 9.3 et seq., discuss minimum responsibilities for LAMP management. Responsibilities should generally cover data compilation, water quality assessment, follow-up on issues, and reporting to the Central Valley Water Board:		
9.3.1	Permit Records, OWTS with Variances	Describe your records maintenance; numbers, locations, and descriptions of permits where you have granted variances.		
9.3.2	Water Quality Assessment Program:	In the Water Quality Assessment Program, generally focus on areas with characteristics covered in Section 9.1. Include monitoring and analysis of water quality data, complaints, variances, failures, and inspections. Also include appropriate monitoring for nitrate and pathogens; you can use information from other programs. *We are available to provide further guidance on reporting requirements. In the interim, to assist with analyses and evaluation reports (Section 9.3.3), we suggest posting data on appropriate maps; for example consider the following links*: http://www.nrcs.usda.gov/wps/portal/nrcs/site/ca/home/ http://www.cdpr.ca.gov/docs/emon/grndwtr/gwpa_maps.htm http://ngmdb.usgs.gov/maps/mapview/ http://www.conservation.ca.gov/cgs/information/publications/ms/Documents/MS58.pdf http://www.water.ca.gov/groundwater/data_and_monitoring/northern_region/GroundwaterLevel/SacValGWContours/100t400_Wells_Spring-2013.pdf http://www.water.ca.gov/waterdatalibrary/ http://www.waterboards.ca.gov/gama/docs/hva_map_table.pdf http://geotracker.waterboards.ca.gov/gama/ http://msc.fema.gov/portal		

9.3.2.1	Domestic Well Sampling	*Apply your best professional judgment to ensure that well sampling focuses on hydrogeologically reasonable pollutant (primarily nitrate) flow paths. A qualified professional should generally design an appropriate directed, judgmental, sample (i.e., statistically non-random). Of the links provided, the Geotracker GAMA website might be particularly useful to the professional; at minimum we suggest reviews of available nitrate data in relevant domestic wells, up-gradient, within, and down-gradient of an area of interest. For some instances, for example where a developer proposes a relatively large project, a Local Agency might require a special study to distinguish between wastewater and non-wastewater sourced nitrate. In such cases, we suggest your consideration of requiring focused sampling and analyses, for example of $\delta^{18}O$ and $\delta^{15}N$ of nitrate (Megan Young, USGS, 2014 pers comm), and the artificial sweeteners sucralose and acesulfame-K (Buerge et al 2009, Van Stempvoort et al 2011, and more recent publications as they become available).*		
9.3.2.2	Domestic Well Sampling, Routine Real Estate Transfer Related	This applies only if those samples are routinely performed and reported.		
9.3.2.3	Water Quality of Public Water Systems	Reviews can be by your agency or another municipality.		
9.3.2.4	Domestic Well Sampling, New Well Development	This applies if those data are reported.		
9.3.2.5	Beach Water Quality Sampling, H&S Code §115885	*Public beaches include those on freshwater.*		
9.3.2.6	Receiving Water Sampling Related to NPDES Permits	This refers to existing data from other monitoring programs.		
9.3.2.7	Data contained in California Water Quality Assessment Database	This refers to existing data from other monitoring programs.		
9.3.2.8	Groundwater Sampling Related to Waste Discharge Requirements	This refers to existing data from other monitoring programs.		
9.3.2.9	Groundwater Sampling Related to GAMA Program	This refers to existing data from other monitoring programs.		
9.3.3	Annual Status Reports Covering 9.3.1-9.3.2	Reports are due 1 February, annually, beginning one year after a Regional Board approves LAMP. Every fifth year also include an evaluation report. Submit all groundwater monitoring data in Electronic Delivery Format (EDF) for Geotracker; submit all surface water data to CEDEN.		
9.4	Not Allowed or Authorized in LAMP:	For Section 9.4 et seq., ensure that your LAMP covers prohibitions.		
9.4.1	Cesspools	Local Agencies cannot authorize cesspools of any kind or size.		
9.4.2	Projected Flow greater than10,000 gpd	*Apply professional judgment to further limit projected flows.*		

9.4.3	Effluent Discharger Above Post-Installation Ground Surface	For example, Local Agencies cannot authorize effluent disposal using sprinklers, exposed drip lines, free-surface wetlands, and ponds.		
9.4.4	Installation on Slopes greater than 30% without Registered Professional's Report	*See also earlier comments, Section 9.1.1, regarding potential geotechnical concerns.*		
9.4.5	Decreased Leaching Area for IAPMO-Certified Dispersal System with Multiplier less than 0.70	IAPMO refers to International Association of Plumbing and Mechanical Officials. *Decreased leaching area refers to alternatives to conventional (stone-and-pipe) dispersal systems; these alternatives require relatively less area. The multiplier, less than 1, allows for a reduction in dispersal field area relative to a conventional system.*		
9.4.6	Supplemental Treatments without Monitoring and Inspection	*Therefore, ensure that the LAMP describes periodic inspection and monitoring for OWTS with supplemental treatments.*		
9.4.7	Significant Wastes from RV Holding Tanks	*We interpret significant amounts to mean amounts greater than incidental dumping, such that volume, frequency, overall strength, or chemical additives preclude definition as domestic wastewater; see Definitions in OWTS Policy. See also, State Water Resources Control Board Order WQ 2014-0153-DWQ, Attachment B-2.*		
9.4.8	Encroachment Above Groundwater	Bottom of OWTS dispersal systems cannot be less than 2 feet above groundwater, or bottom of seepage pits, less than 10 feet above groundwater. *We interpret groundwater to include inter-flow and perched zones, along with the shallowest main unconfined aquifer. Degree of vulnerability to pollution due to hydrogeological conditions, Section 9.1.1, and the Water Quality Assessment, Section 9.3.2., should cover in detail means of assessing seasonally shallowest depth to groundwater.*		
9.4.9	Installations Near Existing Sewers	New and replacement OWTS cannot occur on any lot with available public sewers less than 200 feet from a building or exterior drainage facility (exception; connection fees plus construction costs are greater than 2 times the replacement OWTS costs, and Local Agency determines no impairment to any drinking water.)		
9.4.10	Minimum Setbacks:	These setbacks are from public water systems.		
9.4.10.1	From Public Supply Wells	If the dispersal system is less than 10' in depth, then the setback must be greater than150' from public water supply well.		
9.4.10.2	From Public Supply Wells	If the dispersal system is greater than10' in depth, then the setback must be greater than 200' from public water supply well.		
9.4.10.3	From Public Supply Wells, Regarding Pathogens	If the dispersal system is greater than 20' in depth, and less than 600' from public water supply well, then the setback must be greater than the distance for two-year travel time of microbiological contaminants, as determined by qualified professional. In no case shall the setback be less than 200'.		
9.4.10.4	From Public Surface Water Supplies	If the dispersal system is less than 1,200' from public water system's surface water intake, within its drainage catchment, and potentially threatens an intake, then the setback must be greater than 400' from the high water mark of the surface water body.		

9.4.10.5	From Public Surface Water Supplies	If the dispersal system is greater than1,200,'but less than 2,500,' from public water system's surface water intake, within its drainage catchment, and potentially threatens an intake, then the setback must be greater than 200' from high water mark of surface water body.		
9.4.11	Supplemental Treatments, Replacement OWTS That Do Not Meet Minimum Setback Requirements	Replacement OWTS shall meet minimum horizontal setbacks to the maximum extent practicable.		
9.4.12	Supplemental Treatments, New OWTS That Do Not Meet Minimum Setback Requirements	New OWTS shall meet minimum horizontal setbacks to the maximum extent practicable, and meet requirements for pathogens as specified in Section 10.8., and any other Local Agency's mitigation measures.		
9.5	Technical Support of LAMP	Include adequate detail to ensure that the combination of all proposed criteria will protect water quality and public health sufficiently to warrant the Central Valley Water Board's waiver of Waste Discharge Requirements, pursuant to §13269, California Water Code.		
9.6	Regional Water Quality Control Board Consideration of LAMP	Regional Boards shall consider past performance of local programs to protect water quality. *We will generally consider past performance based on our reviews of annual status and evaluation reports; see Section 9.3.3.*		

References:

Hantzsche, N.N. and E.J. Finnemore (1992). Predicting groundwater nitrate-nitrogen impacts. "Groundwater," 30, No. 4, pages 490-499.

Crites, R and G. Tchobanoglous (1998). Small and Decentralized Wastewater Management Systems, McGraw-Hill, ISBN 0-07-289087-8, 1084 pages (see especially pages 919-920).

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Buerge, Ignaz J., Hans-Rudolf Buser, Maren Kahle, Markus D. Muller, and Thomas Poiger (2009). Ubiquitous occurrence of the artificial sweetener acesulfame in the aquatic environment: an ideal chemical marker of domestic wastewater in groundwater. "Environmental Science and Technology," 43" pages 4,381 to 4,385.

Van Stempvoort, Dale R., James W. Roy, Susan J. Brown, and Greg Bickerton (2011). Artificial sweeteners as potential tracers in groundwater in urban environments. "Journal of Hydrology," 401 pages 126 to 133.

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