

**STAFF REPORT
FIELD OPERATIONS
FEBRUARY 2018**

TRANSMISSION & DISTRIBUTION

MAINTENANCE WORK

- Crews have been taking care of leaks/maintenance issues.
- 3 Mainline leaks were repaired this month.
- 580 Firefly's have been replaced this month.
- 2 service lines were repaired/replaced this month.
- System wide flushing started this month.
- 1 hydrant was repaired this month.

PFD/PID JOINT PIPELINE PROJECTS

- Use hydrant surcharge funds to upgrade substandard mains.
- The Country Club project is now complete.
- Crestview/Crestwood project is in beginning stages.

DEVELOPMENT PROJECTS

- None at this time.

CUSTOMER REIMBURSEMENT JOBS (by work order)

- New mod 35 install at 470 Boaz Ct. (Anderson's Scmale Lane project)

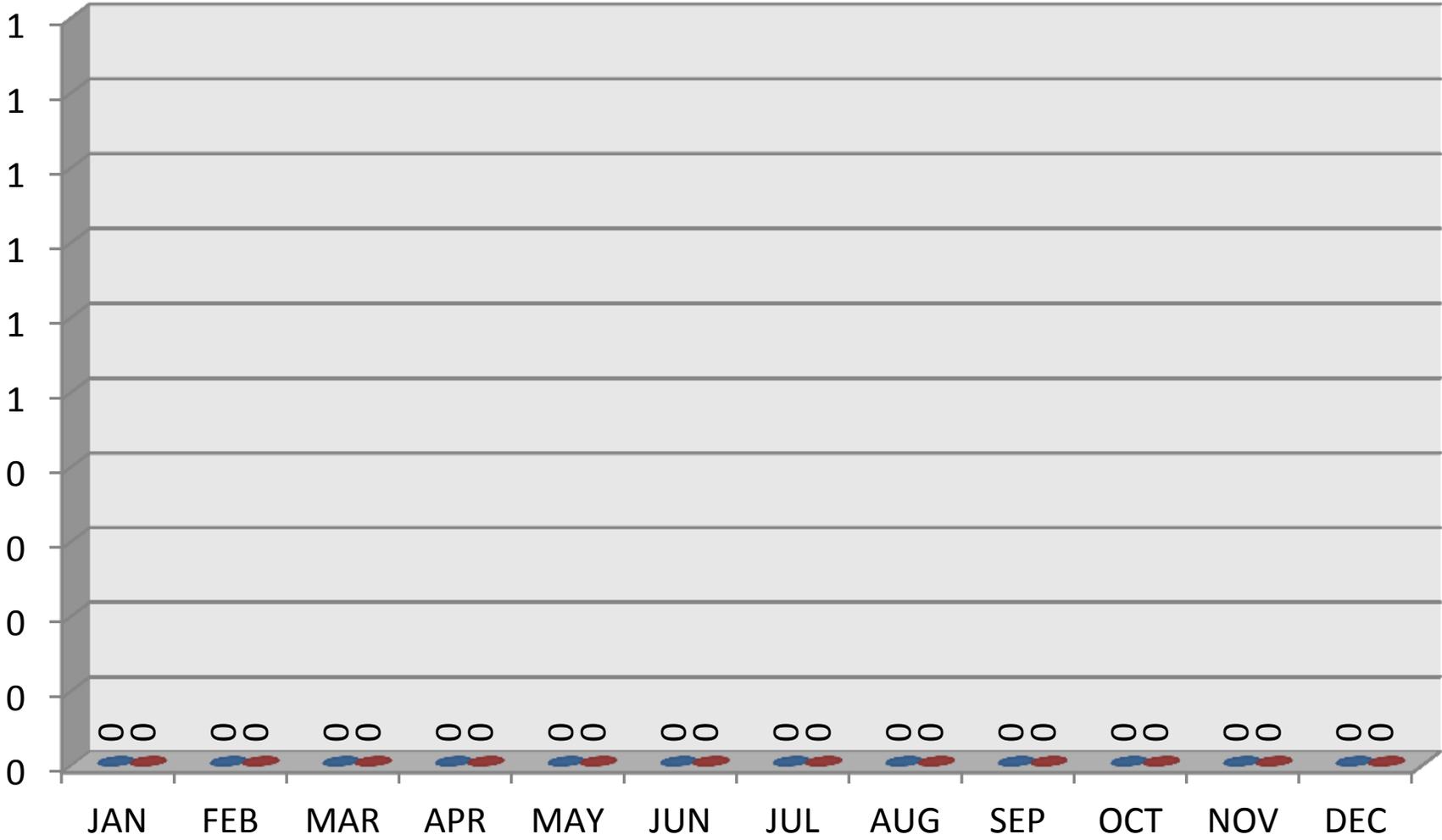
CRESTVIEW/CRESTWOOD PIPELINE PROJECT

- Project is in beginning stages. Planning/pot-hole work.

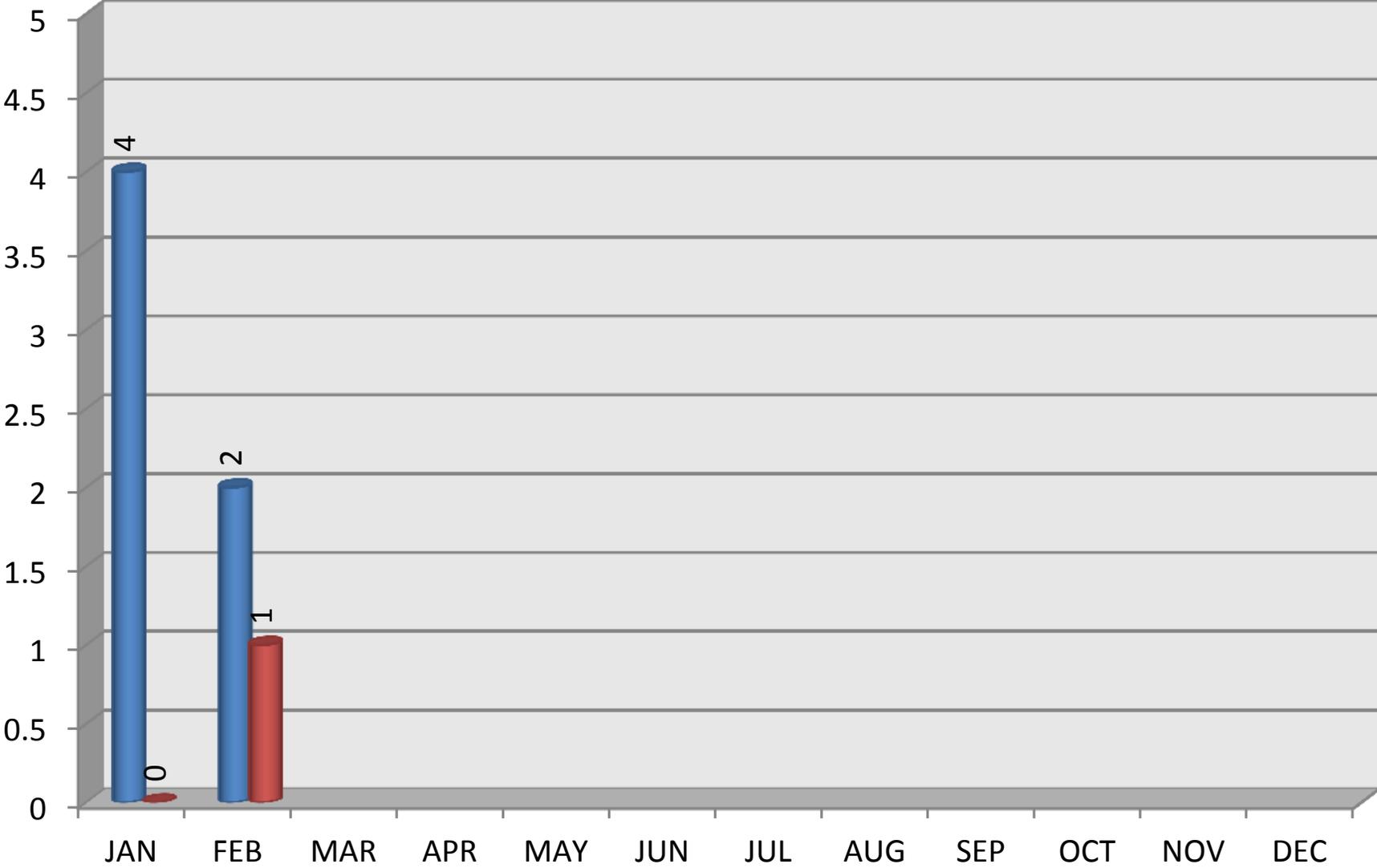
SUMMARY

- We are in the beginning stages of plans/lay out for the Crestview/Crestwood pipeline project. Letters were delivered by hand to all the customers that will be affected explaining the process. Old 4" and 2" steel pipe currently feed this entire neighborhood. The majority of these mains are in the backyards of several homes with minimal fire protection/flow. Approximately 3,000 feet of 8" C-900 will be installed. Six residential hydrants will be placed throughout, along with new service lines. Twelve customers currently have meters in their back yards, which will be relocated in front of their homes. This project will be beneficial to all for a multitude of reasons.
- Three new Utility Workers started in mid-January. Two of the three have recently passed their drive test/skills with a DMV tester and are the proud owners of their CDL licenses. Pete Grout, who is one of our Crew Leaders, has been instructing/training our new employees for many years to prepare them for taking the drive/skills test in Redding or Yuba City. Our drivers need a minimum of 40 hours behind the wheel in a Class A vehicle toeing a flatbed trailer and fine tuning the skills required to pass with a DMV instructor in the cab. Pete has done a great job preparing our drivers. The last employee is scheduled to test in mid-April.
- We are assisting the meter shop with the firefly replacements. 2-4 of our utility workers are teaming up with the change outs to insure our system is operating properly on a daily basis.
- We have been working on our valve program, locating missing and or covered valve cans, exposing them, exercising, and taking R.P's (reference points for mapping) when necessary.
- We continue to take care of the daily needs of the District and maintenance issues providing excellent customer service.

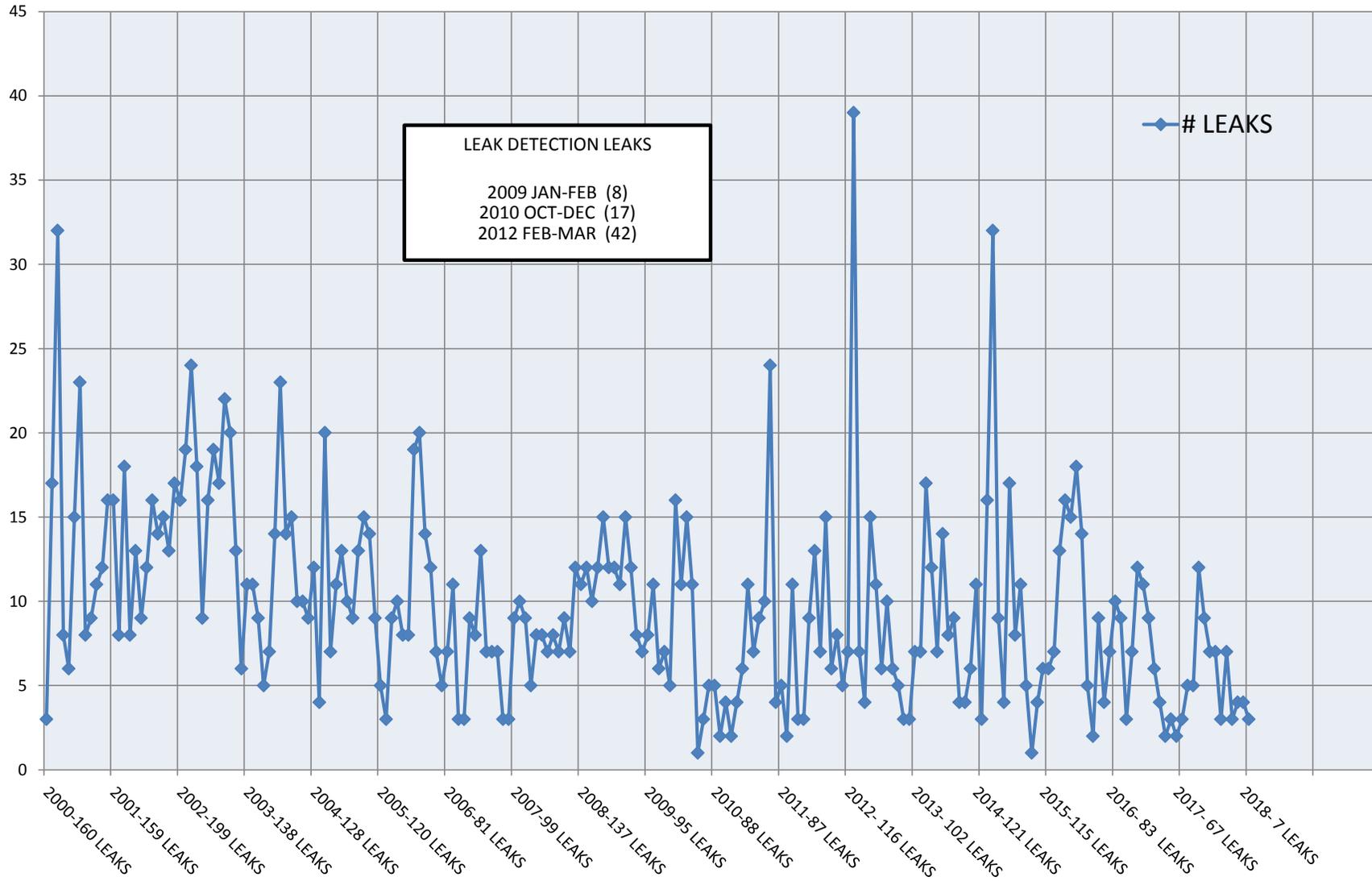
MONTHLY PIPE INSTALLATION 2018, TOTAL INSTALLED FT.



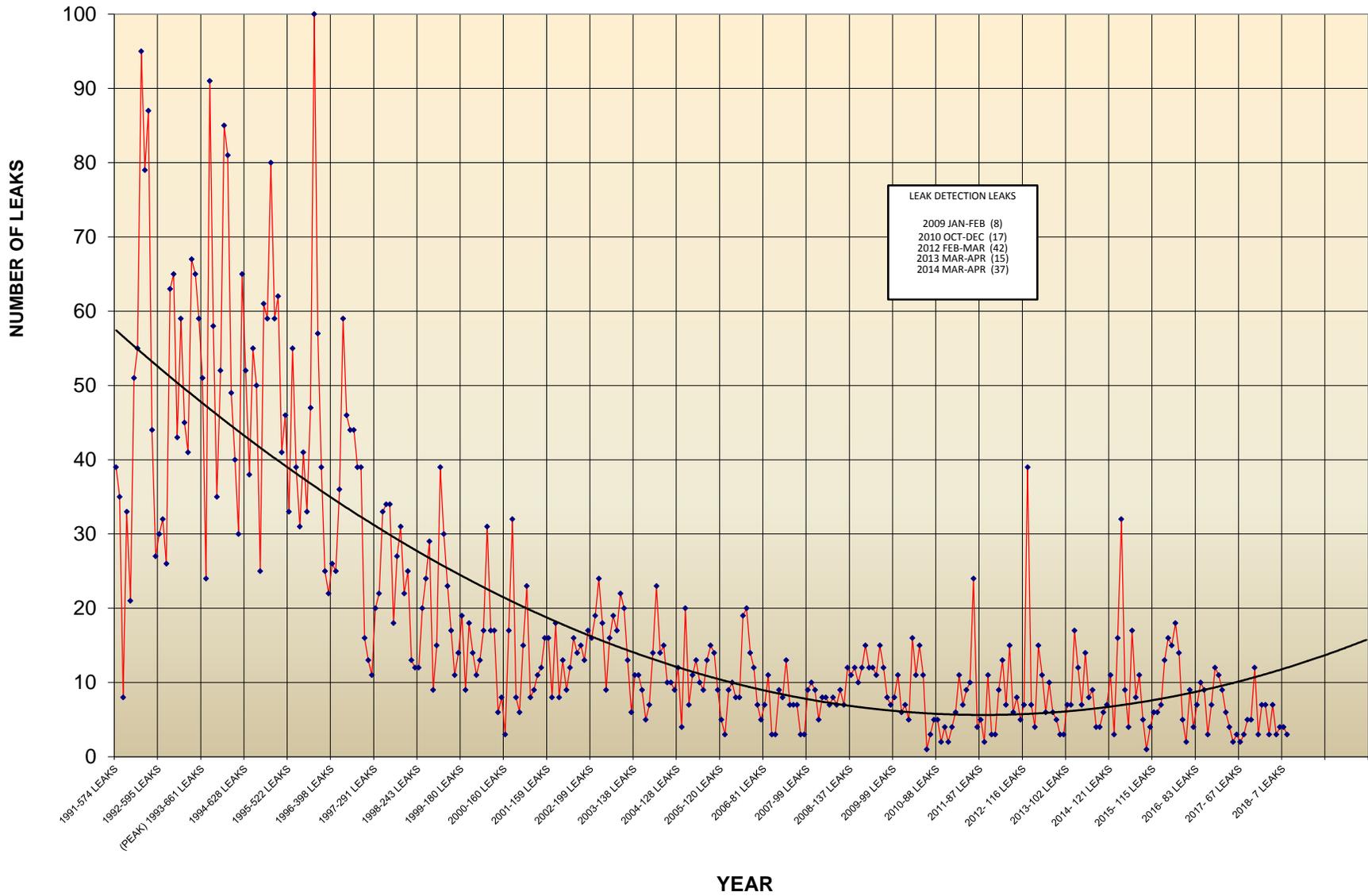
2018 METER WORK: 6 REPLACED; 1 NEW



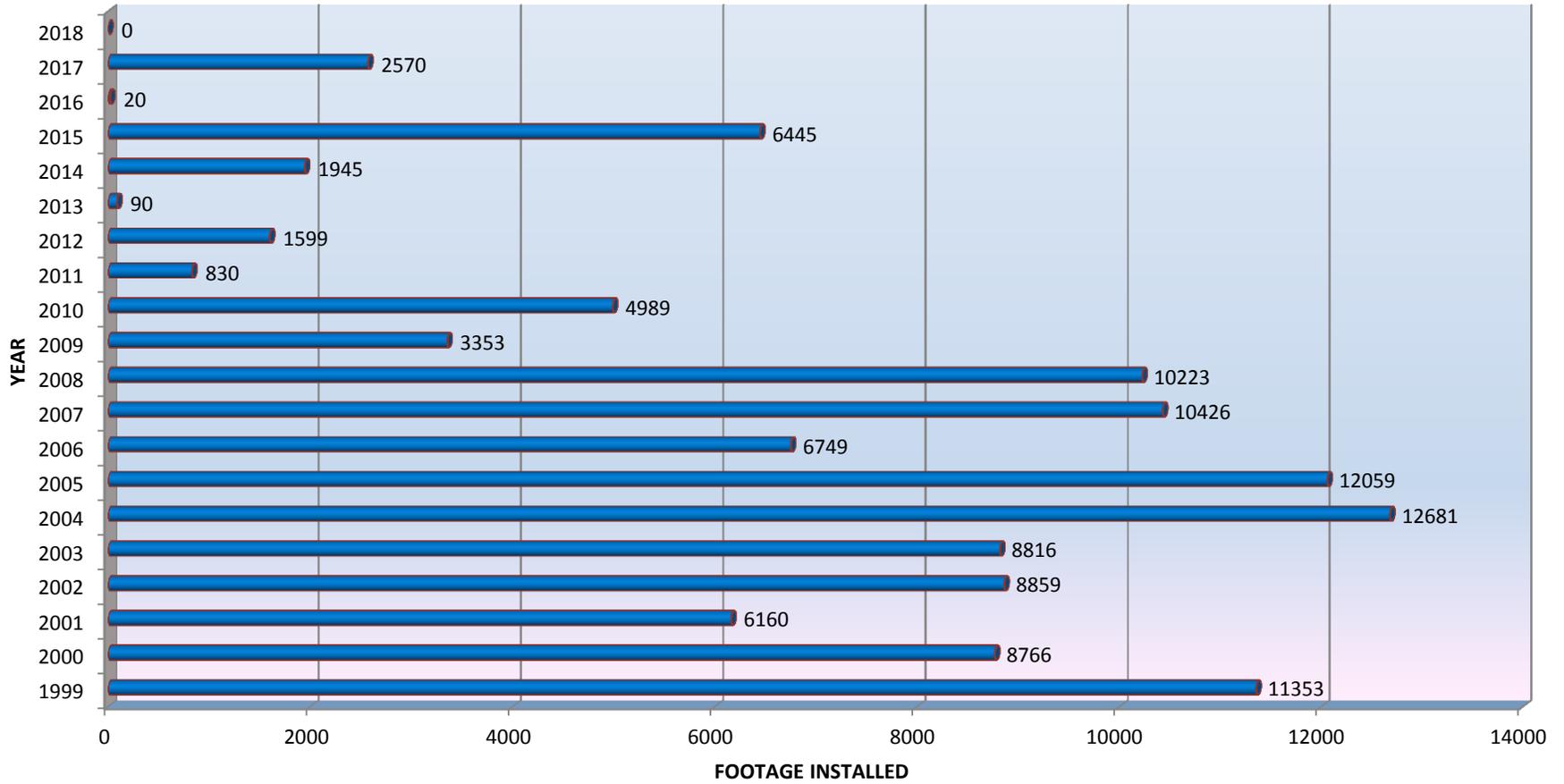
MAINLINE LEAKS



MONTHLY LEAK HISTORY 1991 TO PRESENT



PIPELINE INSTALLATION HISTORY



FIREFLY REPLACEMENTS 2018



TYPE PIPE	FEET	MILES	%
Asbestos Cement	91375	17.31	10.0%
Ductile Iron	2191	0.41	0.2%
C-900 PVC 4" to 12"	281308	53.28	30.9%
Cast Iron	1780	0.34	0.2%
Cement Mortar Lined	175060	33.16	19.2%
Galvanized 1.5"- 2"	13568	2.57	1.5%
PVC 1"-2"	38482	7.29	4.2%
Steel 4"-12"	300665	56.94	33.0%
C-905 14" & greater	6288	1.19	0.7%
TOTAL PIPE	910717	172.48	100.0%
Adjustments are made in January of each year			

TREATMENT - STAFF REPORT
February 2018

SUPPLY & QUALITY:

(See Attached Graphs)	Feb. 2018	Feb. 2017	Feb. 6 yr. Avg.
Monthly Production (Million Gallons - MG)	73.4	55.0	68.8
	Range	Average	
Plant Production (MGD)	2.1 – 3.0	2.6	
Raw Water Turbidity (NTU)	0.42 – 0.78	0.56	
Treated Water Turbidity (NTU)	0.04 – 0.04	0.04	
Treated Water Chlorine (ppm)	0.88 – 1.51	1.09	

WATER TREATMENT:

- **Plant Production and Water Quality:** Average production increased to **2.6 MGD** from **2.2 MGD** last month. Magalia Reservoir is raw water source for treatment to conserve water in Paradise Lake. The raw water quality has remained consistent through the winter months.
- **Monthly Residential Water Conservation:** **4%** reduction comparing production in February 2018 – **73.4 MG** to February 2013 – **76.1MG**.
- **Emergency Response Planning:** Planned and facilitated a SEMS/ICS orientation and EOC table top exercise with management personnel (See attachment), and prepared a draft After-Action list of items for follow-up prior to the next ERP EOC planning meeting (See attachment).
- **Plant & Distribution Operations:** Obtained another five (5) gallon sample of rain impacted raw water for SANCO Chemical Solutions polymer coagulation testing.
- **PGE Energy Conservation Assessment:** Met with PGE Feb. 15 to evaluate energy reduction at the treatment plant and potential rebate retrofit programs; scheduled a lighting assessment for March 2nd.
- **Reservoir “B” Replacement; A Zone Pipeline & Pump Station:** 60% design comments were incorporated in the plans and specifications. Waterworks is moving on to the 90% design phase scheduled for completion in April. Easement acquisition is underway from the property owner and the County for the A Zone Pipeline along Skyway. \$12M SRF Construction Loan Application preparation is underway, which includes a \$2.5M contingency. The \$800,000 SRF Planning & Design Loan agreement was authorized and amended.
- **Rehabilitation of C Tank and Cathodic Protection:** Harper and District Staff are working on Bid documents. Project bidding planned for mid-summer.
- **NPDES Permit Renewal Assistance:** Work in progress by Waterworks and Larry Walker. Meeting was re-scheduled to Feb 13th to discuss mixing zone and dilution credit evaluation, and potentially less stringent discharge limits in a renewed permit. Consultants and Staff are in the process of finalizing the memo that will eventually be reviewed with the State Water Board staff.
- **NPDES Permit for Discharge to Magalia Reservoir:** No violation this month.
- **Process Water Recycle Project:**
RFP Pond Alternative Design: Consideration of solicitation depending on outcome of NPDES permit renewal.
Engineering & CEQA: Work Suspended.
SRF Construction Loan Application: Pending completion of design and CEQA; full design cost recovery is contingent on construction of a project.
SRF Planning and Design Loan Application: SRF indicated District qualifies to receive \$500,000 for “Green Project Reserve” principal forgiveness for planning & design cost recovery; received the SRF management approval checklist that justifies the amount. See attachment; Section 1.D.
- **CalOES/FEMA Grant:** All information requests were provided to CalOES/FEMA. Waiting for favorable communication from CalOES.
- **Drinking Water and NPDES Reports:** Completed monthly sampling and reports.
- Miscellaneous repairs to aging equipment and routine instrument calibrations. One of the plant’s turbidity units failed (Filter No. 1); replaced it with a spare in storage; obtained bids and requested purchase of a spare for future immediate replacement (See photo attached). One of three chlorine analyzers (Finished Water No. 2) is having failures and parts availability problems; requested sole source purchase to replace the obsolete unit with a Wallace & Tiernan analyzer similar to the other unit in use. (See photos attached).

RECREATION:

- **Lake Activities:** See attached Parking & Boating Permit Sales Chart & Table. Staff re-attached the Paradise Lake Spillway boom to east shoreline.
- **DBW North Lake Boat Launch Grant Project:** Waiting for DBW's response to District's concerns. DBW requested the District execute pending Grant Agreement Amendment No. 2, extending the project completion date to Feb 1, 2019.
- **BC Fish & Game Commission Grant:** Received \$3,000 grant to purchase catchable trout for stocking lake prior to Kids Fishing Day in April 2019. \$2,500 grant for April 2018.
- **Kids Fishing Day Planning Committee:** Next meeting March 13th. Mr. Dave Berman is assisting with the development of a future event poster and soliciting Ridge View High School support for the project, and volunteer assistance during the event. Committee is developing two new booth concepts to entertain the kids during the event (i.e., painting wood and photos).
- **Annual Trout Purchase:** Bids received March 2nd. Seeking Board approval on March 21st to make annual trout purchase.

WATERSHED - SOURCE of SUPPLY: Monthly Rainfall = 1.05" during 4 days; Greatest Rain Day = 0.46"

Paradise Lake Levels (feet)	2018 Feb. 28 @ + 0.1	2018 Jan. 31 @ - 0.1	2017 Feb. 28 @ + 0.9'
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- **CalFire Service Crews:** Completed vegetation removal around treatment plant, both dams, and along Little Butte Creek near our facilities.
- **Paradise Ridge Fire Safe Council:** Monthly meeting was canceled.
- **Little Butte Creek Phase II Shaded Fuel Project:** Project is still underway.

2018 Emergency Response Exercise **SEMS and ICS Orientation the “Paradise Way”** **& Table Top Scenario**

Scenario: At 9AM February 28, 2018 a 9.0 earthquake occurred east of San Francisco Bay area, east of Hayward. Treatment staff initiated an inspection of the dams per the DOSD requirement regarding the distance of the epicenter to the plant and magnitude. PGE power is off in the communities of Paradise and Magalia. The Corp Yard/Office and plant's emergency generators are working. Plant SCADA is working, except for communications with Pump Station No. 2 and the tanks. The condition of the District's facilities, distribution system and water storage tanks have not been assessed. Water quality does not appear to be impacted at this time pending a comprehensive assessment of the water system. Several structure fires are occurring in the Town of Paradise.

The Emergency Response Plan (ERP) provides guidelines and resources to assist with response and recovery from a major water system emergency. Progress with response and recovery depends on specific SEMS/ICS action plans prepared and actions taken in the Emergency Operations Center (EOC). Does the District activate the EOC?

Keep in mind the following: 1. Communications & Coordination; 2. What types of situations are going on? 3. What have you got? and 4. What do you need?

The purpose of the exercise is to accomplish the following:

1. Review Emergency Response Plan (ERP).
2. Discuss elements of Standardized Emergency Management System (SEMS) as it relates to PID; field response; operational area; Incident Command Structure (ICS); multi/inter-agency coordination; mutual aid **(ERP Sections 4 & 7; 8)**.
3. Establish ICS structure appropriate for the event scenario, and assign primary and secondary managers to each section (i.e. command; planning/intelligence; logistics; operations; and finance). Assign safety & PIO roles and responsibilities as needed **(ERP Sections 4 & 7; 8)**.
4. Determine what drinking water contamination may or may not occur, and mitigate public health risks **(ERP Section 7; AP6A – AP6C; Appendices D & E)**.
5. Discuss and evaluate potential dam problems/failures that may occur **(ERP AP1 & AP2)** and what actions we would take if any occurred.
6. Discuss types of distribution system and water service disruption that may occur, and ways to minimize impacts on as many customers as possible **(AP 5)**.
7. Discuss how the Board; administrative; management; and field personnel will work together to respond to the emergency. Under what circumstances should the Board declare an emergency proclamation?
8. Post-exercise evaluation & revisions to ERP, etc.

EMERGENCY OPERATIONS CENTER (EOC):

The office conference or Board rooms are designated as the EOC. Determine the best modes of communications available at the time. If the communication mode is lost, make other arrangements to provide emergency communications with emergency response agencies. The ERP includes contact information for agency coordination. **Appendix C.**

DESIGNATE ICS PERSONNEL: Establish lead and subordinate personnel in each ICS section, including chain of command with specific roles and responsibilities and span of control. **ERP Sections 4 & 7; 8.**

RESPONSE PROCEDURES: Personnel will, as quickly as possible accomplish the following:

- A. Determine the status of other employees;
- B. Assess and document damage to water system facilities;
- C. Provide logistics for emergency repairs;
- D. Monitor and document progress of repairs and restoration efforts;
- E. Communicate with health officials and water users according to the "DDW Emergency Notification Plan"; and
- F. Document damage, repair, and costs.

INVENTORY OF RESOURCES: determine resources to be used or that are needed to restore operations to normal; including maps and schematic diagrams of the water system, lists of emergency equipment, equipment suppliers, and emergency contract agreements if practical. **ERP Section 3.9.**

SEMS AGENCY COORDINATION: Coordination is a necessary objective of ICS with governmental agencies for health and safety protection; technical, legal, and financial assistance, and public notification procedures. **ERP Section 4.**

WATER QUALITY PUBLIC NOTIFICATION: Determine appropriate public notice procedures to communicate with customers and regulatory agencies regarding the condition of the water system. Modify customer notification with specific information depending on the nature of the emergency. One person should be designated to coordinate with DDW, the County's Public and Environmental Health Departments. ICS command shall coordinate with the Town of Paradise EOC. Notice must be given directly to a person. Standard public notifications include the following:

- A. Precautions during a water outage or low pressure problem
- B. Boil Water Order (i.e. bacteria)
- C. Do Not Drink (i.e. inorganic chemical)
- D. Do Not Use (i.e. volatile organic chemical)

DOCUMENTATION:

ICS personnel shall document specific actions continually throughout response and recovery from the event in as much detail as possible.



PARADISE IRRIGATION DISTRICT

6332 Clark Road, Paradise CA 95969 | Phone (530)877-4971 | Fax (530)876-0483

TO: Management Team

FROM: Jim Passanisi, Treatment Superintendent

DATE: February 30, 2018

**RE: DRAFT - SEMS/ICS Orientation and Table Top Exercise (2-28-2018)
After-Action Report**

List of items for consideration and further action include the following:

1. Training (See attachment - page 2 of 2) - Incident Command System (ICS) Courses for Managers: Online link to take courses is <https://training.fema.gov/nims/>. Take ICS 100 and ICS 700 classes, and when you have time, ICS 200. The County tries to offer ICS 300 at least once a year and ICS 400 at least once every other year. We are on the County's list to notify us when their trainings become available.
2. Prepare a diagram of the EOC setup: tables, phone system, computers, whiteboards, ICS section locations, etc.
3. EOC Telephone System (Ladrini & Rich): Establish procedures for Office phone relocation from desks to the EOC.
4. EOC Television or Monitors: Establish procedure for Computer monitors to be relocated from desks and connected to cable TV
5. EOC White Boards: Purchase two (2)
6. Emergency Response Plan (ERP) – Create Searchable Word Files (West & Rice) and print more ERP binders
7. ERP Update - Contact Info (everyone)
8. Radio System Optimization & Specifications: Truck and Treatment Plant Base Station (Ladrini)
9. Availability of County Office of Emergency Management Cal OES Grants for Equipment (Passanisi & Ladrini)
10. Beverage Company Contact Info for mass quantities of bottled water (Passanisi)
11. Upload Code Red app. to smart phones (everyone)

12. Next Meeting Content: Progress regarding the After-Action list; invite additional office key staff to the next meeting.

13. Cal EMA and the governmental agencies in the state follow the National Incident Management System (NIMS) requirements to comply with the required training as listed below.



.NIMS Compliance Training Reference Chart

Number of required courses increases with level of position responsibility	PERSONNEL Includes Federal/State/Local/Private Sector and non-Governmental Personnel	REQUIRED TRAINING Courses listed below in BOLD ITALICS currently required for NIMS Compliance
ICS 400 (Command) Six Months after ICS 300 Completion	COMMAND AND GENERAL STAFF Department heads with Multi-agency coordination system responsibilities, area commanders, emergency managers, multi-agency coordination center / emergency operations center managers	<ul style="list-style-type: none"> • <i>FEMA IS 700a: NIMS, An Introduction</i> • <i>FEMA IS 800b: National Response Framework (NRF)</i> • <i>ICS 100: Introduction to ICS or equivalent</i> • <i>ICS 200: Basic ICS or Equivalent</i> • <i>ICS 300: Intermediate ICS or equivalent</i> • <i>ICS 400: Advanced ICS or equivalent</i> • <i>SEMS EOC/ Introduction to SEMS</i>
ICS 300 / IS 800 SEMS EOC (Managers)	MIDDLE MANAGEMENT Strike team leaders, task force leaders, unit leaders, division / group supervisors, branch directors, and multi-agency coordination center / emergency operations center staff	<ul style="list-style-type: none"> • <i>FEMA IS 700a: NIMS, An Introduction</i> • <i>FEMA IS 800 b: National Response Framework (NRF)</i> • <i>ICS 100: Introduction to ICS or equivalent</i> • <i>ICS 200: Basic ICS or Equivalent</i> • <i>ICS 300: Intermediate ICS or equivalent</i> • <i>SEMS EOC/ Introduction to SEMS</i>
ICS 200 SEMS EOC (Supervisors)	FIRST LINE SUPERVISORS Single resource leaders, field supervisors, and other emergency management / response personnel that require a higher level of NIMS training	<ul style="list-style-type: none"> • <i>FEMA IS 700.a: NIMS, An Introduction</i> • <i>ICS-100: Introduction to ICS or equivalent</i> • <i>ICS-200: Basic ICS or equivalent</i> • <i>SEMS EOC/ Introduction to SEMS</i>
ICS 100 / IS 700 SEMS (Responders)	ENTRY LEVEL RESPONDERS & DISASTER WORKERS Emergency Medical Service, firefighting, law enforcement, hospital, public health, public works/utility, skilled support and other emergency management response, support & volunteer personnel at all levels	<ul style="list-style-type: none"> • <i>FEMA IS 700.a: NIMS, An Introduction</i> • <i>ICS-100: Introduction to ICS or equivalent</i> • <i>Introduction to SEMS</i>

California recommends Standardized Emergency Management System courses at levels indicated.
 FEMA Independent Study Program (for ICS/IS) courses can be found at: <http://training.fema.gov/IS/crslist.asp>
 Standardized Emergency Management System courses can be found at: <http://www.calema.ca.gov/CSTI/Pages/SEMS-ACI-Training-Materials.aspx>

CWSRF PLANNING/DESIGN REVIEW CHECKLIST

SECTION I – PROJECT INFORMATION

A. General Project Information

Date Planning/Design application received: 7/13/2017
Recipient name: Paradise Irrigation District
Project name: Process Water Recycling Planning Project
Physical location of Project: 13888 Pine Needle Drive, Magalia, CA 95954
CWSRF Project No.: 8050-120

Planning/Design Financial Assistance Application is signed by the authorized representative

B. Attachment Checklist

The following Technical items were submitted in the Planning/Design application package:

- 1 – Plan of Study**
- 2.a – Certification for Compliance with Water Metering Form**
 - Is the applicant an urban water supplier? YES NO
 - Is the Certification for Compliance with Water Metering signed by the Authorized Representative? YES NO
- 2.a – Compliance with Urban Water Use Reduction, Efficient Agricultural Water Management Practices, Urban Water Management Planning Act, and/or Agricultural Water Management Planning Act requirements, (if applicable) (N/A)**
- 3 – Regional Water Quality Control Board Requirements**
 - Waste Discharge Requirements, NPDES Permit or Water Recycling Requirements
 - Amended Basin Plan or Total Maximum Daily Load
 - Enforcement Orders

Comments: TSO R5-2010-0058-02

The following Financial Security items were submitted and delivered to Financial Security Review staff:

- 4 – Authorizing Resolution/Ordinance**
- 5 – Relevant Service, Management, Operating or Joint Power Agreements** N/A
- 6 – Audited Financial Statements**
- 7 – Rate Adoption Resolution/Ordinance**
- Applicant is a small disadvantaged community receiving 100% grant (Attachments 8 and 9 not required)
- 8 – Pledged Revenues and Fund(s) Resolution/Ordinance** N/A

9 – Existing Related Debt N/A

Additional Small Community Wastewater Checklist completed and included in Master File YES NO

Date Planning/Design application was considered complete: 8/15/2017

C. Requested Project Financing

CWSRF Planning Financing Amount Requested: \$500,000

Proposed Planning/Design Work and Estimated Costs:

Preliminary Design Report*	\$150,000
Environmental Documentation and Permitting	\$200,000
Rate Study	\$0
Project Administration and Legal	\$0
Fiscal Sustainability Plan (FSP)**	\$0
Public Education and Outreach	\$0
CWSRF Construction Application Assistance	\$40,000
Other:	\$110,000

Comments: Other costs include Pilot Testing, Design Plans & Specs, Bid documents and Bidding Assistance.

* Particularly for small communities, should always verify that they are considering consolidation or regionalization alternatives where appropriate. For projects considering septic-to-sewer conversion, should verify adequate public outreach budget, possibly including surveys to assess community interest, if not already completed.

** Prior to funding for construction applicant will have to certify they are implementing an FSP, or a date by which they will be, so if they are not currently, recommend incorporating development of the FSP as part of the planning scope.

D. Green Project Reserve (GPR)

Is the GPR applicable to this project? YES NO

1. PM has reviewed the GPR categories and percentages claimed by the applicant and discussed any adjustments with the applicant if appropriate? YES NO N/A

Explain: The project incorporates water efficiency, energy efficiency, and environmentally innovative components consistent with the Green Project Reserve categories, 2.2-6, 3.2-1, and 4.2-4 respectively. The percentages claimed by the District are appropriate and based on the total planning and design cost. These percentages may need to be adjusted as the District makes progress on developing and selecting a project compliance alternative.

2. PM has confirmed the GRP eligibility of the project or components of the project are CWSRF eligible and that they are either Categorically Eligible or that an adequate Business Case was submitted? YES NO

Section 2.2-6 of the GPR guidance document states that categorical projects are "recycling and water reuse projects that replace potable sources with non-potable sources." Water savings would be achieved by recycling wastewater for potable reuse. Instead of surface water discharge, about 600 acre-feet of wastewater would be treated and reused to supplement potable water supply. At the plant headworks, the recycled water would be blended with raw water.

Section 3.2-1 describes categorical projects as "Renewable energy projects such as wind, solar, geothermal, micro-hydroelectric, and biogas combined heat and power systems (CHP) that provide power to a POTW". Energy conservation would be achieved through the use of in-conduit micro-hydroelectric turbine to generate a renewable energy source for the operation of the treatment plant. Gravity flow from the elevated ponds to the

treatment units at the lower elevation plant should reduce energy consumption by generating a renewable energy source with a micro-hydroelectric turbine.

Section 4.2.4 lists as categorical projects "planning activities by a POTW to prepare for adaptation to the long-term effects of climate change and/or extreme weather". The existing pond configuration is subject to storm water impacts, because they do not include perimeter diversion structures to redirect rainfall; consequently the ponds fill with rain during the solids drying operation thereby extending the solids drying time significantly, usually up to one year. An optimized pond configuration will improve this solids handling concern.

3. If Yes, final GPR percentages are as follows:

Category	Categorically Eligible*		Adequate Business Case Submitted		Eligible Costs	% of Total Project Cost
	Yes	No	Yes	No		
Green Infrastructure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Water Efficiency	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$898,979	57.06%
Energy Efficiency	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$65,919	4.19%
Environmentally Innovative	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$610,500	38.75%
Total					\$1,575,398	100%

* For any category that is not Categorically Eligible, the applicant must provide an adequate Business Case to justify eligibility for principal forgiveness.

4. Municipalities applying for GPR eligible projects or components are eligible for principal forgiveness:

a. The applicant is a municipality (i.e., city, county, special district)?
 YES NO
 (If no, the applicant is not eligible for principal forgiveness, skip to Section 4)

b. If yes, the project is eligible for \$500,000 in principal forgiveness.

Show calculation:

- i. \$ [GPR eligible amount from Item 3 above] * 75% = (\$1,575,398*0.75) = \$ 1,181,548
- ii. If Line i above is greater than \$500,000 then eligible PF amount for GPR project is \$500,000. If Line i above is less than \$500,000, then eligible PF amount for GPR equals Line i.

c. PM notified the Credit Analysis/Fiscal Unit of principal forgiveness eligibility when requesting financial review?
 YES NO

SECTION II – CWSRF Requirements

A. Loans Grants Tracking System (LGTS) Update

1. Project has been created in LGTS? YES
2. Updated the contacts information in LGTS to reflect current Authorized Representative, Legal, Davis-Bacon, Engineering, Contacts etc.? YES
3. Entered Legislative Districts in LGTS? YES
4. Application Documents are uploaded to LGTS document Tab? YES NO
5. Project description complete and entered into LGTS? YES
6. PM Completed the CBR Tab in LGTS? YES

7. PM entered the applicants DUNS Number in LGTS? YES
8. Completed WC 5103 tab? YES N/A
9. Spending forecast in LGTS - Spending forecast is set as:
If manual, is it updated? Manual Automatic
 Yes

B. CWSRF General Requirements

1. What is the Project's priority class? A B C D E

SECTION III – PLAN OF STUDY REVIEW

A. Project Area

1. Please describe the current system users and any new users?
Explain: The current system includes 94% residential customers, 5.8% commercial customers, 0.3% others.
2. What is the current population? Service Area: 26,299 Project Area: 26,299
Notes:

B. Project Objectives

1. What is the problem or reason for the project (e.g. water quality, I/I, overflows, public health)?
Explain: Paradise Irrigation District provides potable water service to 10,500 connections in the Town of Paradise, California. The District operates a water treatment plant (WTP) that treats surface water with a process that includes pre-chlorination, coagulation using alum, aluminum chlorohydrate (ACH) and polymers, upflow adsorption clarification, multimedia filtration, and chlorine contact time. Wastewater from clarifier flushing, filter backwashing and filter-to-waste is sent to an equalization tank and pumped to unlined ponds for liquid solid separation. The pond water decants over a fixed weir and discharges to Magalia Reservoir and Little Butte Creek.

The District has an NPDES permit and a Time Schedule Order for pond discharge into Magalia Reservoir. The discharge is currently out of compliance for aluminum and dichlorobromomethane (DCBM). The District needs to achieve compliance by one of the following: (1) eliminating the discharge (and the permit), (2) reducing aluminum and DCBM in the discharge to acceptable levels, (3) or justifying higher discharge limits in a renewed permit.

2. Project description: No existing collection and treatment system; skip to D.

The project consists of recycling the wastewater generated during the water treatment process. Instead of surface water discharge, about 600 acre-feet of wastewater would be treated and reused to supplement potable water supply. At the plant headworks, the recycled water would be blended with raw water. The treated wastewater would only be recycled when it did not exceed 2NTU or 10% of the plant production. Unsuitable reuse water exceeding the turbidity and flow criteria would be directed to an "Out of Spec." tank. Additional treatment of the "Out of Spec" water may be needed to comply with the NPDES permit.

As part of this project, the District plans to first develop an NPDES permit renewal approach to ensure compliance is achieved before project alternatives are evaluated and a recommended project is determined. After the NPDES permit renewal is completed, the District intends to solicit a request for proposal for planning, design and engineering services to do the following:

1. Evaluate compliance alternatives to meet NPDES permit requirements;
2. Recommend a compliance project alternative;
3. Provide a Preliminary Design Report (PDR);
4. Prepare final design plans and specifications;
5. Prepare CEQA documents;

- 6. Prepare bid documents; and
 - 8. Provide Bidding assistance.
3. What is the current treatment capacity?
Explain: The WTP has potable water and wastewater treatment capacities of 21.1 mgd and 2.0 mgd, respectively.
4. Describe the current discharge location(s)?
Explain: Wastewaters generated from the operation of the WTP are treated and discharged to Magalia Reservoir (Paradise Lake), a man made impoundment on Little Butte Creek, both waters of the United States.
5. Is the facility meeting discharge requirements? YES NO N/A
If not, list violations: The District has not been able to comply with the final effluent limits for aluminum and dichlorobromomethane (DCBM). See attachment T3 for a list of violations occurred in 2015 and 2016. The District has been able to comply with the interim limits, which have been extended until April 17, 2020 by TSO R1-2017-01211. There were no violations in 2017.

C. Treatment Objectives for Discharge and Reuse

1. What are the relevant wastewater discharge requirements?
Explain: Relevant interim and final discharge requirements are shown on the tables below.

Table 1: Interim effluent limits

Parameter	Units	Interim Maximum Daily Effluent Limitation	Interim Average Monthly Effluent Limitation
Dichlorobromomethane	µg/L	3.0	3.0
Aluminum	µg/L	790	790

Note: The interim limits above have been extended until April 17, 2020 by TSO R1-2017-01211.

Table 2: Final Effluent limits

Parameter	Units	Average Monthly	Maximum Daily
Dichlorobromomethane	µg/L	0.56	1.12
Aluminum	µg/L	77.2	123

2. What are the relevant reuse requirements?
Explain: Per Drinking Water Cryptosporidium Action Plan guidelines for recycling water, recycled water should not exceed (1) 2 NTU turbidity units and (2) 10% of the total flow to the head of the plant.

D. Project Technical Review Approval

1. Tentative Planning/Design schedule:

MILESTONES	DATE
Eligible Start Date	8/15/2017
NPDES Permit Renewal: Mixing Zone Study	9/15/2018
NPDES Permit Renewal: Dilution Study	9/15/2018
Alternatives Evaluation Report	6/15/2019
Preliminary Design Report	10/16/2019
CEQA Documents: Draft IS/MND	12/15/2019

CEQA Documents: Final MMRP	6/15/2020
CEQA Documents: Final Cultural Resources Inventory and Evaluation Report	6/15/2020
Final Design Plans & Specifications	6/15/2020
Final Disbursement Request/End of Draw	Three years from date of financing agreement

2. Project is eligible to receive Planning/Design CWSRF financing? YES NO
 Project has technical review special conditions*? YES NO
 If Yes, List here:

- a. The Recipient must provide to the Division of Financial Assistance documentation that 50 percent and 90 percent Design Plans and Specifications have been submitted to the Division of Drinking Water Valley District Field Office by February 10, 2020 and May 10, 2020, respectively. If not, disbursement of funds will be held at 90 percent of the total principal forgiveness amount until the Recipient provides the aforementioned documentation.

*Note: If the project is for example a water recycling project or a septic-to-sewer project, and the applicant is requesting funding for all the work required for a construction application, it may be appropriate to require the recipient to complete the project report or feasibility study only, and then have conditions to allow the release of additional funds (or possible amendment to add funds later) for other work such as Environmental Documents, Report of Waste Discharge, Rate Study, etc.

3. Other Comments: None

The technical portion of the Project is hereby approved to receive a CWSRF Planning/Design financing agreement.

Elizabeth B.
Project Manager Signature
Robert Tushin
Senior Engineer Signature

2/1/2018
Date
2/1/18
Date

1/18/2018: S:\DFA\ENGINEER\Funding Programs\SRF\Projects\Paradise Irrigation District\8050-120\Planning_Design_Review_Checklistrev8-7-15_8050-120_3.Docx

Turbidimeter Replacement for Filter No. 1



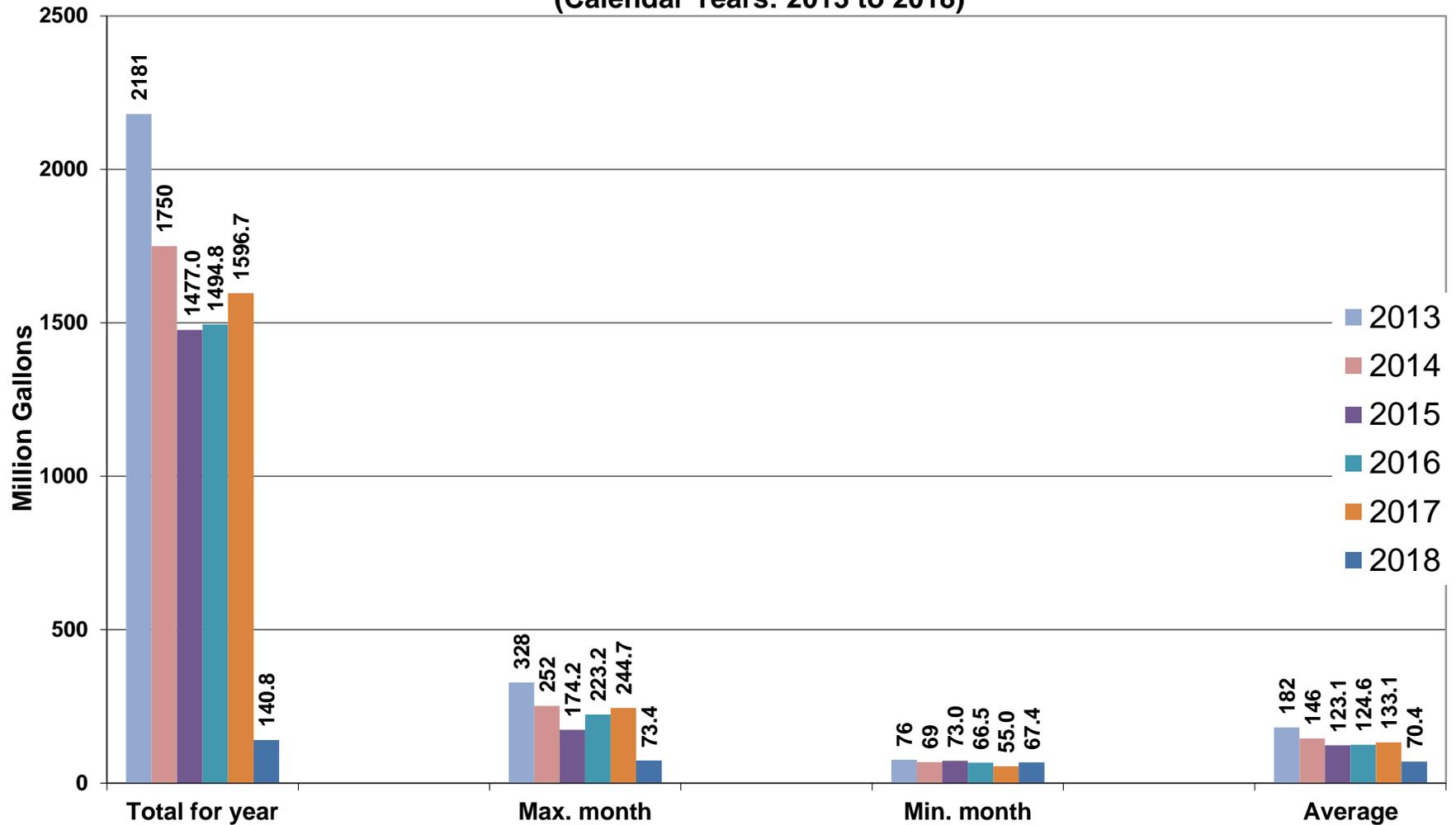
Obsolete Chlorine Analyzer (Finished Water No. 2) to be Replaced



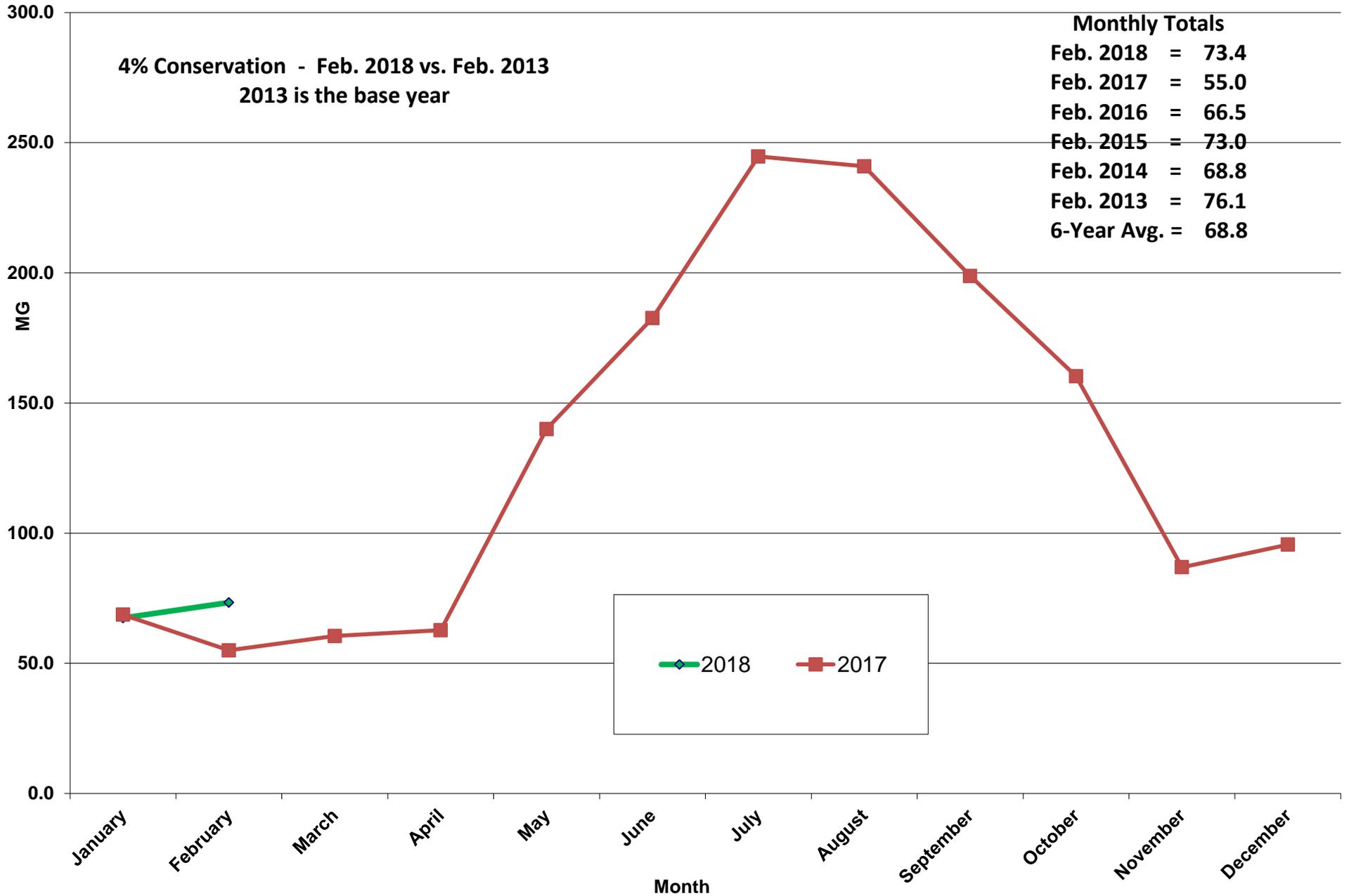
Back of the Obsolete Chlorine Analyzer (Left); Type of Replacement Analyzer (Right)



**Water Treatment Plant Annual Production Comparisons
Total; Monthly Max. & Min, and Average
(Calendar Years: 2013 to 2018)**



Monthly Treatment Plant Production (Million Gallons - MG) (Comparison of Calendar Years 2018 to 2017)



Water Treatment Plant Annual Production Figures and 5 Year Averages (2013 - 2018)
(Million Gallons)

Note: 2013 is the conservation comparison/base year

	Years														6-Year Average	
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2013-2018	
January	113.2	113.7	130.8	116.1	105	91.4	91.6	105.2	82.5	111.2	82.3	71.1	68.7	67.4	80.5	January
February	101	104.7	106.9	112.3	88.4	79.2	85.2	85.3	76.1	68.8	73.0	66.5	55.0	73.4	68.8	February
March	129.3	110.7	150.2	147	108.9	100.2	84.6	79.3	101.6	85.8	98.7	67.1	60.5			March
April	132	112.5	172	205.9	170.5	96.9	99.8	94.2	145.1	107.7	106.7	84.5	62.7			April
May	181.5	243.9	259.3	275	221	140.8	146	214.7	241.6	175.6	136.5	119.6	140.0			May
June	250.7	328.5	336.4	321.6	256.7	239.7	183.3	262.7	276.2	230.3	148.1	169.7	182.6			June
July	393.2	428.9	384.6	360.5	350.6	344.4	283.3	325.5	327.5	252.1	174.2	207.6	244.7			July
August	412.3	391.5	379.6	363.8	338.6	332.4	307.6	331.2	309.9	220.7	171.8	223.2	240.9			August
September	312.1	338.4	295.3	317.5	281.4	271.3	280.3	283.7	230.1	196.3	157.9	191.0	198.8			September
October	234.9	253.2	156.9	218.1	178.1	185.1	152.2	198.7	170.7	137.3	138.3	115.2	160.3			October
November	117.8	128.7	142	124.7	114.2	95.8	107.3	91.7	117.4	85.4	95.6	90.6	86.9			November
December	114.3	112.9	115.5	120.7	101.7	105.3	105.1	81.2	102.3	78.5	93.9	88.7	95.6			December
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	5 Year Avg.	
Total for year	2492	2668	2630	2683	2315	2083	1926	2153	2181	1750	1477.0	1494.8	1596.7	140.8	149.3	
Max. month	412	429	385	364	351	344	308	331	328	252	174.2	223.2	244.7	73.4	80.5	
Min. month	101	105	107	112	88	79	85	79	76	69	73.0	66.5	55.0	67.4	68.8	
Average	208	222	219	224	193	174	161	179	182	146	123.1	124.6	133.1	70.4	74.7	

Paradise Irrigation District
 Lake Permit Sales
 January -December 2018

	Recreation				Boating				Total
	Annual		Daily		Season		Daily		
January	62	\$ 935.00	269	\$ 808.30	71	\$ 2,840.00	50	\$ 500.00	\$ 5,083.30
February	69	\$ 1,035.00	206	\$ 619.00	65	\$ 2,580.00	38	\$ 380.00	\$ 4,614.00
March	0		0		0		0		\$ -
April	0		0		0		0		\$ -
May	0		0		0		0		\$ -
June	0		0		0		0		\$ -
July	0		0		0		0		\$ -
August	0		0		0		0		\$ -
September	0		0		0		0		\$ -
October	0		0		0		0		\$ -
November	0		0		0		0		\$ -
December	0		0		0		0		\$ -
Totals	131	\$ 1,970.00	476	\$ 1,427.30	136	\$ 5,420.00	88	\$ 880.00	\$ 9,697.30

ENGINEERING REPORT

February 2018

Activities This Month

This month engineering staff prepared and sent out a Request for Proposals to assist the District with an inundation study for its two dams and the preparation of updated inundation maps, as required by recently adopted State law. Staff continued work on the condition assessments for the spillways at Magalia Dam and Paradise Dam.

Staff also continued efforts in support of the Town of Paradise Almond Street/Gap Complex project. This included preparing preliminary design drawings for the anticipated pipeline replacement projects on Black Olive Drive and Birch Street.

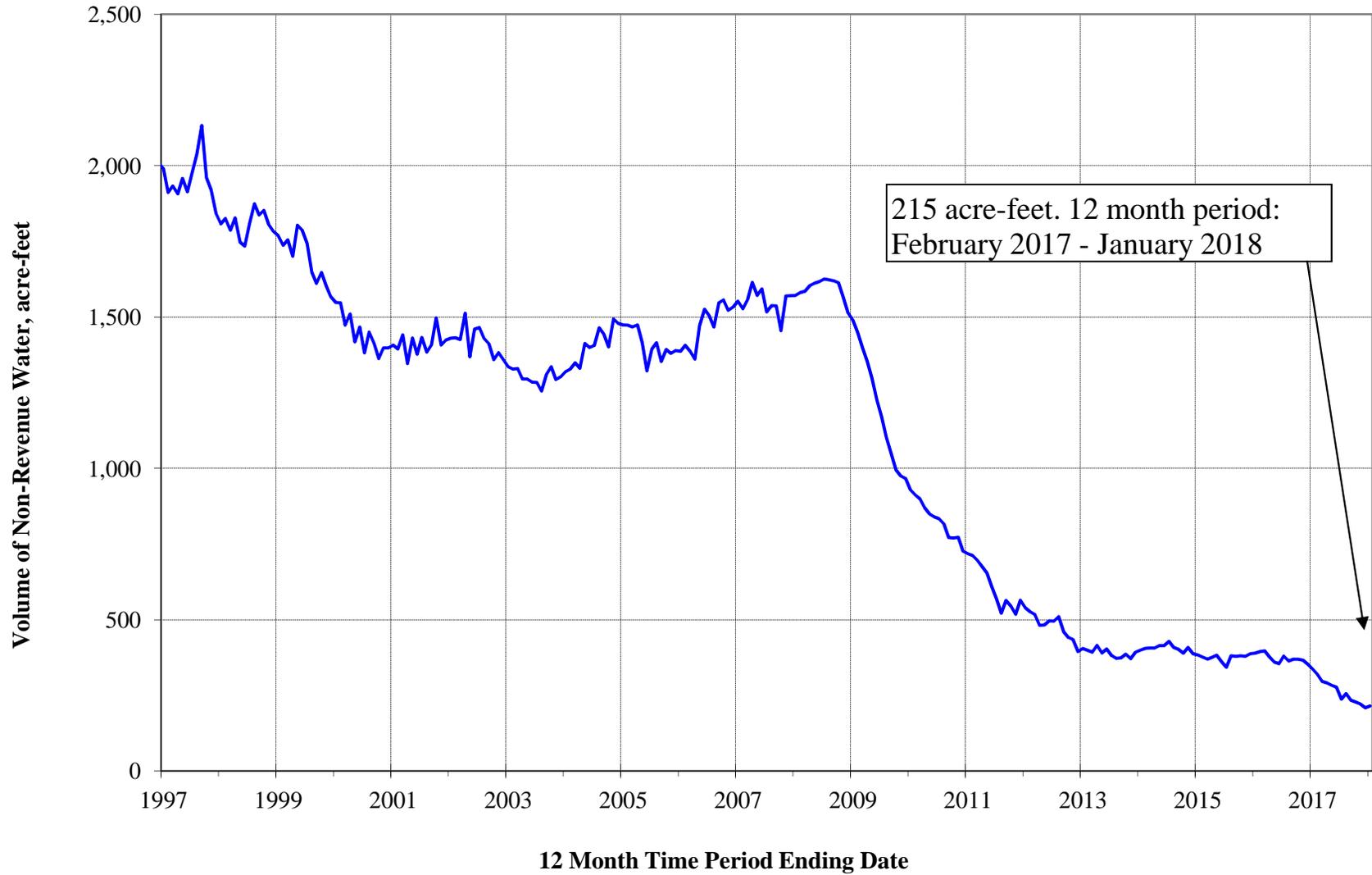
Staff began work on water rights reporting for the 2017 calendar year. Engineering staff also continued work on the water rights measurement and reporting requirements, including review of SCADA data suitability, and ordering components for an instrumentation upgrade of the water level measuring device at Magalia Reservoir.

Engineering staff continued work on the Reservoir B expansion project. Staff also continued work on the NPDES permit renewal and water recycling project. Staff provided preliminary engineering support for the Crestview Drive / Crestwood Drive pipeline replacement project.

Summary of Development Review and Other Activities

Water Service Requirements Review Requests	9
New/revised projects reviewed in Project Evaluation Committee (TOP)	1
Review and direction of miscellaneous ongoing projects	4
Meter Sizing Audits (total to date)	61
Meter Size Reductions (total to date)	38

**Non-Revenue Water
Production Minus Metered Sales
12 Month Cumulative Time Intervals**



Information Technology Report

PID Website

Top 10 Pages - Feb. 1 through Feb. 28, 2018

Page Title ?	Pageviews ? ↓
	5,402 % of Total: 100.00% (5,402)
1. Pidwater.com - Paradise Irrigation District - Water Utility for Paradise, California - Paradise Irrigation District	2,442 (45.21%)
2. Payment Options for Paradise Irrigation District - Paradise Irrigation District	460 (8.52%)
3. Search or browse PID documents - Paradise Irrigation District	328 (6.07%)
4. Flushing - Paradise Irrigation District	315 (5.83%)
5. Search - Paradise Irrigation District	206 (3.81%)
6. PID Reservoir Levels: Paradise Lake and Magalia Reservoir - Paradise Irrigation District	174 (3.22%)
7. PID Projects - Paradise Irrigation District	119 (2.20%)
8. Contact PID - Paradise Irrigation District	115 (2.13%)
9. Careers at PID - Paradise Irrigation District	92 (1.70%)
10. UpcOi - Paradise Irrigation District	90 (1.67%)

Note: Item 10 is a pointer page from Facebook to our flushing page.

Reduction in Online Payment Fees

As promised, we have kept a close eye on our customer's online payment use so that we may request discounts from Tyler Technologies as more customers use the services. As of January 15, 2018 we successfully reduced our online payment fees by another 12% (in 2017 we reduced the fee by 20%). More than 11% of PID customers are routinely making their

payments online. Tyler suggested they may have additional volume discounts available upon a 20% usage rate.

February Regular Meeting on Facebook Live – Post Performance

Paradise Irrigation District
Watch PID's Regular Board Meeting from wherever you are on Facebook Livestream. The documents projected on the wall behind the board members may not "show" very well on the stream's imaging so please download the agenda and supporting documents here s...

03:51:53 · Uploaded on 02/21/2018 · View Permalink

Performance for Your Post	
← Audience and Engagement ▾	
People Reached	83 >
Unique Viewers	52 >
Post Engagement	1 >
Video Engagement	>
Top Audience	-- >
Top Location	-- >

Security Policy Update

I am continuing to work with PID management staff to revise the update to PID's security policy.

Mickey Rich
Information Systems Manager
March 2018