

Malaga County Water District WWTP

Technical Report

Disposal Capacity

February 2, 2017



DATE SIGNED: 02/02/2017

Prepared for:
Malaga County Water District

Prepared by:
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1 Introduction

The Malaga County Water District (MCWD) owns and operates wastewater treatment and disposal facilities at the northwest corner of Maple and Central Avenues in Fresno County. The facilities are regulated through WDR Order No. R5-2014-0145 (NPDES Permit No. CA 0084239). An aerial view of the site is included as **Figure 1**.

The RWQCB issued a Cease and Desist Order (R5-2014-0146) (CDO) to the Malaga County Water District (District) on December 4, 2014. (**Appendix A**) One of the requirements of the Cease and Desist Order was to prepare a report that describes the measures that the District had taken since at least March 2008 to address disposal facility deficiencies.

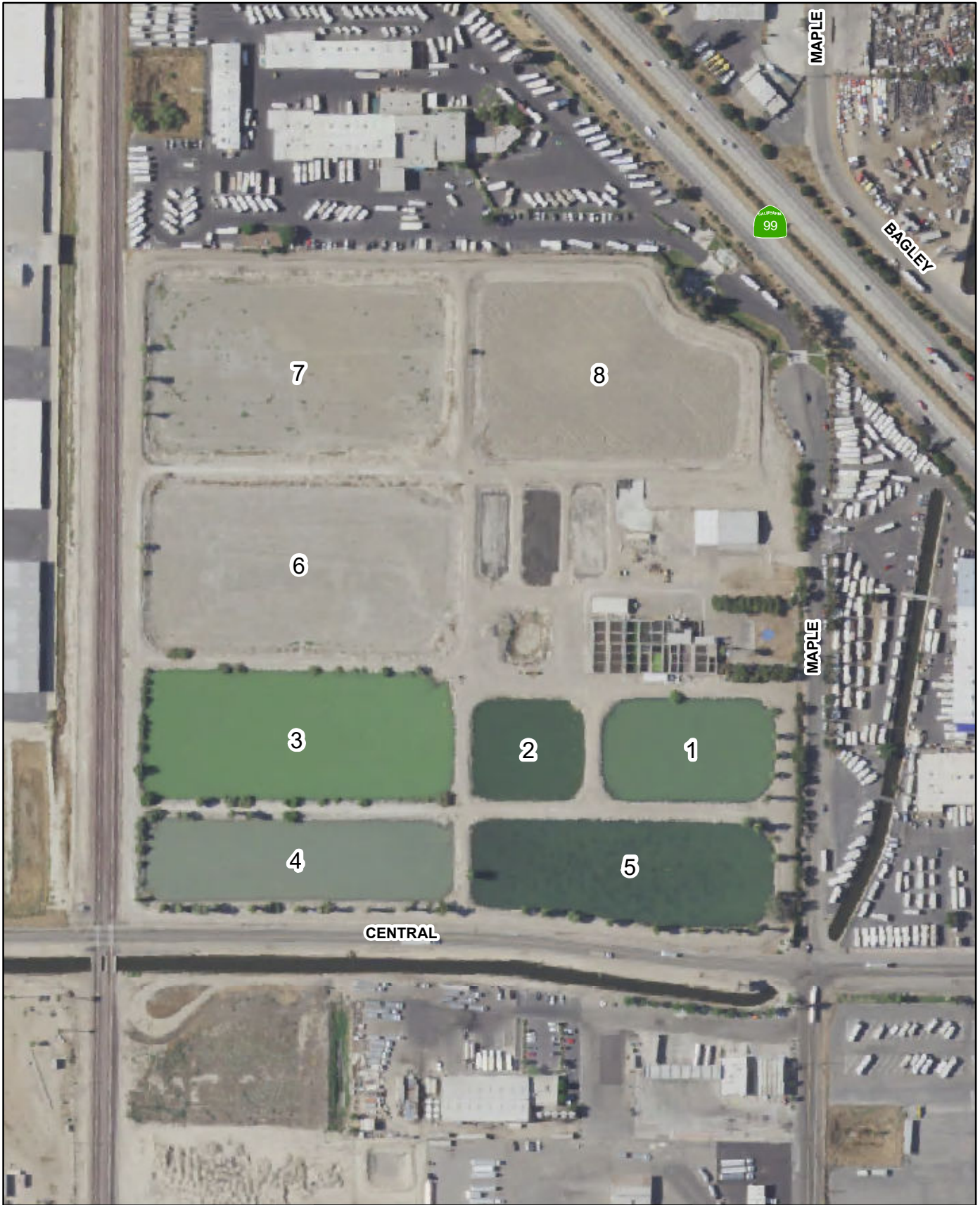
This report is required to also include any and all alternative disposal measures the District has looked into and evaluated.

The disposal report shall describe in detail what the District proposed to do to increase its future disposal capacity and maintain increased disposal capacity. The report shall also evaluate alternative disposal measures including recycling/reuse and regionalization.

The report shall also include analysis of the disposal capacity of the onsite ponds and the methods to maintain the disposal capacity.

The items to address future disposal capacity shall be implemented within 180 days following Executive Officer approval of this report.

In addition, the report is to include a description of additional tasks or improvements the District intends to complete to improve disposal capacity of the wastewater treatment facilities.



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Figure 1

Wastewater Treatment Plant

Malaga County Water District

1.1 Background

The history of wastewater flow for the treatment plant is shown in **Figure 2**.

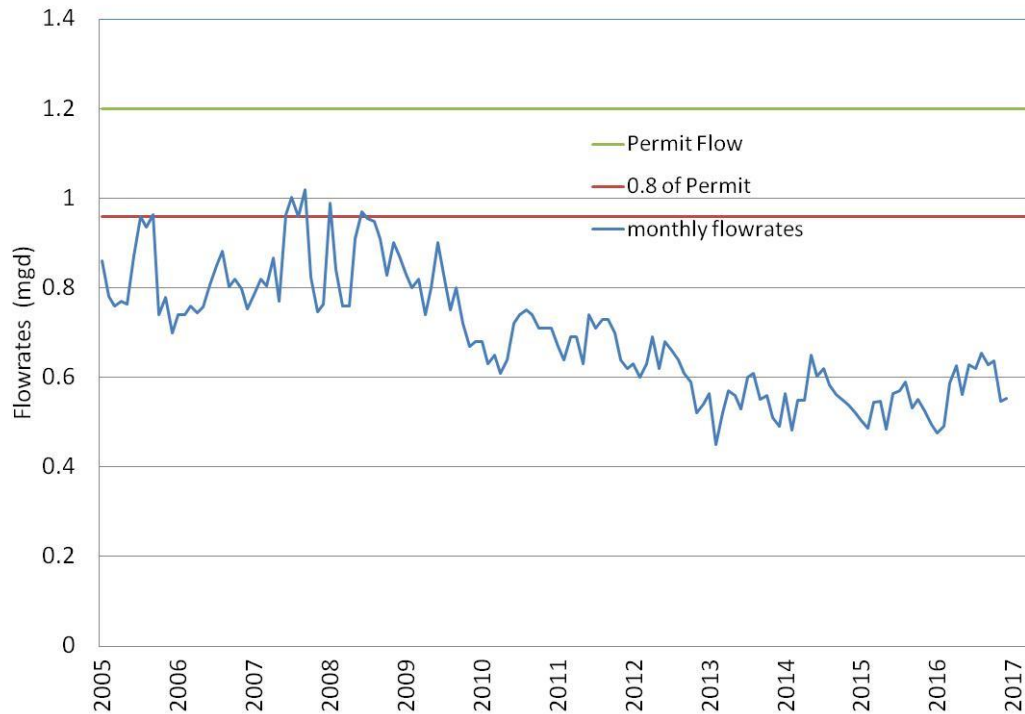


Figure 2 - Monthly Wastewater Flow Rate as Compared to Permit Capacity

Table 1. Annual Average Daily Flow of MCWD WWTP

Year	Annual Average Flow (MGD)
2005	0.823
2006	0.788
2007	0.860
2008	0.887
2009	0.778
2010	0.658
2011	0.683
2012	0.618
2013	0.541
2014	0.565
2015	0.533
2016	0.594

Based on the present flowrates received at the wastewater treatment and disposal facilities, the current percolation rate of the ponds, and an anticipated development growth rate of 2 percent per year in the area, it is estimated that the disposal capacity of the disposal ponds should be sufficient for approximately 15 years. (Figure 3).

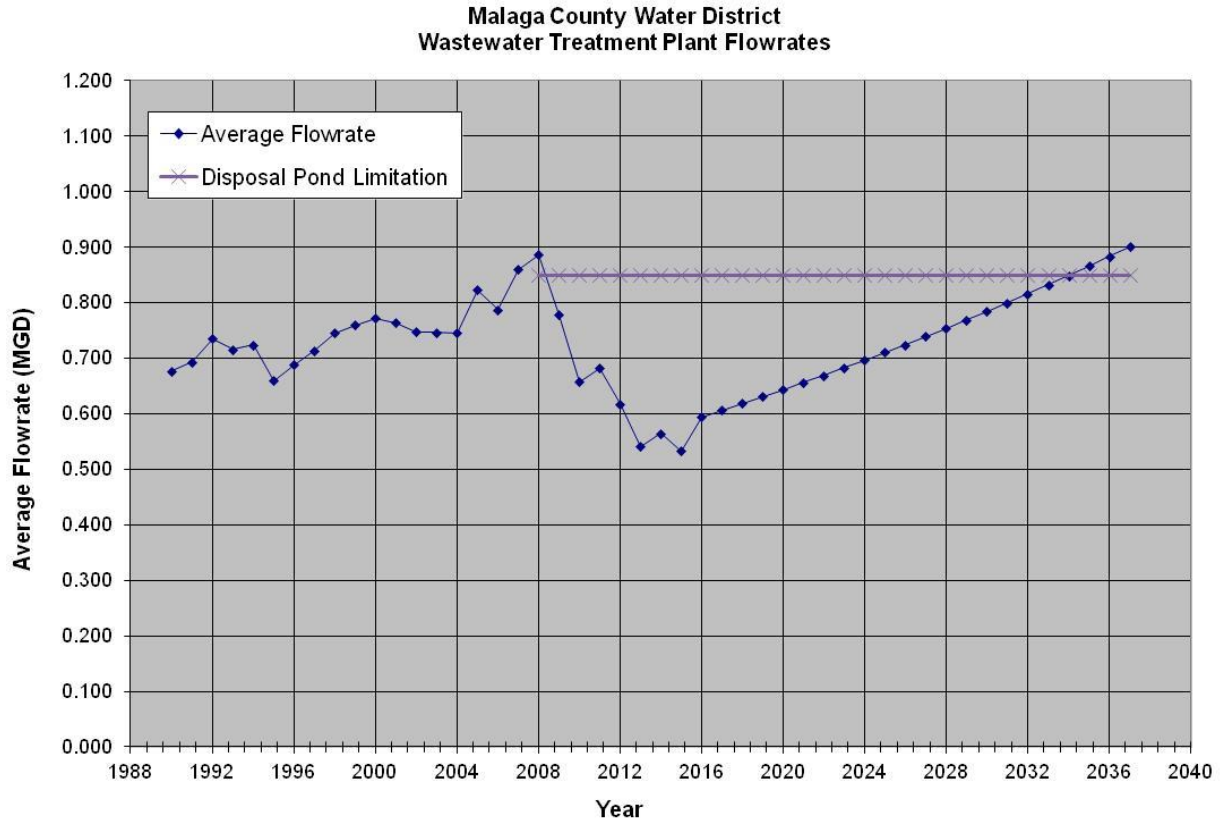


Figure 3 - Historical and Projected Annual Average Daily Flow

1.2 Existing Facilities

Existing facilities are limited to the existing evaporation/percolation ponds. **Table 2** summarizes the area and volumes of the disposal ponds.

Table 2. MCWD Pond Capacity

	Pond Area Acres	Freeboard Capacity (6') MG	Freeboard Capacity (6') Acre-Ft
Pond 1	1.31	2.5610	7.86
Pond 2	0.92	1.7986	5.52
Pond 3	4.33	8.4650	25.98
Pond 4	2.13	4.1660	12.79
Pond 5	2.12	4.1524	12.74
Pond 6	4.40	8.6019	26.40
Pond 7	4.30	8.4064	25.80
Pond 8	3.40	6.6469	20.40

1.3 Historical

The percolation rate for the disposal ponds in 2008 was determined to be 0.60 inches/day (**Appendix B** Study Evaluating Treatment and Disposal Facilities, July 2008). This percolation rate, in combination with the flowrates received at the facilities, required MCWD to utilize tertiary filtration and disinfection facilities for the discharge of effluent to the Fresno Irrigation District Central Canal. The on-site disposal capacity of the ponds was estimated to be 0.417 mgd.

The average percolation rate in 2012 for Ponds 1 through 8 was estimated as between 0.73 to 0.84 inches/day (**Appendix E** DRAFT Study Evaluating Treatment and Disposal Capacity Facilities (October 2013)). The improved percolation rate reflected an on-site disposal capacity of 0.543 mgd.

The estimated percolation rate in the disposal ponds in 2014 was 1.66 inches/day (Memorandum from Provost & Pritchard to Malaga County Water District dated October 24, 2014). The on-site disposal capacity was estimated to be 1.086 mgd.

A review of percolation rates from June through September, 2016 indicated an average percolation rate of 1.26 inches per day. Subsequent to ripping the ponds, a percolation rate of 1.85 inches/day was determined.

2 Measures Taken for Disposal Capacity Issues

2.1 Measures evaluated

The District prepared a Study Evaluating Treatment and Disposal Facilities dated July 2008. The Study identified several alternatives for the enhancement of disposal capacity. The alternatives included the purchase of additional property for the construction of additional evaporation/percolation ponds, development of irrigation facilities for landscape facilities within State Route 99, development of irrigation facilities for properties within the community of Malaga, and recycling of treated effluent for industrial facilities within Malaga.

Additional measures included the scraping and ripping of existing disposal ponds to improve percolation rates.

2.2 Measures implemented

2.2.1 Scraping and Ripping of ponds

The District has drained all the disposal ponds and has subsequently performed ripping measures to enhance percolation of the ponds in 2016.

Ponds 1, 2, 3, 4, and 5 were monitored for percolation from June through August, 2016. The average percolation rate was found to be 1.26 inches/day in average. See Error! Reference source not found. for monitoring and calculation data. The MCWD subsequently ripped the ponds in October 2016.

Ponds 6, 7, and 8 were ripped in July 2016. Pond 7 was then monitored in July and August (**Appendix L**). The average percolation rate was determined to be 1.85 inch/day.

2.2.1.1 Caltrans Landscape Irrigation

Discussions between the District and Caltrans in 2008 revealed that Caltrans is not receptive to receiving treated effluent for landscape irrigation purposes, primarily due to a lack of funds to maintain landscaping in the area near the District.

2.2.2 Establishment of a Moratorium of New Connections

The District established a Moratorium of new connections to the sewer system in 2010. (**Appendix C**). This action further limited the flowrate to be received at the wastewater treatment and disposal facilities. Due to the continued decline of flowrate received at the wastewater facilities since 2008, and improvement of the percolation rate of the disposal ponds,

the District rescinded the moratorium on August 12, 2014 (Resolution 812-2014A) (**Appendix F**).

2.2.3 Purchase of Additional Property

The District purchased 4.33 acres of property at the northwest corner of Maple and Malaga Avenues in August, 2012. The property could be evaluated for future development as evaporation/percolation ponds to supplement the existing facilities.

2.2.4 Construction of new Canal Gates at Diversion Boxes

The District has contracted with Lyles Construction to replace the canal gates at the diversion boxes that serve the disposal ponds. Many of the existing canal gates are in excess of 50 years old and there are leaks from the canal gates. The canal gate replacement should be complete by May, 2017.

The District presently has to install plugs in the pipelines that serve some of the disposal ponds in order to isolate them for operational and maintenance purposes.

2.3 Maintaining Current Disposal Capacity

2.3.1 Monitoring and Maintenance on Disposal Ponds

2.3.1.1 Routine Monitoring of Percolation Rate

The District continues to monitor the percolation capacity of the ponds and has developed a Standard Operating Procedure for the operation and evaluation of the disposal ponds. The present overall disposal capacity of the disposal pond system is at least 0.85 mgd (see **Appendix J** Water Balance).

2.3.1.2 Possible installation of Evaporation Monitoring Device

The District may determine that it will be beneficial and result in more accurate and consistent estimates of the disposal capacity of the ponds if an evaporation pan is constructed at the site. Information regarding evaporation pan requirements is included in **Appendix K**.

2.4 Increase Disposal Capacity

2.4.1 Purchase more land for new Percolation Pond

The area that the WWTP serves continue to grow with additional business and residents, the treatment plant may eventually grow out of the 0.85 MGD disposal capacity. Besides the possible reclamation/recycling of the effluent, additional disposal ponds might be unavoidable. The current treatment plant site is landlocked by surrounding businesses and will also be reduced and constrained by the High-Speed Rail project. Additional land that is within and outside of the district boundary might be needed for the additional ponds. It is recommended

that the District identify available properties and define the necessary infrastructure to utilize said properties for disposal of effluent.

2.4.2 Modification of Pond Embankments

The pond embankments between Pond 1 and Pond 2, and between Pond 5 and Ponds 1 and 2 could potentially be removed. There may be an increase of pond surface area, which could increase evaporation and percolation. An evaluation of the potential increase of disposal capacity and the capital cost of the effort is recommended.

2.4.3 Reclamation

2.4.3.1 Agricultural Land

Malaga CWD may conduct a survey of potential agricultural reclamation opportunities in the vicinity of the treatment facilities to identify any potential reclamation use.

2.4.3.2 Community Park

It is possible that effluent to be reclaimed at community park to replace the irrigation water. However, tertiary effluent quality is needed in order to meet the Title 22 requirements. As the irrigation requirements are contingent to the grass growing season and weather conditions, a storage volume for tertiary effluent would be needed to meet the irrigation requirements.

2.4.3.3 School

Similar to the community park, the Malaga School property could also be used for effluent reclamation. Tertiary effluent, pipeline, and storage would be needed to meet the regulatory requirements and irrigation demands.

2.4.3.4 Industrial water recycling

A significant portion of the wastewater received by the District is boiler blowdown water from the Pittsburg Plate Glass plant and from the Rio Bravo cogeneration plant. Previous communications with Pittsburg Plate Glass and Rio Bravo have not resulted in receptiveness of either facility to receive tertiary treated effluent for recycling purposes.

A future evaluation may be to investigate the potential of treating isolated boiler blowdown waste streams near the two industries with a reverse osmosis (RO) treatment facility, return the treated water to the industries for reuse in the cooling towers, and defining a means and method to handle and dispose of the waste stream from the RO process. The evaluation would need to define the capital and operational costs of the processes to determine if the concept could be performed in a cost effective (for the District and for customers) manner. Environmental and regulatory requirements of such a facility would also be defined in the evaluation.

If proven to be viable, the impacts of such a facility could include: less potable water used for industrial purposes; less wastewater discharged to the sanitary sewer system; and reduction of salinity loading to the wastewater treatment and disposal facilities.

2.5 Regionalization

Another alternative that has been reviewed in the past is the potential for the District to become a customer of the City of Fresno, make a connection to a collection sewer in Central Avenue, and send all or a portion of the wastewater to the City of Fresno for ultimate treatment and disposal.

Regionalization of the wastewater services with the City of Fresno was considered as an alternative to MCWD's application for incorporation to Fresno County LAFCo in 2002. Annexation of MCWD into the City of Fresno was not considered a reasonable alternative by both the MCWD and the City of Fresno (Fresno County LAFCo Executive Officer's report 9 October 2002, page 40).

It is understood that MCWD considers regionalization of wastewater services with outlying unincorporated communities such as Easton CSD as a potential regionalization option. However, said regionalization alternative would increase disposal capacity requirements for the system.

3 Description of Recommended Disposal Capacity Projects

3.1 Recommended Actions

3.1.1 Install Evaporation Pan

Evaporation Pan

It is recommended that Malaga CWD install a Class A Evaporation Pan at the WWTP to monitor the actual evaporation rate on the site. With the on-site monitoring of evaporation, estimating percolation rate of the disposal ponds will be more accurate. The evaporation pan information is attached to this report in **Appendix K**

3.1.2 Continued Evaluation of Existing Disposal Capacity

Monitoring

It is recommended that Malaga CWD continue to monitor the freeboard of disposal ponds and effluent discharged. The information will be used to estimate the percolation rate of the disposal ponds.

Reporting

The freeboard of the disposal ponds would be reported in the monthly wastewater monitoring spreadsheet and CIWQS electronic report.

Forecasting

The percolation rates would be estimated based on the effluent flow, evaporation rate and physical dimension of the ponds. The declination of percolation rates for the disposal ponds will be forecasted and used as the basis for necessary maintenance.

3.1.3 Investigate Availability of more land for new Percolation Ponds

It is recommended that Malaga CWD continue to search for property that may be available for additional percolation ponds with the consideration the infrastructure necessary to serve said property(ies).

3.1.4 Apply for Planning Grant to Investigate RO treatment of Boiler Blowdown Waste Streams

RO investigation

It is recommended that Malaga CWD evaluate the feasibility of RO treatment for part of the effluent or isolated industrial waste streams to achieve reuse and reclamation,

It is recommended that Malaga CWD apply for a planning grant through Proposition 1 to further investigate the feasibility of industrial water recycling (Refer to **Appendix O**). The following tasks need to be conducted for the feasibility study:

- Identify land available
- Define treatment alternatives
- Develop a Pilot Study
- Define waste streams
- Define waste disposal
- Define capital and operational costs
- Define potential reuse of produced water
- Initiate environmental review if applicable
- Initiate regulatory review if applicable
- Develop memorandums of understanding with the industries

3.1.5 Investigate Connection to the City of Fresno Sewer System

It is recommended that Malaga CWD continue to evaluate the possibility of connection to the City of Fresno Sewer System. Items to be considered include:

- Identify potential point of connection
- Identify any pretreatment of effluent prior to connection
- Define High-Speed Rail Impacts and schedule
- Define capital and operational costs
- Define costs for customers of the District

3.1.6 Investigate Regionalization with Unincorporated areas

It is recommended that Malaga CWD perform a review of the implications of consolidation with unincorporated communities such as the Easton CSD.

3.2 Future Improvements

3.2.1 Potential Purchase of Additional Property, Construct Discharge Pipeline south from WWTP to the south side of FID Central Canal

It is recommended that the District evaluate the viability of purchasing additional property south of the existing WWTP for the purposes of percolation/evaporation ponds. Further, the infrastructure necessary to deliver treated effluent to the future ponds would require evaluation and construction.

3.2.2 Potential Removal of Embankments between Ponds 1, 2 and 5

It is recommended that the District evaluate the potential disposal capacity increase and the capital construction cost of removing the pond embankments between Ponds 1, 2, and 5.

3.2.3 If Viable, Apply for Construction Grant to Implement RO treatment of Boiler Blowdown Waste Streams

If the feasibility of industrial water recycling deemed that the project is feasible and is acceptable to the industrial users, Malaga CWD will apply for a construction grant to implement the project. Following are a number of steps to implement the project.

- Purchase property
- Finalize Agreements with industrial users
- Initiate Regulatory Permitting
- Construct Improvements
- Finalize fee structure
- Define capital and operational costs

3.2.4 If Viable, Construct Improvements to Connect to the City of Fresno Sewer System

- Finalize Agreements between District and City of Fresno
- Define capital and operational costs
- Purchase Property
- Construct Improvements

4 Conclusions and Recommendations

4.1 Summary of Findings

Since 2008, the MCWD has realized a significant increase of on-site disposal capacity from 0.417 mgd to at least 0.85 mgd. Concurrent with the increased disposal capacity, the MCWD has realized a significant reduction of average influent flow to the WWTP from 0.887 mgd to 0.594 mgd.

These two factors have greatly alleviated the disposal capacity concerns for the near future.

4.2 Pond Operation and Maintenance Plan

It is recommended that the MCWD maintain consistent compliance with SOP for the disposal ponds.

It is further recommended that the MCWD develop a log of Pond Maintenance Activities, especially those involved with monitoring percolation rate, scraping pond bottoms, and ripping pond bottoms.

4.3 Encourage Water Conservation

It is recommended that the MCWD encourage water conservation within its boundaries through the installation of residential water meters, and the replacement of commercial/industrial water meters.

4.4 Next Steps

<u>Task</u>	<u>Complete by</u>
Implement Log of Pond Maintenance	February, 2017
Submit Planning Grant Application For Evaluation of Treatment and Reuse Of Boiler Blowdown waste streams	March 2017
Canal Gate Replacement Project	May, 2017
Construct Evaporation Pan	2017
Evaluate removal of embankment between Ponds 1, 2, and 5	2017

Appendix

Appendix A
Cease and Desist Order R5-2014-0146

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

CEASE AND DESIST ORDER R5-2014-0146
REQUIRING
MALAGA COUNTY WATER DISTRICT
WASTEWATER TREATMENT FACILITY
FRESNO COUNTY

TO COMPLY WITH REQUIREMENTS PRESCRIBED IN
WASTE DISCHARGE REQUIREMENTS ORDER R5-2014-0145 (NPDES PERMIT NO. CA0084239)

The California Regional Water Quality Control Board, Central Valley Region (hereinafter Central Valley Water Board), finds that:

1. The Malaga County Water District (Discharger) owns and operates a Wastewater Treatment Facility (Facility) in the unincorporated community of Malaga, Fresno County.
2. The Facility provides sewerage service to approximately 1,300 residents and various industrial users. The Facility consists of a 1.2 million gallons per day (mgd) activated sludge secondary treatment system with dissolved air flotation/primary clarification, aeration basins, and three secondary sedimentation basins. Secondary-treated wastewater is discharged to eight evaporation/percolation ponds (Discharge Point 002). Wastewater can also be tertiary-treated in a 'fuzzy' filter and disinfected with ultraviolet light. Disinfected, tertiary-treated wastewater is discharged to Central Canal, up to 0.45 mgd (Discharge Point 001).
3. On 4 December 2014, the Central Valley Water Board adopted Waste Discharge Requirements (WDRs) Order R5-2014-0145 (NPDES Permit No. CA0084239). WDR Order R5-2014-0145 section IV.A.1. includes, in part, the following effluent limitation for flow at Discharge Point 002:

1. **Average Monthly Flow.** The average monthly discharge flow shall not exceed the following:

- b. 0.49 mgd at Discharge Point 002, unless the Executive Officer approves a higher flow, up to 0.85 mgd, as allowed by Provision VI.C.2.b. Compliance shall be determined at monitoring location EFF-002.
4. WDRs Order R5-2014-0145, section IV.B.1.a includes, in part, the following effluent limitations at Discharge Point 001:
 - a. The Discharger shall maintain compliance with the effluent limitations specified in Table 4:

Table 4. Final Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Copper, Total Recoverable	µg/L	6.5	--	12	--	--
Cyanide, Total (as CN)	µg/L	4.2	--	8.7	--	--
Nitrate plus Nitrite (as N)	mg/L	10.	--	--	--	--

5. By letter dated 25 June 2014, Fresno Irrigation District informed the Central Valley Water Board that it would agree to continue allowing discharge from the Facility to Central Canal year-round for the next 3-5 years, after which it would be open to accepting the discharge during irrigation season. The letter identified the irrigation season as typically lasting six months, between April through September, but also indicated the irrigation season could vary from two months to nine

months. Thus, WDRs Order R5-2014-0145, Provision VI.C.6.b requires the discharge to Central Canal to cease during months when there are no irrigation water deliveries beginning on 31 January 2020.

6. WDRs Order R5-2014-0145, Provision VI.C.4.d.v states:

- v. Ponds shall have sufficient capacity to accommodate allowable wastewater flow and design seasonal precipitation and ancillary inflow and infiltration during the non-irrigation season (i.e., during periods when there are no irrigation water deliveries). Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns. The Discharger shall operate and maintain all ponds sufficiently to protect the integrity of containment dams and berms and prevent overtopping and/or structural failure. Unless a California-registered civil engineer certifies (based on design, construction, and conditions of operation and maintenance) that less freeboard is adequate, the operating freeboard in any pond shall never be less than two feet (measured vertically from the lowest possible points of overflow).

7. WDRs Order R5-2014-0145, Provision VI.C.4.d.vi states:

- vi. Prior to the onset of the rainy season each year, available pond storage capacity shall at least equal the volume necessary to comply with the Disposal Ponds Operating Requirement at Section VI.C.4.d.v, above.

8. WDRs Order R5-2014-0145, Provision VI.A.2.g states:

- g. The Discharger shall ensure compliance with any existing or future pretreatment standard promulgated by U.S. EPA under section 307 of the [Clean Water Act], or amendment thereto, for any discharge to the municipal system.

9. WDRs Order R5-2014-0145, Provision VI.C.5.a states, in part:

a. Pretreatment Requirements

- i. The Discharger shall be responsible and liable for the performance of all Control Authority pretreatment requirements contained in 40 CFR Part 403, including any subsequent regulatory revisions to 40 CFR Part 403...

10. WDRs Order R5-2014-0145, Section V.B. includes Groundwater Limitations, as follows:

B. Groundwater Limitations

- 1. Release of waste constituents associated with the Facility or discharge shall not cause or contribute to groundwater containing constituent concentrations in excess of the concentrations specified below or natural background quality for the specified constituents, whichever is greater:
 - a. Nitrate (as N) of 10 mg/L.
 - b. For constituents identified in Title 22 of the California Code of Regulations, the MCLs quantified therein.

Need for Time Schedule for Effluent Limitations

11. On 27 August 2014, the Discharger submitted a request and justification for time schedules for the new copper, cyanide, and nitrate plus nitrite (as N) effluent limitations. The Discharger proposes to make modifications to its existing aeration basins to enable denitrification to meet

the new effluent limitation for nitrate plus nitrite (as N). The Discharger also proposes to conduct an evaluation of the sources and concentrations of copper and cyanide into the Facility and determine the removal efficiency of these parameters. Additional monitoring will be conducted as part of the study, and the Discharger proposes to submit a report with recommendations after the additional monitoring and source and concentration evaluation have been conducted. Additionally, as part of its pretreatment program, the Discharger is required to evaluate and update its local limits, as necessary, which may assist with source control.

Mandatory Minimum Penalties

12. California Water Code (Water Code) sections 13385(h) and (i) require the Central Valley Water Board to impose mandatory minimum penalties (MMPs) upon dischargers that violate certain effluent limitations. Water Code section 13385(j)(3) exempts the discharge from MMPs “*where the waste discharge is in compliance with either a cease and desist order issued pursuant to Section 13301 or a time schedule order issued pursuant to Section 13300 or 13308, if all the [specified] requirements are met... for the purposes of this subdivision, the time schedule may not exceed five years in length...*”
13. Per the requirements of Water Code section 13385(j)(3), the Central Valley Water Board finds that:
 - a. This Order specifies the actions that the Discharger is required to take in order to correct the violations that would otherwise be subject to Water Code sections 13385(h) and (i).
 - b. The Discharger has requested additional time to complete Facility modifications and conduct studies to comply with the final effluent limitations for copper, cyanide, and nitrate plus nitrite (as N). The Discharger proposes to complete modifications to its existing aeration basins to allow for denitrification of the wastewater to meet the nitrate plus nitrite (as N) effluent limitation. The Discharger proposes to conduct a study to determine sources and concentrations of copper and cyanide into the Facility, determine the removal efficiency at the Facility, and prepare a report with recommendations to address copper and cyanide. Additionally, the Discharger is required to conduct a local limits evaluation as part of its pretreatment program, which may assist in source control for copper and cyanide.
 - c. The final effluent limitations for copper, cyanide, and nitrate plus nitrite (as N) are new, more stringent, or modified regulatory requirements that became applicable to the waste discharge after the effective date of WDRs Order R5-2014-0145 and after 1 July 2000. New or modified control measures are necessary in order to comply with the final effluent limitations for copper, cyanide, and nitrate plus nitrite (as N). The new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days.
 - d. This Order establishes a time schedule to bring the waste discharge into compliance with the effluent limitations that is as short as possible, taking into account the technological, operational, and economic factors that affect the design, development, and implementation of the control measures that are necessary to comply with the effluent limitations.
14. Compliance with this Order exempts the Discharger from MMPs for violations of the final effluent limitations for copper and cyanide found in WDRs Order R5-2014-0145 from 1 February 2015 until 31 January 2020 and the final effluent limitation for nitrate plus nitrite (as N) found in WDRs Order R5-2014-0145 from 1 February 2015 until 31 July 2016. The

Discharger has not previously been exempt from MMPs for violations of the copper, cyanide, and nitrate plus nitrite (as N) effluent limitations.

15. In accordance with Water Code section 13385(j)(3)(C), the time schedule established by the Central Valley Water Board for bringing the waste discharge into compliance with final effluent limitations for copper, cyanide, and nitrate plus nitrite (as N) does not exceed five years.
16. This Order provides a time schedule for completing the actions necessary to ensure compliance with the final effluent limitations for copper, cyanide, and nitrate plus nitrite (as N) contained in WDRs Order R5-2014-0145. Since the time schedule for completion of actions necessary to bring the waste discharge into compliance exceeds one year, this Order includes interim effluent limitations and interim requirements and dates for their achievement.
17. This Order includes performance-based interim effluent limitations for copper, cyanide, and nitrate plus nitrite (as N). The interim effluent limitations are based on the current treatment plant performance.

The interim effluent limitations consist of statistically calculated performance-based average monthly and maximum daily effluent limitations derived using effluent data submitted by the Discharger. The interim effluent limitations were developed using the statistical based approach provided in U.S. EPA's *Technical Support Document for Water Quality-Based Toxics Control* (TSD). The TSD provides guidance on estimating the projected maximum effluent concentration using a lognormal distribution of the observed effluent concentrations at a desired confidence level, as detailed in Section 3.3 of the TSD. The multipliers in Table 3-1 of the TSD were used to calculate the 99th percent confidence level and 99th percentile of the data set based on the number of effluent samples and the coefficient of variation. The multipliers from the table were multiplied by the highest observed effluent concentration (MEC) to estimate the maximum expected effluent concentration; this value was used as the interim effluent limitation for the average monthly effluent limitations (AMELs). The interim performance-based maximum daily effluent limitations (MDELs) were established in accordance with section 1.4 and Table 2 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP), by multiplying the interim AMEL by the MDEL/AMEL multiplier.

Effluent data from January 2010 through December 2013 were used to calculate the interim effluent limitations in the table below. The following table summarizes the calculations of the daily maximum and average monthly interim effluent limitations for these constituents:

Parameter	Units	MEC	No. of Observations	Mean	Standard Deviation	CV	Interim AMEL ¹	Interim MDEL ²
Copper, Total Recoverable	µg/L	41	36	21	10	0.50	70	130
Cyanide, Total (as CN)	µg/L	6.6	27	2.8	1.8	0.64	14	30
Nitrate plus Nitrite (as N)	mg/L	20	26	14	2.8	0.20	26	--

¹ Projected 99th percentile effluent concentration value for an assumed lognormal distribution at a 99 percent confidence upper bound. Calculated per Section 3.3.2 of the TSD.

² Interim MDEL calculated using MDEL/AMEL multiplier from Section 1.4 of the SIP.

18. The Central Valley Water Board finds that the Discharger can maintain compliance with the interim effluent limitations included in this Order. Interim effluent limitations are established when compliance with the final effluent limitations cannot be achieved by the existing Facility. Discharge of constituents in concentrations in excess of the final effluent limitations, but in compliance with the interim effluent limitations, can significantly degrade water quality and

adversely affect the beneficial uses of the receiving stream on a long-term basis. The interim effluent limitations, however, establish an enforceable ceiling concentration until compliance with the final effluent limitations can be achieved.

19. If an interim effluent limitation contained in this Order is exceeded, then the Discharger is subject to MMPs for that particular exceedance as it will no longer meet the exemption in Water Code section 13385(j)(3). It is the intent of the Central Valley Water Board that a violation of an interim average monthly effluent limitation subjects the Discharger to only one MMP for that monthly averaging period. In addition, a violation of an interim maximum daily effluent limitation subjects the Discharger to one MMP for the day in which the sample was collected.

Enforcement History

Disposal Capacity

20. The Discharger was previously regulated by WDRs Order 99-100, Cease and Desist (CDO) 5-01-001, WDRs Order R5-2008-0033, and CDO R5-2008-0032. WDRs Order 99-100 was the first NPDES permit issued to the Discharger, and included findings that the Discharger proposed to construct a tertiary filter and chlorine disinfection treatment units. The tertiary treatment and disinfection units were constructed to address the Discharger's insufficient disposal capacity and functioned to supplement the disposal ponds by discharging the tertiary, disinfected wastewater to Central Canal. Between adoption of WDRs Order 99-100 and CDO 5-01-001, the Discharger proposed emergency discharges to Central Canal to alleviate the freeboard in the ponds. The Discharger had constructed a temporary chlorination system and discharge pipeline, but not the tertiary filter. Additionally, CDO 5-01-001 included findings that the Discharger had constructed a one-foot deep temporary pond for additional percolation capacity. The Discharger did not inform the Central Valley Water Board about its temporary pond prior to initiating the discharge, nor did it inform the Central Valley Water Board when treated wastewater from the emergency pond spilled onto adjacent property. CDO 5-01-001 included a schedule requiring the Discharger to construct the tertiary filter and disinfection units prior to commencing discharge to Central Canal.
21. WDRs Order R5-2008-0033 and CDO R5-2008-0032 rescinded WDRs Order 99-100 and CDO 5-01-001, respectively. WDRs Order R5-2008-0033 included an effluent flow limitation to the disposal ponds (Discharge Point 002) of 0.85 mgd, which is less than the design capacity of the secondary treatment system (1.2 mgd). CDO R5-2008-0032 required the Discharger to address disposal capacity issues, and indicated the disposal capacity of the ponds was likely less than 0.85 mgd, and was more likely around 0.42 mgd, based on a water balance provided by the Discharger in 2006.
22. CDO R5-2008-0032 required the Discharger to: "*Evaluate [Facility] treatment and disposal capacity and identify short-term and long-term measures to secure adequate treatment and disposal capacity for the volume, type, and concentrations of wastes in influent projected through at least 2028.*" The CDO further specified that: "*Study results shall include evaluations of, but not limited to, short-term measures necessary to comply with Order No. R5-2008-0033, implementation of appropriate ongoing operations and maintenance, and long-term measures to meet [Facility] treatment and disposal needs through at least 2028.*"
23. On 28 July 2008, the Discharger submitted the *Treatment and Disposal Capacity Study* (Study) to fulfill requirement No. 3 of CDO R5-2008-0032 (p. 6). Central Valley Water Board staff provided a review of the Study on 24 September 2009 and requested that the Discharger submit

a revised Study to address several deficiencies and provide additional information. The Discharger did not submit a revised Study, as requested, but submitted the *Short Term Improvements Implementation Report* (Report) on 29 April 2011, which summarized short-term improvements completed as part of the Study. The Report included a list of improvements made to treatment components that had been out of service for many years. The Report also included a list of items the Discharger completed to address disposal capacity issues. This included maintenance of three disposal ponds to increase percolation rates, adoption of a moratorium on new or expanding sewer connections until disposal capacity is expanded, and initiation of discussions with City of Fresno regarding consolidation of sewer treatment and disposal. The District also indicated that it contacted property owners and companies to determine if they were willing to sell or lease their property or accept treated effluent for recycling/reclamation, but none were reportedly willing to do so. The Report did not include updated information regarding the disposal capacity of the ponds.

24. On 19 August 2013, Central Valley Water Board staff sent a letter to the Discharger requesting additional information regarding disposal capacity issues as part of the NPDES permit renewal process. In part, the letter requested the Discharger provide status updates regarding maintenance work performed on the disposal ponds and how, if at all, the maintenance work affected disposal capacity. The letter also requested information regarding the status of land acquisition for additional disposal ponds, and the status of alternative disposal measures the Discharger had looked into. The letter requested a response by 3 October 2013.
25. On 10 October 2013, Central Valley Water Board staff contacted the Discharger's Board president, Mr. Charles Garabedian, via telephone because the Discharger had not submitted a response to the letter in Finding No. 24, nor had it communicated to the Central Valley Water Board about the letter or its response. Mr. Garabedian indicated he was in possession of a memorandum from the Discharger's consulting engineer that addressed four of the five items in the August 2013 letter. Mr. Garabedian offered to send Central Valley Water Board staff the memorandum while the Discharger worked on its response. However, Mr. Garabedian indicated the memorandum was not the Discharger's official response to the August 2013 letter. On 10 October 2013, Central Valley Water Board staff received the memorandum. Central Valley Water Board staff reviewed the memorandum, which was essentially a memorandum from the consulting engineer to the Discharger requesting additional information from the Discharger to allow the consulting engineer to prepare a response to the August 2013 letter.
26. On 24 October 2013, Central Valley Water Board staff communicated with the general manager, Mr. Russ Holcomb, to again inquire on the status of the Discharger's response. At that time, Mr. Holcomb indicated the response would be sent in soon, but did not give a specific date. The Discharger provided a response on 29 October 2013. The response included updated disposal capacity estimates and vague information regarding the status of alternative disposal measures the Discharger had looked into. The Discharger also noted it had recently purchased approximately four acres of land near the Facility, but did not include detailed information about developing the land, such as a schedule or a description of the work that needs to be completed. The Discharger indicated it would provide information about which ponds had received maintenance work at a later date, and also indicated it was planning to isolate one or more ponds to determine percolation rates and would also provide that information at a later date. This information was not provided until 27 October 2014 (see Finding No. 27). Additionally, the response did not include a discussion on how the Discharger estimated higher percolation rates for the revised disposal capacity than what it had previously used, considering the Discharger had not, to the best of Central Valley Water Board staff's knowledge, performed a study to determine new percolation rates for the ponds since 2007.

27. On 27 October 2014, the public comment due date for adoption of this Order, the Discharger provided an internal memorandum from its consulting engineer addressed to the Discharger. The memorandum included information regarding the disposal capacity of the ponds, and also included recommendations for the Discharger. The memorandum was resubmitted on 3 November 2014 with the signature and stamp of the engineer in responsible charge. On 19 November 2014, the Discharger submitted a proposed disposal pond maintenance plan. As of the adoption date of this Order, Central Valley Water Board staff had not had sufficient time to thoroughly review the Discharger's 27 October 2014 and 19 November 2014 technical submittals. However, if review of the technical information provided supports a higher effluent flow limitation to the disposal ponds, WDRs Order R5-2014-0145 allows the Executive Officer to approve a higher effluent flow limitation.

Pretreatment

28. On 18 February 2010, staff from a U.S. EPA contractor conducted a pretreatment compliance inspection of the Discharger's pretreatment program. The Discharger was informed of the pretreatment program deficiencies during the inspection exit interview and received the checklist identifying the deficiencies on that same date. It is clear the Discharger was aware of the pretreatment program deficiencies in 2010 given the discussions during the exit interview and the deficiency checklist even though the final report was not transmitted until 6 September 2013 with the Central Valley Water Board's Notice of Violation. Furthermore, the Discharger's attempts to correct several of the deficiencies in 2010 also demonstrates its awareness of the pretreatment program deficiencies. The inspection report included a list of 17 items the Discharger was required to address, and three items Central Valley Water Board staff recommended to enhance the pretreatment program.
29. On 6 and 7 January 2014, staff from the Central Valley Water Board, U.S. EPA – Region IX, and a U.S. EPA contractor conducted a pretreatment compliance inspection and audit of the Discharger's pretreatment program. The Discharger was found to be in violation of several pretreatment requirements and was sent a Notice of Violation on 14 February 2014 that provided a list of 24 items it must address to comply with the pretreatment requirements, and a list of 12 items Central Valley Water Board staff recommended to enhance the pretreatment program.
30. On 2 April 2014 and 1 May 2014, the Discharger provided responses to the 14 February 2014 Notice of Violation. The Discharger indicated it revised several documents that were deemed unsatisfactory in the 14 February 2014 Notice of Violation that transmitted the pretreatment compliance inspection/audit report, and included copies of some of the documents. The response indicated the Discharger would work on developing local limits and was working on conducting evaluations for slug discharges, among other things.

Groundwater Monitoring

31. WDRs Order R5-2008-0033 required the Discharger to evaluate its current groundwater monitoring well network to determine the adequacy of the network in detecting any impacts from every treatment, storage, and disposal unit that does or may release waste constituents to groundwater, and for determining compliance with Groundwater Limitations. The Discharger was required to evaluate each groundwater monitoring well, and was also required to provide recommendations for necessary modifications to the network where deficiencies were documented.

32. The Discharger submitted the *Evaluation of Groundwater Monitoring System* on 15 July 2008. The Discharger's evaluation concluded that the current groundwater monitoring network was providing consistent and reliable data for monitoring the effects of effluent disposal in the immediate vicinity of the Facility. The Discharger did suggest that an additional downgradient well would be desirable and reported that it had been unable to locate an existing groundwater monitoring well further downgradient that would be close enough to the Facility to be relevant.
33. On 23 September 2008, Central Valley Water Board staff provided the Discharger with a review of the *Evaluation*, which Board staff deemed deficient. The review indicated that Central Valley Water Board staff disagreed with the Discharger on the direction of groundwater flow based on the groundwater elevation map included with the report, and requested the Discharger provide groundwater elevation contour maps and a table depicting groundwater flow direction and gradient using the existing monitoring well data. The Discharger was also required to evaluate the adequacy of the upgradient well as a background well based on actual groundwater flow direction and gradient, and background water quality data from monitoring wells at other nearby sites. The review also requested the Discharger provide documentation of its efforts to find a suitable location for an additional downgradient monitoring well and a work plan to implement any changes to the monitoring network if the evaluation determines such changes are necessary.
34. The Discharger submitted a second evaluation on 3 November 2008. As requested, the Discharger provided a groundwater elevation contour map and table depicting groundwater flow direction and gradient, based on wells owned by the Discharger, to support its claim that groundwater flows in a northwest direction. The Discharger's evaluation of the upgradient well consisted of stating that the well was adequate "due to the general groundwater direction" and that the well provides representative groundwater information upgradient of the Facility. In addition, the Discharger indicated that to its knowledge, there are no other representative groundwater monitoring wells in the vicinity. The Discharger also noted that its original evaluation did not indicate an additional downgradient well was necessary, only that it may be beneficial. As such, in the Discharger's opinion, there were insufficient grounds for Central Valley Water Board staff to require that a new downgradient groundwater monitoring well be installed immediately.
35. Central Valley Water Board staff provided a second review of both submittals on 24 September 2009, which indicated the evaluation was still deficient and provided the Discharger with more direction to resolve the deficiencies. The review letter indicated Central Valley Water Board staff looked at groundwater information from a site northwest of the Facility and from two nearby sites with groundwater monitoring networks, the latter accessed through the State Water Resources Control Board's GeoTracker website, all of which indicate that groundwater flow direction is to the west and southwest. Additionally, the review letter noted Central Valley Water Board staff believed that mounding associated with percolation beneath the ponds precluded the use of the depth to groundwater measurement in the downgradient wells to establish the direction of local groundwater flow and gradient. The review also noted that the location and operation of the Central Canal also needed to be included in the evaluation of the groundwater monitoring network. The Discharger was directed again to re-evaluate the groundwater gradient and direction of flow. The review letter indicated that Central Valley Water Board staff disagreed with the Discharger's assessment that the upgradient well was adequate as a background well. The review letter noted that the upgradient well is degraded and/or polluted by nitrates and, consequently, does not represent "background" within the meaning of State Water Resources Control Board's Resolution 68-16. The Discharger was directed to, at minimum, examine monitoring data from other sites in the vicinity that conduct groundwater

monitoring to determine if the chemical quality of the upgradient well is representative of other wells in the area and is providing accurate background quality information.

36. On 23 October 2009, the Discharger provided a third iteration of its groundwater monitoring network evaluation. The Discharger indicates that there is no information substantiating Central Valley Water Board staff's claim that the upgradient well is not suitable. Additionally, the Discharger indicated there were no wells in the vicinity of the upgradient well that are representative of first-encountered groundwater. The Discharger also noted that the groundwater monitoring well network was approved by the Central Valley Water Board in 2001. The Discharger continued to argue that the existing groundwater monitoring network is adequate, and that the groundwater flow direction is to the northwest and not west or southwest as the Central Valley Water Board claims.
37. Central Valley Water Board staff provided a third review of all the submittals on 14 December 2012, which indicated the evaluation was still deficient. The review requested either a proposal to use additional data from existing wells in support of an evaluation of background conditions, or a work plan for an additional background well. The review also requested the Discharger submit a work plan for an additional downgradient well. On 15 February 2013, the Discharger's attorney responded to Central Valley Water Board staff's third review with a letter in which the attorney accused Central Valley Water Board staff of numerous things including harassing the Discharger. In the letter, the attorney indicated that nowhere in the evaluation did the Discharger ever mention installation of additional upgradient or downgradient wells, and questioned whether the Central Valley Water Board has the authority to require the Discharger to install any of these wells. The letter did say the Discharger had installed an additional downgradient monitoring well but indicated the well was not yet operational because testing had not occurred. However, no other information was included, such as the location of the well, but the Discharger's attorney alluded to the Central Valley Water Board likely disagreeing with the location. Central Valley Water Board staff did not respond to the attorney's letter because the letter did not raise substantial new issues and the issues raised had already been discussed and addressed in previous correspondence from the Central Valley Water Board to the Discharger.
38. In its 2013 Annual Report, the Discharger noted that three of the four groundwater monitoring wells were dry during the fourth quarter, and later confirmed via telephone that all four wells were dry.

Regulatory Considerations

39. The Discharger addressed two requirements in CDO R5-2008-0032 but has not adequately addressed the disposal capacity issues. However, CDO R5-2008-0032 is no longer adequate and is being replaced by this Order.
40. Based on Findings No. 3, 5-7, and 20-26, a discharge of waste is threatening to take place in violation of WDRs Order R5-2014-0145. The disposal ponds (Discharge Point 002) have a disposal capacity of 0.49 mgd, based on the available information submitted under the responsible charge of a professional engineer, and the Discharger will be restricted from discharging to Central Canal during months when there are no irrigation water deliveries. The irrigation water delivery period can vary each year from approximately two months to nine months and is generally about six months. During wet years, the disposal ponds do not have enough capacity to accommodate current flows, which averaged 0.65 mgd between 2010-2013.

41. Based on Finding No. 8, 9, and 28-30, the Discharger is in violation of WDRs Order R5-2014-0145. The Discharger has failed to properly implement its pretreatment program and comply with the requirements in 40 CFR Part 403.
42. Based on Findings No. 31-38, the Central Valley Water Board cannot make a determination whether the disposal ponds are conditionally exempt from Title 27, California Code of Regulations, due to the lack of adequate groundwater data. This Order requires the Discharger to submit a work plan and time schedule for installation of new groundwater monitoring wells, that will enable Central Valley Water Board staff to determine compliance with Groundwater Limitations V.B. in WDRs Order R5-2014-0145 (see Finding No. 10), and to allow the Central Valley Water Board to determine if the disposal ponds meet the exemptions in Title 27, California Code of Regulations, Section 20090(b).
43. Water Code section 13301 states: *“When a regional board finds that a discharge of waste is taking place, or threatening to take place, in violation of requirements or discharge prohibitions prescribed by the regional board or the state board, the board may issue an order to cease and desist and direct that those persons not complying with the requirements or discharge prohibitions (a) comply forthwith, (b) comply in accordance with a time schedule set by the board, or (c) in the event of a threatened violation, take appropriate remedial or preventive action. In the event of an existing or threatened violation of waste discharge requirements in the operation of a community sewer system, cease and desist orders may restrict or prohibit the volume, type, or concentration of waste that might be added to that system by dischargers who did not discharge into the system prior to the issuance of the cease and desist order. Cease and desist orders may be issued directly by a board, after notice and hearing.”*
44. Water Code section 13267 states, in part: *“In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.”*
45. The Discharger owns and operates the wastewater treatment facility that is subject to this Order. The technical and monitoring reports required by this Order are necessary to determine compliance with the WDRs and with this Order, and to ensure the Discharger secures adequate disposal capacity for the long term.
46. Issuance of this Order is exempt from the provisions of the California Environmental Quality Act (Pub. Resources Code, § 21000 et seq.) (“CEQA”) pursuant to Water Code section 13389, since the adoption or modification of a NPDES permit for an existing source is statutorily exempt and this Order only serves to implement a NPDES permit. (Pacific Water Conditioning Ass’n, Inc. v. City Council of City of Riverside (1977) 73 Cal.App.3d 546, 555-556.).
47. On 4 December 2014, in Rancho Cordova, California, after due notice to the Discharger and all other affected persons, the Central Valley Water Board conducted a public hearing at which

evidence was received to consider this Cease and Desist Order under Water Code section 13301 to establish a time schedule to achieve compliance with waste discharge requirements.

IT IS HEREBY ORDERED THAT Cease and Desist Order R5-2008-0032 is rescinded upon the adoption date of this Order, except for enforcement purposes, and, pursuant to California Water Code sections 13301 and 13267, Malaga County Water District, its agents, successors, and assigns, shall:

1. Cease and desist discharging wastes in violation and threatened violation of WDRs Order R5-2014-0145.
2. Resolve the disposal capacity issues at the Facility, according to the following:

Task	Description	Compliance Date
2a	Submit a technical report that includes: <ul style="list-style-type: none"> • Detailed information with supporting evidence¹, if available, of all measures the Discharger has taken since at least March 2008 to address disposal capacity issues. This shall include any and all alternative disposal measures the Discharger has looked into and/or evaluated. 	1 February 2017
2b	To address future disposal capacity, the Discharger shall submit a technical report that: <ul style="list-style-type: none"> • Describes, in detail, what the Discharger proposes to do to increase its disposal capacity and maintain the increased disposal capacity. The Discharger shall evaluate alternative disposal measures, including but not limited to, recycling/reuse and regionalization. If the Discharger determines other alternative measures are infeasible, it shall include an infeasibility analysis that demonstrates why the disposal alternatives are infeasible. • Includes a complete analysis of the disposal capacity of the onsite ponds. The analysis shall be accompanied by supporting documentation, such as a description with calculations on how percolation rates were determined. The discussion shall also include the long-term percolation rate(s) and how the Discharger intends to maintain those long-term percolation rates. • Include an implementation schedule for implementing the above actions. The technical report is subject to Executive Officer approval.	1 February 2017
2c	Implement the items described in task 2b, above	Within 180 days following Executive Officer approval of task 2b

¹ Supporting evidence may include correspondence such as letters and/or emails, and meeting notes, among other things.

3. Comply with the following schedule to ensure the pretreatment program is properly implemented and complies with requirements in Title 40, Code of Federal Regulations, Part 403, as appropriate:

Task	Description	Compliance Date
3a	Submit certification that the Discharger has adequately evaluated all nondomestic users for the need to develop a slug discharge control plan,	1 February 2016

Task	Description	Compliance Date
	and how the Discharger will ensure, or has ensured, that the plans are developed where applicable. [Title 40, Code of Federal Regulations, 403.8(f)(2)(vi)]	
3b	Submit a local limits evaluation for revising and/or developing local limits as necessary. [Title 40, Code of Federal Regulations, 403.5(c)]	1 August 2016

4. Comply with the following schedule to ensure sufficient and adequate data are available for determining compliance with Groundwater Limitations V.B in WDRs Order R5-2014-0145, and for determining if the disposal ponds meet the exemptions from Title 27, California Code of Regulation (CCR) in section 20090(b). Adequate groundwater data include data that are representative of regional groundwater conditions unaffected by the Facility (i.e., background data), and data representative of first-encountered groundwater downgradient of the Facility at locations where any impacts to groundwater from waste, storage, and/or treatment units at the Facility can be detected.

Task	Description	Compliance Date
4a	Submit a technical report for a proposed groundwater monitoring well network that includes a monitoring well installation work plan and implementation schedule: <ul style="list-style-type: none"> The groundwater monitoring well network shall include one or more background monitoring wells representative of regional groundwater conditions, and a sufficient number of designated monitoring wells to evaluate the extent to which, if any, the Facility has degraded or threatens to degrade groundwater. The groundwater monitoring well installation work plan shall satisfy Section 1 in Attachment A of this Order. 	1 February 2016
4b	Implement monitoring well installation and destruction work plan and commence groundwater monitoring in accordance with the Monitoring and Reporting Program (MRP). <ul style="list-style-type: none"> The Discharger shall install approved monitoring wells and commence groundwater monitoring in accordance with Attachment E – MRP in WDRs Order R5-2014-0145. 	180 days following written approval of task 4a. by Executive Officer
4c	Submit a technical report that satisfies Section 2 in Attachment A of this Order. If the work plan proposed destruction of groundwater monitoring wells, the completion report shall include well destruction details.	90 days following completion of task 4b.
4d	Report on monthly and quarterly sampling	In accordance with the MRP
4e	Submit a technical report that discusses natural background quality: <ul style="list-style-type: none"> After one year of monitoring, the Discharger shall characterize natural background quality of monitored parameters. 	120 days following completion of 1 st year of sampling

Task	Description	Compliance Date
4f	<p>Submit a technical report that describes the method of compliance for ensuring the disposal ponds comply with land disposal regulations in Title 27, CCR.¹</p> <ul style="list-style-type: none"> This report is required if the Discharger fails to comply with tasks 4a through 4e, above, or if groundwater monitoring data collected from the monitoring well network [required by implementation of tasks 4a through 4e] indicate the disposal ponds have caused or are contributing to an exceedance(s) of water quality objectives contained in the <i>Water Quality Control Plan for the Tulare Lake Basin, Second Edition, Revised January 2004</i> (Tulare Lake Basin Plan). 	1 February 2018

¹ Where sufficient and adequate groundwater monitoring data are not available, the Central Valley Water Board cannot make a finding that the onsite disposal ponds meet precondition (b)(2) in section 20090 of Title 27, CCR. For the onsite disposal ponds to be exempted from Title 27, CCR requirements, all three preconditions under section 20090(b) must be met. Thus, if the Central Valley Water Board cannot find with current data that discharge to the onsite disposal ponds meets all preconditions, it cannot exempt the onsite disposal ponds from Title 27, CCR requirements, and the Discharger would need to determine a method or methods for complying with Title 27, CCR requirements.

5. The Discharger shall comply with the following time schedule to submit reports and ensure compliance with final effluent limitations for copper, cyanide, and nitrate plus nitrite (as N).

Task	Description	Compliance Date
5a	Submit and implement a Pollution Prevention Plan (PPP) for copper, cyanide, and nitrate plus nitrite (as N) that meets the requirements specified in California Water Code Section 13263. ¹	3 August 2015
5b	Provide a list of the modifications completed to the aeration basins to provide denitrification capabilities.	3 August 2015
5c	Submit a report that includes the results of the additional copper and cyanide monitoring, including sources and concentrations of copper and cyanide.	3 August 2015
5d	Submit a technical report that includes an implementation schedule for addressing copper and cyanide in the effluent.	1 October 2015
5e	Progress Reports ²	1 February and 1 August, semi-annually, until final compliance
5f	Comply with the final effluent limitations for nitrate plus nitrite (as N)	1 August 2016
5g	Comply with the final effluent limitations for copper and cyanide	1 February 2020

¹ The pollution prevention plan shall be prepared and implemented for copper, cyanide, and nitrate plus nitrite (as N), and shall meet the requirements specified in Water Code section 13263.3. The pollution prevention plan shall describe pollution prevention activities the Discharger will implement in the short-term and the long-term to reduce effluent concentrations for copper, cyanide, and nitrate plus nitrite (as N).

² The progress reports shall detail what steps have been implemented towards achieving compliance with waste discharge requirements, including studies, construction progress, evaluation of measures implemented, and recommendations for additional measures as necessary to achieve full compliance by the final date.

6. Discharge from Discharge Point 001 shall not exceed the following interim effluent limitations. These interim effluent limitations for copper, cyanide, and nitrate plus nitrite (as N) are effective upon the effective date of WDRs Order R5-2014-0145 and shall apply in lieu of the corresponding final effluent limitations in WDRs Order R5-2014-0145. The Discharger shall comply with the following interim effluent limitations through the dates specified in the table below.

Parameter	Units	Interim Maximum Daily Effluent Limitation	Interim Average Monthly Effluent Limitation	Effective Through
Copper, Total Recoverable	µg/L	130	70	31 January 2020
Cyanide, Total (as CN)	µg/L	30	14	31 January 2020
Nitrate plus Nitrite (as N)	mg/L	--	26	31 July 2016

7. Any person signing a document submitted under this Order shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my knowledge and on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

8. In accordance with California Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain work plans for, that describe the conduct of investigations and studies, or that contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly stated. Each technical report submitted by the Discharger shall contain the professional's signature and/or stamp of the seal.
9. If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order or with the WDRs may result in the assessment of Administrative Civil Liability of up to \$10,000 per violation, per day, depending on the violation, pursuant to the Water Code, including sections 13268, 13350 and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., within 30 days of the adoption date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:

http://www.waterboards.ca.gov/public_notices/petitions/water_quality

or will be provided upon request.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 4 December 2014.

Original signed by:

PAMELA C. CREEDON, Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

CEASE AND DESIST ORDER R5-2014-0146

ATTACHMENT A
STANDARD REQUIREMENTS FOR MONITORING WELL INSTALLATION WORK PLAN AND
MONITORING WELL INSTALLATION REPORT

Prior to installation of groundwater monitoring wells, the Discharger shall submit a work plan containing, at a minimum, the information listed in Section 1, below. Groundwater monitoring wells may be installed after the Central Valley Water Board Executive Officer approves the work plan. Upon installation of the groundwater monitoring wells, the Discharger shall submit a well installation report that includes the information contained in Section 2, below. All work plans and reports must be prepared under the direction of, and signed by, a professional geologist or civil engineer licensed by the State of California.

SECTION 1 – Monitoring Well Installation Work Plan and Groundwater Sampling and Analysis Plan

The monitoring well installation work plan shall contain the following minimum information:

A. General Information

1. Purpose of the well installation project;
2. Brief description of local geologic and hydrogeologic conditions;
3. Proposed monitoring well locations and rationale for well locations;
4. Topographic map showing facility location, roads, and surface water bodies;
5. Large-scaled site map showing all existing onsite wells, proposed wells, surface water bodies and drainage courses, buildings, waste handling facilities, utilities, and major physical and man-made features.

B. Drilling Details

1. Onsite supervision of drilling and well installation activities;
2. Description of drilling equipment and techniques;
3. Equipment decontamination procedures;
4. Cuttings disposal methods;
5. Soil sampling intervals (if appropriate); logging methods; number and location of soil samples and rationale; and sample collection, preservation, and analytical methods.

C. Monitoring Well Construction Details (in graphic form with rationale provided in narrative form):

1. Borehole diameter;
2. Casing and screen material, diameter, and centralizer spacing (if needed);
3. Type of well caps (bottom cap either screw on or secured with stainless steel screws);
4. Anticipated depth of well, length of well casing, and length and position of perforated interval;
5. Thickness, position, and composition of surface seal, sanitary seal, and sand pack;
6. Anticipated screen slot size and filter pack.

D. Well Development (performed at least 48 hours after sanitary seal placement):

1. Method of development to be used (i.e., surge, bail, pump, etc.);
2. Parameters to be monitored during development and record keeping technique;

3. Method of determining when development is complete;
4. Disposal of development water.

E. Well Survey (precision of vertical survey data shall be at least 0.01 foot):

1. Identify the Licensed Land Surveyor or Civil Engineer that will perform the survey;
2. Datum for survey measurements;
3. List well features to be surveyed (i.e., top of casing, horizontal and vertical coordinates, etc.).

F. Schedule for Completion of Work

G. Appendix: Groundwater Sampling and Analysis Plan (SAP)

The Groundwater SAP, a guidance document that is referred to by individuals responsible for conducting groundwater monitoring and sampling activities, shall contain, at a minimum, a detailed written description of standard operating procedures for:

1. Equipment to be used during sampling;
2. Equipment decontamination procedures;
3. Water level measurement procedures;
4. Well purging (include a discussion of procedures to follow if three casing volumes cannot be purged);
5. Monitoring and record keeping during water level measurement and well purging (include copies of record keeping logs to be used);
6. Purge water disposal;
7. Analytical methods and required reporting limits;
8. Sample containers and preservatives;
9. General sampling techniques;
10. Record keeping during sampling (include examples of record-keeping logs);
11. QA/QC samples;
12. Chain of Custody;
13. Sample handling and transport.

SECTION 2 – Monitoring Well Installation Report

The monitoring well installation report must provide the information listed below. In addition, the report must also clearly identify, describe, and justify any deviations from the approved work plan.

A. General Information:

1. Purpose of the well installation project;
2. Number of monitoring wells installed and identifying label(s) for each;
3. Brief description of geologic and hydrogeologic conditions encountered during well installation;
4. Topographic map showing facility location, roads, surface water bodies;
5. Large-scaled site map showing all previously existing wells, newly installed wells, surface water bodies and drainage courses, buildings, waste handling facilities, utilities, and other major physical and man-made features.

B. Drilling Details (in narrative and/or graphic form):

1. Onsite supervision of drilling and well installation activities;

2. Drilling contractor and driller's name;
3. Description of drilling equipment and techniques;
4. Equipment decontamination procedures;
5. Well boring log (provide for each well);
 - a. Well boring number and date drilled;
 - b. Borehole diameter and total depth;
 - c. Total depth of open hole (i.e., total depth drilled if no caving or back-grouting occurs);
 - d. Depth to first encountered groundwater and stabilized groundwater depth;
 - e. Detailed description of soils encountered, using the Unified Soil Classification System.

C. Well Construction Details (provide a diagram for each well):

1. Monitoring well number and date constructed;
2. Casing and screen material, diameter, and centralizer spacing (if needed);
3. Length of well casing;
4. Length and position of slotted casing and size of perforations;
5. Thickness, position and composition of surface seal, sanitary seal, and sand pack;
6. Type of well caps (bottom cap either screw on or secured with stainless steel screws).

D. Well Development (provide for each well):

1. Date(s) and method of development;
2. How well development completion was determined;
3. Volume of water purged from well and method of development water disposal.

E. Well Survey (provide for each well):

1. Reference elevation at the top rim of the well casing with the cap removed (feet above mean sea level to within 0.01 foot);
2. Ground surface elevation (feet above mean sea level to within 0.01 foot);
3. Horizontal geodetic location, where the point of beginning shall be described by the California State Plane Coordinate System, 1983 datum, or acceptable alternative (provide rationale);
4. Present the well survey report data in a table.

F. Water Sampling:

1. Date(s) of sampling;
2. How well was purged;
3. How many well volumes purged;
4. Levels of temperature, EC, and pH at stabilization;
5. Sample collection, handling, and preservation methods;
6. Sample identification;
7. Analytical methods used;
8. Laboratory analytical data sheets;
9. Water level elevation(s);
10. Groundwater contour map.

G. Soil Sampling (if applicable):

1. Date(s) of sampling;
2. Sample collection, handling, and preservation methods;
3. Sample identification;

CEASE AND DESIST ORDER R5-2014-0146
ATTACHMENT A – REQUIREMENTS FOR MONITORING WELL
INSTALLATION WORK PLAN AND MONITORING WELL
INSTALLATION REPORT
MALAGA COUNTY WATER DISTRICT
WASTEWATER TREATMENT FACILITY
FRESNO COUNTY

4. Analytical methods used;
5. Laboratory analytical data sheets;
6. Present soil sampling data in a table.

H. Well Completion Report(s) (as defined in California Water Code § 13751). Blank forms are available from California Department of Water Resources' website www.water.ca.gov. Submit this section under separate cover.

I. Appendix (include, at a minimum, copies of the following):

1. County-issued well construction permits;
2. Registered engineer or licensed surveyor's report and field notes;
3. Field notes from well development.

Appendix B
Study Evaluating Treatment and Disposal Facilities, July 2008



WATER & WASTEWATER
MUNICIPAL INFRASTRUCTURE
LAND DEVELOPMENT
AGRICULTURAL SERVICES
DAIRY SERVICES
LAND SURVEYING & GIS
PLANNING & ENVIRONMENTAL
DISTRICT MANAGEMENT

286 W. Cromwell Avenue
Fresno, CA 93711-6168
559 449-2700
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July 25, 2008

California Regional Water Quality Control Board
Central Valley Region
1685 "E" Street
Fresno, CA 93706-2020

Attention: W. Dale Harvey, P.E., Senior Engineer

Subject: Malaga County Water District (MCWD)
Order No. R5-2008-0033, NPDES No. CA 0084239
Treatment and Disposal Capacity Study

Dear Mr. Harvey:

As required, please find attached an evaluation of the Treatment and Disposal Capacity of the facilities as required by Section 3.a. of the Cease and Desist Order.

Please contact me if you have any questions or if you require additional information.

Sincerely,

Michael G. Taylor, P.E.

MGT

Enclosure

cc: Malaga County Water District, Russ Holcomb, General Manager
Fresno Irrigation District (FID), Lawrence Kimura
2008 MCWD – RWQCB Correspondence File

MALAGA COUNTY WATER DISTRICT

Study Evaluating Treatment And Disposal Facilities

July 2008

Prepared for:

RWQCB

Prepared by:

**Provost & Pritchard Engineering Group, Inc.
Fresno, California**

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- A Design Criteria Summary
- B Master Plan of Wastewater Treatment Facilities
- C Preliminary Opinion of Cost for Disposal Facilities

1 FLOWRATE AND CHARACTERISTICS

1.1 Existing Flowrate and Characteristics

- A. The present flowrate received at the wastewater facilities is summarized in Table 1. It is noted that the facilities periodically receive high flows. For example, the District received average monthly flows in excess of 0.9 mgd from July through September of 2005 and from June through September in 2007. The District has received high flows again in the summer of 2008. The source of those flows is not yet determined, although they may due in part to high source water electroconductivity and the resulting impact to boiler blowdown generation from the industrial connections.
- B. It is noted that the flowrates reported include a recirculation flowrate estimated to be between 100,000 and 200,000 gpd from the grit wash tank. Existing influent characteristics are typically approximately 200 mg/l BOD₅ and approximately 200 mg/l TSS as reported to the RWQCB. It is noted that the influent characteristics are sampled when the grit wash recirculation is active. The impact of this recirculated flowrate to the characteristics is not known. Future samples will be obtained without the influence of the recirculated flows.

1.2 Future Flowrate and Characteristics

- A. The Waste Discharge Requirements are intended to be applied to a facility receiving up to 1.2 mgd. The existing average monthly flowrate received by the facilities ranged from 0.746 mgd to 1.020 mgd in 2007. Land use of property within the sphere of influence of the District, yet not connected to the sewer system is summarized in Table 2. Zoning within the sphere of Influence is shown in Figure 1.
- B. Based on previous growth rates in the Malaga County Water District, an anticipated increase of sewage received at the treatment facilities is summarized in Table 3. The growth rate is based on the average monthly flowrate increase between 1990 and 2007 (0.011 mgd increase per year). The ultimate flowrate for the treatment plant is unknown due to the extreme range of flows that could be attributed to the industrial land uses in the District.

2 TREATMENT FACILITIES

2.1 Design Criteria

- A. Design criteria for the wastewater treatment and disposal facilities are summarized on Plan Sheet 15 of 62 (1999) in the Appendix A.
- B. Specific requirements that require compliance are as follows:
- Average monthly electroconductivity (Ec) 500 μ mhos/cm greater than source water, or 1,000 μ mhos/cm, whichever is more stringent.
 - Chloride of 175 mg/l
- C. Tertiary effluent
- BOD₅ of 10 mg/l
 - TSS of 10/mg/l
 - Ammonia Nitrogen of 1.3 mg/l (as N) until May 2010
 - Ammonia Nitrogen of 0.4 mg/l (as N) after May 19, 2010
 - Boron of non-detect
 - Turbidity of 2 NTU
 - Total Coliform of 2.2 MPN/100 ml as a 7 day median

2.2 Evaluation of Treatment Components

2.3 Headworks

- A. The influent screw pumps have a capacity of 1,100 gpm each. The existing screw pumps have a capacity that is sufficient to meet existing and future demands. The existing screw pumps are in need of repair to the flights to maintain the pumping capacity.
- B. The existing headworks includes a grit removal facility. There is a continuous recirculation of a portion of the wastewater that is not metered separately. The MCWD is in the process of installing a new flowmeter to enable monitoring of the recirculated flow.
1. Short-Term measures: repair flights of screw pumps within 12 months.
Construct grit chamber flow measurement within four 4 months.
 2. Long-Term measures: maintain a fund for the purpose of maintaining and replacing the screw pumps as needed.

2.4 Barminutor

The barminutor has a capacity of 1.2 mgd. The barminutor is sufficient to meet anticipated demands through 2028. The barminutor is presently out of service for maintenance and is expected to be placed into operation in August 2008.

2.5 Dissolved Air Floatation (DAF) Clarifier

- A. The existing DAF has been out of service for several years due to the discovery of leaks from the structure that resulted in the surfacing of untreated effluent. The entire interior surface of the DAF was recently re-coated and sealed. Leaks continue to come from the structure and are now limited to two (2) 12 inch diameter lines that feed the DAF and are located underneath the structure. The workplan to bring the DAF into service is as follows:

<u>Task</u>	<u>Timeline</u>
Video review of existing pipeline	June 2008
Physical confirmation of as-built Conditions and dimensions	July 2008
Initiate construction of improvements	October 2008
Complete construction, perform leak testing	December 2008
Return DAF to service	January 2008 <i>9/2008</i>

- B. The capacity of the DAF is estimated to be 1.2 mgd. A long term plan for expansion of the primary sedimentation facilities is to construct a second DAF as shown in Appendix B. Presently, the lack of the DAF has not compromised the ability of the facilities to meet Waste Discharge Requirements.

1. Short term measures: Repair/replace influent pipelines and place the DAF back into service by January 2009.
2. Long term measures: Construct a second DAF with a capacity of 1.65 at such time that the average influent flowrate reaches 1.10 mgd.

2.6 Activated Sludge

- A. The capacity of the activated sludge tanks is 1.20 mgd. The activated sludge system is dependent upon the three existing blowers that supply 1,500 of cfm to the fine bubble diffuser system. The existing tank volume, detention time, and oxygen supply are sufficient to meet the new discharge requirements for BOD and TSS until the flowrate of 1.2 mgd is reached. A summary of the design criteria for the activated sludge units is contained in Appendix A. Performance of

the activated sludge facilities regarding ammonia is not yet verified. Monitoring of nitrogen forms within the effluent has recently been initiated. Enhancements that may be implemented at the activated sludge facilities may include:

1. Recirculation of RAS to the headworks,
2. Installation of fixed media beds within the existing activated sludge tanks, or
3. Creation of anoxic zones within the activated sludge tanks by restricting air flow in specific locations.

A workplan to investigate the activated sludge units is as follows:

<u>Task</u>	<u>Timeline</u>
Evaluate the existing units and air flow regarding nitrification and denitrification	July-August 2008
Recommend improvements or modifications to present operations (short-term and long-term)	September 2008
Implement short-term measures (if necessary)	December 2008

B. A long-term plan for expansion of the activated sludge units is to install two (2) additional blowers and construct one (1) additional activated sludge tank as shown in Appendix B.

1. Short-term measures: Complete the workplan to investigate the nitrification capabilities of the existing facilities. Implement recommendations of the short-term workplan by December 2008.
2. Long-term measures: Expand the activated sludge tank and associated blowers to a capacity of 1.65 mgd at such time the average monthly flowrate is 1.1 mgd.

2.7 Secondary Clarifiers

A. Although three (3) secondary clarifier tanks are located within the treatment facilities, only one (1) clarifier is in operation. The capacity of the clarifier is 823,000 gpd. The facilities lack redundancy and the ability to meet periodic high influent flowrates. The overall capacity of the three (3) secondary clarifiers is 1.65 mgd (one clarifier held in reserve for redundancy). The workplan to bring a second clarifier into service is as follows:

<u>Task</u>	<u>Timeline</u>
Determine availability and cost of clarifier drive mechanism, chain and flights	June-July 2008
Initiate contract to install necessary components in the second clarifier	September 2008
Review necessary structural repairs to the third clarifier tank – cold joint between structures	August-Sept. 2008
Initiate repairs to the third clarifier structure	April 2009
Construct mechanical components in third clarifier	June 2009

1. Short-term measures: Proceed with workplan as outlined above.
2. Long-term measures: TBD

2.8 Sludge Digestion

- A. The existing sludge digesters have a capacity of 1.2 mgd. The operation of the sludge digesters is proceeding as required. No specific upgrades or improvements are needed at this time.
- B. The sludge thickener is in need of repair to the chain and flight mechanism. The thickness is out of service at the present. District staff is proceeding with initiating the necessary purchase of replacement components.
 1. Short-term measures: Repair sludge thickener by September 2008. Construct lining of the third sludge drying bed in 2009.
 2. Long-term measures: TBD

2.9 Tertiary Filter

- A. The existing tertiary filter has a capacity of 0.45 mgd, which is equivalent to the existing permit for discharge. The Fresno Irrigation District (FID) has requested that the MCWD initiate actions to become independent of canal discharge. Therefore, immediate expansion of the Tertiary filter is not warranted. Previous evaluations recommended an expansion of the tertiary filtration system to at least 0.7 mgd to alleviate pressure from the disposal ponds.
- B. The MCWD is presently designing an ultraviolet (UV) light disinfection system to replace the existing chlorination/dechlorination facilities and achieve more consistency in meeting the electroconductivity limits. The UV system will allow the facilities to meet the new requirements for bromoform, chlorodibromomethane, and dichlorobromomethane.

1. Short-term measures: Complete the improvements necessary to convert to UV disinfection.
2. Long-term measures: TBD

3 DISPOSAL FACILITIES

3.1 Background

- A. Provost & Pritchard Engineering Group, Inc. was authorized by the Board of Directors to evaluate disposal pond expansion alternatives for wastewater treatment plant design flows of 1.2 MGD and 1.65 MGD (future), evaluate potential disposal sites and estimate capital costs associated with the additional disposal facilities.
- B. Additional disposal capacity is of critical need to address both present flow rates and design capacity flows for the wastewater treatment plant. In addition the FID has notified the District of the need to become independent of the discharge to the Central Canal.

The California Regional Water Quality Control Board (RWQCB) Cease and Desist Order issued March 14, 2008 requires a study evaluating the current disposal capacity and addressing additional short term and long term disposal capacity be submitted by District within 90 days of permit adoption.

- C. The District will also evaluate reclamation of the treated effluent and reclamation of industrial effluent within the next 45 days. The wastewater treatment plant site has 23.24 acres of disposal ponds and no vacant property for additional ponds. Wastewater treatment plant data for 2007 was studied and determined that percolation rates remain at no greater than 0.6 inches per day. The 2007 study confirmed the percolation data previously reviewed in 2005. Calculations for the 2007 study can be found in Table 4. Decreasing percolation and increasing flow rates have caused pond freeboard to be chronically in violation of the WDR requirements over the last few years. Tertiary treatment and disposal to the Central Canal, was implemented in 2001 to relieve pond loading and allow for pond maintenance, however increased in flow rates to the wastewater treatment plant have offset the additional discharge capacity.
- D. Due to periodic high flow rates pond maintenance to improve percolation has not been performed. It is anticipated that maintenance of the existing ponds would initially increase percolation to 1.0 inches per day. Regular pond maintenance would keep percolation rates at higher levels and remove solids and silt build up that cause reduced percolation rates.
- E. Actions to enhance disposal capacity or to decrease flows at the treatment facilities are critical in the next 6 to 9 months.

3.2 Disposal Pond Requirements

- A. Water balances have been prepared to evaluate the disposal requirements for the current wastewater treatment flowrates, design capacity of 1.2 MGD and the ultimate wastewater treatment capacity of 1.65 MGD. Average year and 100 year rainfall scenarios were evaluated for each flowrate in Tables 5 through 10.

The total pond required disposal pond capacity required was found to be:

Existing Acres	23.24 ac
0.8 MGD ¹	36.50 ac
1.2 MGD ²	50.50 ac
1.65 MGD ³	66.20 ac

1. Present Flows (approximate)
2. Current WWTP Design Capacity
3. Ultimate WWTP Design Capacity

- B. To prepare conservative estimates of required disposal areas, it was assumed that at any given time 23.24 acres of ponds would have reduced percolation rates of 0.6 inches per day (ponds requiring maintenance) and the remaining ponds would have percolation rates of up to 1.0 inches per day (ponds recently maintained).

Additional acres of disposal ponds needed:

0.8 MGD - Present Flowrate	
Total Required	36.50 ac
Existing Disposal Ponds	<u>23.24 ac</u>
Additional Ponds Required	13.26 ac

1.2 MGD – Design Capacity	
Total Required	50.50 ac
Existing Disposal Ponds	<u>23.24 ac</u>
Additional Ponds Required	27.26 ac

1.65 MGD – Ultimate Capacity	
Total Required	66.20 ac
Existing Disposal Ponds	<u>23.24 ac</u>
Additional Ponds Required	42.96 ac

- C. A water balance prepared to evaluate the pond acreage required to offset the 0.45 mgd discharge to the Central Canal, suggests that 15 acres of ponds would be required (See Table 11).

3.3 Disposal Alternatives

- A. Six (6) potential disposals sites have been identified for the purposes of this preliminary report. All of the sites are south of the wastewater treatment plant near the intersection of Malaga Avenue and Maple Avenue. The area is primarily

agricultural with some single family residences on parcels that range in size from 1 to 18 acres.

- B. Table 12 lists the parcel number, property owner, total parcel acreage and pond acreage that could be provided by each site.

The proposed disposal sites have been evaluated with consideration for the following factors:

1. Size and configuration of property
 2. Distance from WWTP
 3. Existing site conditions
 4. Williamson Act –non-agricultural preserve
- C. Additional factors considered when considering possible disposal sites are the relative locations of Highway 99, the Central Canal and the Southern Pacific Railroad tracks. Traffic volume at the intersection of Maple and Central and the location of existing utilities, irrigation structures, and ditches also must be considered in evaluating potential disposal sites. A pump station and a transmission main would be required to convey treated wastewater to any disposal site.
 - D. Figure 2 shows the vicinity of the WWTP and the APN numbers of parcels in the area being considered for potential disposal sites. Only one parcel, APN 330 031 45S, is large enough to provide all required disposal capacity for the ultimate treatment plant design capacity of 1.65 MGD. Portions of that parcel or smaller parcels could be combined to provide required disposal capacity as flowrates to the wastewater treatment plant increase.
 - E. If property in the vicinity of Maple and Malaga Avenues is acquired, the treated effluent would require a transmission main along Maple Avenue or along an easement parallel to the railroad approximately ¼ mile west of Maple Avenue. A preliminary alignment of the transmission main is included in Figures 4,5 A, and 5B. It is noted that if the transmission main is to follow Maple Avenue, an easement with Parnegian may be required due to the various existing and proposed utilities in Maple Avenue and the high volume of truck traffic at Maple and Central Avenue.
 - F. The configuration of ponds on any site will be dependent on site conditions, size and location. Figure 3 is an example of a typical pond configuration on one of the potential sites.
 - G. A preliminary estimate of capital costs for disposal facilities located on APN 330 031 42S is included in Appendix C.

1. Short-term measures:

Within 30 days:

- a. Conduct additional property research, contact property owners to identify potential willing sellers. Consider hiring a consultant to assist with property acquisition.
- b. Drain Pond No. 5 during the summer of 2008. Allow it to dry for 2-3 weeks then scrape the bottom and then deep rip the bottom.
- c. Consider a moratorium on any new connections or expansion of existing connections until disposal facilities are expanded.

Within 60 days:

- a. Enter into negotiations for purchase or long term lease of a property for disposal ponds. Prepare environmental documents for the proposed project.
- b. Determine financial means to construct the project.
- c. Prepare a timeline for additional disposal capacity improvements.

2. Long-term measures:

- a. Acquire approximately 30 acres of additional property for the construction of percolation/evaporation ponds.

3.4 Reclamation Alternatives

- A. In addition to reviewing alternatives of additional property for the purpose of percolation/evaporation ponds, there may be viable alternatives for reclamation within the District. Alternatives may include:
 1. Reclamation of treated effluent to Caltrans landscaping
 2. Reclamation of treated effluent for agricultural purposes
- B. The MCWD has contacted Caltrans regarding a) the willingness of Caltrans to receive treated effluent, b) the potential volume of water that may be reclaimed, and c) the cost of the reclamation.
- C. Discussions with Caltrans in November of 2007 indicated a willingness to receive the treated effluent in concept. Concerns expressed by Caltrans included the suitability of existing landscapes to the effluent, the need to construct a dual feed system in the event reclaimed water was not available, the ability of Caltrans to maintain the inspection system and landscaping, training of Caltrans personnel in handling treated effluent. Malaga CWD presently provides Caltrans with water for landscaping. Unfortunately, the total water used during the peak month of

2007 was only 7,230 gal/d. The alternative to irrigate Caltrans landscaping, therefore, is not viable to alleviate disposal restrictions.

- D. Agricultural property in the vicinity of the wastewater treatment plant is presently irrigated by private wells and supplemented by FID. The present discharge by MCWD to the FID Central Canal provides approximately 1.3 acre-feet of water per day to the canal. Agricultural properties in the vicinity of the treatment plant are not willing to modify irrigation practices for the relatively small amount of irrigation water.
- E. There exists, several large industries within Malaga County Water District east of State Route 99. These industries discharge industrial boiler blow down water in addition to other waste streams. There exists a potential to construct a separate satellite treatment facility for boiler blow down water that may be treated and disposed of (percolation/evaporation ponds) on the east side of State Route 99. The industrial sites for PPG and Rio Bravo are adjacent to each other. These two sites generate a significant amount of the boiler blowdown received by MCWD. The option of collecting those two waste steams, providing necessary secondary treatment and then disposal in compliance with new Waste Discharge Requirements of property to be obtained by the MCWD would be explored. The alternative reduces the amount of additional property required west of State Route 99.
 - 1. Short-term measures:
 - a. Contact Calpine and PPG regarding the wiliness to sell property to MCWD.
 - 2. Long-term measures:
 - a. Purchase property from PPG, Calpine, and/or ADM.
 - b. Construct new disposal ponds
 - c. Construct a satellite treatment plant
 - d. Construct a separate collection system for boiler blowdown
- F. There exists potential to separate the boiler blowdown water water as a separate waste stream, provide separate treatment facilities, and then reclaim the effluent for industrial or irrigation purposes.
- G. Potential reclamation sources or disposal sites are shown on Figures 6-10. The sites are listed as follows:

<u>Figure</u>	<u>Site</u>
6	ADM and Calpine
7	Community Park Property
8	Konkel School Property
9	PPG Property
10	Rio Bravo Property

- H. The reclamation sites offer the opportunity to reduce the influent flowrate to the treatment facilities by capturing the boiler blowdown water. If necessary, water from the District wells could be used to reduce the Ec of the reclaimed water to levels acceptable for landscape irrigation.
- I. Each acre of lawn that could be irrigated may reduce the amount of sewage received at the treatment facilities by approximately 250 gal/d in an average rainfall year.
1. Short-term measures:
 - a. Determine the suitability of a typical lawn to Ec levels of 800 $\mu\text{mhos/cm}$
 - b. Contact the Department of Public Health regarding the potential of irrigation of tertiary effluent on private sites
 - c. Contact PPG, Rio Bravo, ADM regarding the potential of irrigating or other reclamation with boiler blowdown water
 - d. Contact representatives of the Konkel School regarding the potential or irrigation of lawn with boiler blowdown
 2. Long-term measures:
 - a. Obtain Reclamation Permits from the Department of Public Health for reclamation.
 - b. Construct a separate collection system, treatment plant and distribution system for irrigation of boiler blowdown.

4 SUMMARY

4.1 Short Term

- A. Immediate deficiencies at the treatment facilities are:
 - 1. Influent flow measurement
 - 2. DAF Clarifier
 - 3. Secondary Clarifiers
 - 4. Sludge Thickener
 - 5. UV Disinfection
- B. The MCWD has identified a plan to install grit recirculation flow measurement in 2008, return to DAF to service in 2008, install improvements to an additional secondary clarifier in 2008, and repair the chain and flight mechanism of the sludge thickener. The ultraviolet light disinfection system is also scheduled for construction in 2008.
- C. The MCWD continues to pursue means to reduce electroconductivity within the influent flowrate through pretreatment requirements.
- D. The facilities presently meet ammonia requirements however additional monitoring information is required prior to recommending additional improvements.
- E. Disposal facilities are in critical need of expansion. Additional property acquisition and pond construction is critical.
- F. A summary of the anticipated schedule for short term improvements is included as Figure 11.

4.2 Long Term

- A. Master plan expansion of DAF and Activated Sludge Facilities are identified.
- B. Future disposal alternatives are dependent upon the viability of reclamation proposal and the acquisition of additional disposal ponds.

TABLES

TABLE 1

**MALAGA COUNTY WATER DISTRICT
WASTEWATER TREATMENT PLANT
MONITORING AND REPORTING PROGRAM NO. 2008-0033
NPDES NO. CA 0084239**

YEAR	Permit Flow	AVERAGE FLOWRATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1990		0.677	0.660	0.667	0.694	0.610	0.688	0.709	0.652	0.664	0.679	0.726	0.741	0.632
1991		0.694	0.642	0.651	0.694	0.687	0.684	0.697	0.682	0.703	0.728	0.712	0.713	0.731
1992		0.735	0.727	0.741	0.735	0.681	0.679	0.740	0.753	0.768	0.743	0.768	0.756	0.729
1993		0.716	0.727	0.720	0.724	0.721	0.715	0.703	0.705	0.712	0.714	0.703	0.709	0.734
1994		0.724	0.748	0.739	0.743	0.743	0.745	0.740	0.739	0.737	0.731	0.722	0.669	0.636
1995		0.660	0.638	0.635	0.621	0.614	0.626	0.636	0.641	0.695	0.699	0.705	0.709	0.699
1996		0.688	0.671	0.680	0.676	0.690	0.690	0.689	0.692	0.691	0.686	0.694	0.696	0.705
1997	0.96	0.714	0.686	0.681	0.681	0.690	0.704	0.715	0.711	0.740	0.756	0.722	0.734	0.749
1998	0.96	0.745	0.744	0.743	0.737	0.772	0.755	0.756	0.738	0.775	0.740	0.739	0.706	0.738
1999	0.96	0.760	0.753	0.753	0.735	0.746	0.765	0.762	0.778	0.780	0.770	0.761	0.760	0.751
2000	0.96	0.772	0.723	0.744	0.738	0.754	0.783	0.767	0.772	0.808	0.770	0.795	0.797	0.810
2001	0.96	0.763	0.776	0.771	0.701	0.810	0.755	0.780	0.750	0.770	0.773	0.759	0.760	0.756
2002	0.96	0.748	0.742	0.750	0.737	0.748	0.745	0.737	0.746	0.740	0.755	0.754	0.753	0.763
2003	0.96	0.747	0.752	0.752	0.737	0.750	0.740	0.746	0.758	0.742	0.740	0.750	0.747	0.745
2004	0.96	0.746	0.760	0.737	0.722	0.717	0.734	0.760	0.750	0.750	0.770	0.750	0.750	0.750
2005	0.96	0.823	0.860	0.780	0.760	0.770	0.763	0.870	0.960	0.935	0.964	0.740	0.778	0.700
2006	0.96	0.788	0.740	0.740	0.760	0.744	0.757	0.806	0.849	0.882	0.803	0.820	0.798	0.752
2007	0.96	0.860	0.785	0.820	0.805	0.867	0.770	0.964	1.001	0.960	1.020	0.823	0.746	0.763
2008	0.96	0.355	0.990	0.840	0.760	0.760	0.909	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2009	0.96	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2010	0.96	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2011	0.96	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2012	0.96	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2013	0.96	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

TABLE 2

Property within Sphere of Influence
Not Yet Connected to Community System

Land Use Zoning	Acres	Estimated Sewage Generation (gal/ac-d)	Future Sewage Contribution (gal/d)
AE-5	95.1	1,000	95,100
AL-20	738.4	1,000	738,400
C6	1.7	4,000	6,800
CM	0.8	4,000	3,200
M1	6.4	5,000	32,000
M3	405.4	5,000	2,027,000
O	14.3	100	1,430
RA	2.3	2,000	4,600
Total	1,264.4		2,908,530

TABLE 3

Future Flowrates

Year	Flowrate (mgd)
2007	0.862
2008	0.871
2013	0.926
2018	0.981
2023	1.036
2028	1.091
ultimate	To be determined

TABLE 4

Malaga County Water District
2007 Percolation Rate Estimates

Percolation Pond	Pond 1	Pond 2	Pond 3	Pond 4	Pond 5	Pond 6	Pond 7	Pond 8
Beginning Depth	4.09	4.59	4.92	4.84	4.84	4.50	4.84	4.75
Secondary Inflow Inflow ¹ (ft/yr)	25.37	25.37	25.37	25.37	25.37	25.37	25.37	25.37
Rainfall Inflow ² (ft/yr)	0.588	0.588	0.588	0.588	0.588	0.588	0.588	0.588
Evaporation ³ (ft/yr)	5.1375	5.1375	5.1375	5.1375	5.1375	5.1375	5.1375	5.1375
December 28, 2007	4.50	4.75	5.09	5.00	4.92	4.75	5.00	4.92
Percolation ⁴ (ft/yr)	20.41	20.66	20.65	20.66	20.74	20.57	20.66	20.65
Percolation Rate (ft/day)	0.056	0.057	0.057	0.057	0.057	0.056	0.057	0.057

Note:

1. Secondary inflow distributed evenly in all ponds.
2. Rainfall inflow based on 2007 rainfall data.
3. Evaporation based on WRCC average year pan evaporation x 0.75
4. Percolation = Beginning depth + Inflows - Evaporation - Ending Depth

Table 5
 Malaga County Water District
 Wastewater Treatment & Disposal Facilities
 0.8 MGD Capacity Wastewater Disposal - Average Year Rainfall Water Balance, Discharge and Storage

DATA:

Month	Number of Days per Month	Average Yr. Rainfall ^{1/} (in/month)	Average Yr. Evaporation ^{3/} (in/month)	Discharge to canal	0 MGD
				Daily Effluent Production ^{5/} =	800,000 gpd
January	31	2.11	0.98	Pond Wet Area =	23.24 acres
February	28	1.91	1.58	Pond Storage =	185.9 ac-ft
March	31	1.89	3.15	Pond Percolation Rate =	0.60 in/day
April	30	1.00	4.73		
May	31	0.37	6.98	Additional Pond Wet Area =	11.50 acres
June	30	0.15	8.55	Additional Pond Storage =	69.0 ac-ft
July	31	0.01	9.30	Estimated Pond Percolation Rate =	1.00 in/day
August	31	0.01	8.03	Total Storage =	254.9 ac-ft
September	30	0.17	5.93	Total Storage =	83,066,052 gal
October	31	0.53	3.75		
November	30	1.19	1.73		
December	31	1.58	0.90		
Total	365	10.92	55.61		

Total Area = 34.7 acres

WWTF POND CALCULATIONS:

Effluent Produced (gal/month)	Effluent To Canal (gal/month)	Effluent to Ponds ^{18/} (gal/month)	Surface Rainfall ^{19/} (gal/month)	Surface Evaporation ^{20/} (gal/month)	Pond Percolation ^{21/} (gal/month)	Monthly Change in Storage ^{22/} (gal/month)	Required Storage Capacity ^{23/} (gal)
24,800,000	0	24,800,000	1,990,447	924,473	21,418,325	4,447,649	11,578,101
22,400,000	0	22,400,000	1,801,779	1,490,477	19,345,584	3,365,718	14,943,819
24,800,000	0	24,800,000	1,782,913	2,971,521	21,418,325	2,193,067	17,136,886
24,000,000	0	24,000,000	943,340	4,461,998	20,727,411	(246,069)	16,890,817
24,800,000	0	24,800,000	349,036	6,584,513	21,418,325	(2,853,802)	14,037,015
24,000,000	0	24,000,000	141,501	8,065,557	20,727,411	(4,651,467)	9,385,548
24,800,000	0	24,800,000	9,433	8,773,062	21,418,325	(5,381,954)	4,003,594
24,800,000	0	24,800,000	9,433	7,575,020	21,418,325	(4,183,912)	0
24,000,000	0	24,000,000	160,368	5,594,006	20,727,411	(2,161,049)	0*
24,800,000	0	24,800,000	499,970	3,537,525	21,418,325	344,120	344,120
24,000,000	0	24,000,000	1,122,575	1,631,978	20,727,411	2,763,186	3,107,306
24,800,000	0	24,800,000	1,490,477	849,006	21,418,325	4,023,146	7,130,452
Total (gal)	292,000,000	0	292,000,000	10,301,272	52,459,136	252,183,503	-2,341,367
Total (ac-ft)	896.1	0.0	896.1	31.6	161.0	773.9	-7.2

* Start at 0 Stored September 1st

-2,341,367

1/ Rainfall Data per the Western Regional Climate Center.
 3/ Evaporation data per WRCC X 0.75
 5/ Average Daily Effluent Production
 7/ Total wet area of the existing lagoons.
 19/ Surface Rainfall = Volume of Average-Year rainfall on the existing WWTF treatment and storage ponds and proposed storage ponds.
 20/ Surface Evaporation = Volume of effluent and rain water evaporating from the existing WWTF treatment and disposal ponds.
 21/ Pond Percolation = Volume of effluent and rain water percolating into the ground for existing ponds 1 through 8 plus additional proposed ponds.
 23/ Required Storage = Theoretical starting point Sept. 1st where pond storage starts at zero with monthly contributions.
 36/ Maximum Storage Needed = Peak end of month pond storage volume needed (gallons & ac-ft).
 37/ Storage Available from all ponds = Total volume of available storage.
 39/ Check Balance = Comparison of this value with 16/.

Maximum Required storage	17,136,886
Total Storage Available ^{37/} :	83,066,052 gal
Extra Storage ^{38/} :	65,929,166 gal
	202 ac-ft
Total Effluent Production ^{16/} :	292,000,000 gal
Total Effluent Exported ^{17/} :	0 gal
Total Surface Rainfall ^{19/} :	10,301,272 gal
Total Evaporation ^{20/} :	52,459,136 gal
Total Percolation ^{21/} :	252,183,503 gal
Effluent Applied to Crop ^{28/} :	0 gal
Check Balance ^{39/} :	294,341,367 gal

Updated: 4/14/08
 Print Date: 7/25/08



Table 6
 Malaga County Water District
 Wastewater Treatment & Disposal Facilities
 0.8 MGD Capacity Wastewater Disposal - 100 Year Rainfall Water Balance, Discharge and Storage

DATA:

Month	Number of Days per Month	100 Yr. Rainfall ^{1/} (in/month)	100 Yr. Evaporation ^{2/} (in/month)
January	31	5.14	0.90
February	28	3.70	1.46
March	31	4.53	2.09
April	30	2.76	3.71
May	31	0.01	6.21
June	30	0.31	6.85
July	31	0.00	8.14
August	31	0.00	6.99
September	30	1.10	4.68
October	31	1.58	3.09
November	30	3.16	1.20
December	31	1.59	0.85
Total	365	23.88	46.17

Discharge to canal 0 MGD

Daily Effluent Production^{5/} = 800,000 gpd

Pond Wet Area^{7/} = 23.24 acres

Pond Storage = 185.9 ac-ft

Pond Percolation Rate = 0.60 in/day

Additional Pond Wet Area = 13.50 acres

Additional Pond Storage = 81.0 ac-ft

Estimated Pond Percolation Rate = 1.00 in/day

Total Storage = 266.9 ac-ft

Total Storage = 86,976,269 gal

Total Area = 36.7 acres

WWTF POND CALCULATIONS:

Effluent Produced (gal/month)	Effluent To Canal (gal/month)	Effluent to Ponds ^{18/} (gal/month)	Surface Rainfall ^{19/} (gal/month)	Surface Evaporation ^{20/} (gal/month)	Pond Percolation ^{21/} (gal/month)	Monthly Change in Storage ^{22/} (gal/month)	Required Storage Capacity ^{23/} (gal)
24,800,000	0	24,800,000	5,127,913	897,884	23,101,890	5,928,139	12,154,893
22,400,000	0	22,400,000	3,691,300	1,456,567	20,866,224	3,768,509	15,923,402
24,800,000	0	24,800,000	4,519,348	2,085,085	23,101,890	4,132,373	20,055,775
24,000,000	0	24,000,000	2,753,510	3,701,276	22,356,668	695,566	20,751,341
24,800,000	0	24,800,000	9,976	6,195,397	23,101,890	(4,487,311)	16,264,030
24,000,000	0	24,000,000	309,271	6,833,892	22,356,668	(4,881,289)	11,382,741
24,800,000	0	24,800,000	0	8,120,859	23,101,890	(6,422,749)	4,959,992
24,800,000	0	24,800,000	0	6,973,563	23,101,890	(5,275,453)	0
24,000,000	0	24,000,000	1,097,413	4,668,995	22,356,668	(1,928,250)	0*
24,800,000	0	24,800,000	1,576,285	3,082,734	23,101,890	191,661	191,661
24,000,000	0	24,000,000	3,152,569	1,197,178	22,356,668	3,598,723	3,790,384
24,800,000	0	24,800,000	1,586,261	848,001	23,101,890	2,436,370	6,226,754
Total (gal)	292,000,000	0	292,000,000	23,823,846	46,061,431	272,006,126	-2,243,711
Total (ac-ft)	896.1	0.0	896.1	73.1	141.4	834.8	-6.9

* Start at 0 Stored September 1st
 -2,243,711

Maximum Required storage	20,751,341
Total Storage Available ^{37/}	86,976,269 gal
Extra Storage ^{38/}	66,224,928 gal
	203 ac-ft
Total Effluent Production ^{16/}	292,000,000 gal
Total Effluent Exported ^{17/}	0 gal
Total Surface Rainfall ^{19/}	23,823,846 gal
Total Evaporation ^{20/}	46,061,431 gal
Total Percolation ^{21/}	272,006,126 gal
Effluent Applied to Crop ^{28/}	0 gal
Check Balance ^{39/}	294,243,711 gal

1/ Rainfall Data per the Western Regional Climate Center.

3/ Evaporation data per WRCC X 0.75

5/ Design Capacity Effluent Production

7/ Total existing wet area of the existing lagoons.

19/ Surface Rainfall = Volume of 100 Year rainfall on the existing WWTF treatment and storage ponds and proposed storage ponds.

20/ Surface Evaporation = Volume of effluent and rain water evaporating from the existing WWTF treatment and disposal ponds.

21/ Pond Percolation = Volume of effluent and rain water percolating into the ground for existing ponds 1 through 8 plus proposed additional ponds.

23/ Required Storage = Theoretical starting point Sept. 1st where pond storage starts at zero with monthly contributions.

36/ Maximum Storage Needed = Peak end of month pond storage volume needed (gallons & ac-ft).

37/ Storage Available from all ponds = Total volume of available storage.

39/ Check Balance = Comparison of this value with 16/.

Updated: 4/14/08

Print Date: 7/25/08



Table 7
 Malaga County Water District
 Wastewater Treatment & Disposal Facilities
 1.2 MGD Capacity Wastewater Disposal - Average Year Rainfall Water Balance, Discharge and Storage

DATA:				WWTF POND CALCULATIONS:										
Month	Number of Days per Month	Average Yr. Rainfall ^{1/} (in/month)	Average Yr. Evaporation ^{3/} (in/month)	Discharge to canal	0	MGD	Effluent Produced (gal/month)	Effluent To Canal (gal/month)	Effluent to Ponds ^{18/} (gal/month)	Surface Rainfall ^{19/} (gal/month)	Surface Evaporation ^{20/} (gal/month)	Pond Percolation ^{21/} (gal/month)	Monthly Change in Storage ^{22/} (gal/month)	Required Storage Capacity ^{23/} (gal)
January	31	2.11	0.98	Daily Effluent Production ^{5/} =	1,200,000	gpd	37,200,000	0	37,200,000	2,735,289	1,270,419	32,361,502	6,303,368	16,670,036
February	28	1.91	1.58	Pond Wet Area =	23.24	acres	33,600,000	0	33,600,000	2,476,020	2,048,226	29,229,744	4,798,050	21,468,086
March	31	1.89	3.15	Pond Storage =	185.9	ac-ft	37,200,000	0	37,200,000	2,450,093	4,083,489	32,361,502	3,205,102	24,673,188
April	30	1.00	4.73	Pond Percolation Rate =	0.60	in/day	36,000,000	0	36,000,000	1,296,346	6,131,715	31,317,583	(152,952)	24,520,236
May	31	0.37	6.98	Additional Pond Wet Area =	24.50	acres	37,200,000	0	37,200,000	479,648	9,048,493	32,361,502	(3,730,347)	20,789,889
June	30	0.15	8.55	Additional Pond Storage =	147.0	ac-ft	36,000,000	0	36,000,000	194,452	11,083,756	31,317,583	(6,206,887)	14,583,002
July	31	0.01	9.30	Estimated Pond Percolation Rate =	1.00	in/day	37,200,000	0	37,200,000	12,963	12,056,015	32,361,502	(7,204,554)	7,378,448
August	31	0.01	8.03	Total Storage =	332.9	ac-ft	37,200,000	0	37,200,000	12,963	10,409,656	32,361,502	(5,558,195)	1,820,253
September	30	0.17	5.93	Total Storage =	108,482,465	gal	36,000,000	0	36,000,000	220,379	7,687,330	31,317,583	(2,784,534)	0*
October	31	0.53	3.75				37,200,000	0	37,200,000	687,063	4,861,296	32,361,502	664,265	664,265
November	30	1.19	1.73				36,000,000	0	36,000,000	1,542,651	2,242,678	31,317,583	3,982,390	4,646,655
December	31	1.58	0.90				37,200,000	0	37,200,000	2,048,226	1,166,711	32,361,502	5,720,013	10,366,668
Total	365	10.92	55.61	Total (gal)			438,000,000	0	438,000,000	14,156,093	72,089,784	381,030,590	-964,281	* Start at 0 Stored September 1st
				Total Area =	47.7	acres	Total (ac-ft)	0.0	1,344.2	43.4	221.2	1,169.3	-3.0	-964,281

1/ Rainfall Data per the Western Regional Climate Center.
 3/ Evaporation data per WRCC X 0.75
 5/ Average Daily Effluent Production
 7/ Total wet area of the existing lagoons.
 19/ Surface Rainfall = Volume of Average-Year rainfall on the existing WWTF treatment and storage ponds and proposed storage ponds.
 20/ Surface Evaporation = Volume of effluent and rain water evaporating from the existing WWTF treatment and disposal ponds.
 21/ Pond Percolation = Volume of effluent and rain water percolating into the ground for existing ponds 1 through 8 plus additional proposed ponds.
 23/ Required Storage = Theoretical starting point Sept. 1st where pond storage starts at zero with monthly contributions.
 36/ Maximum Storage Needed = Peak end of month pond storage volume needed (gallons & ac-ft).
 37/ Storage Available from all ponds = Total volume of available storage.
 39/ Check Balance = Comparison of this value with 16/.

Maximum Required storage	24,673,188
Total Storage Available ^{37/}	108,482,465 gal
Extra Storage ^{38/}	83,809,277 gal
	257 ac-ft
Total Effluent Production ^{16/}	438,000,000 gal
Total Effluent Exported ^{17/}	0 gal
Total Surface Rainfall ^{19/}	14,156,093 gal
Total Evaporation ^{20/}	72,089,784 gal
Total Percolation ^{21/}	381,030,590 gal
Effluent Applied to Crop ^{28/}	0 gal
Check Balance ^{39/}	438,964,281 gal

Updated: 4/14/08
 Print Date: 7/25/08



Table 8
 Malaga County Water District
 Wastewater Treatment & Disposal Facilities
 1.2 MGD Capacity Wastewater Disposal - 100 Year Rainfall Water Balance, Discharge and Storage

DATA:				WWTF POND CALCULATIONS:							Monthly Change in Storage ^{22/}	Required Storage Capacity ^{23/}		
Month	Number of Days per Month	100 Yr. Rainfall ^{1/} (in/month)	100 Yr. Evaporation ^{2/} (in/month)	Discharge to canal	0	MGD	Effluent Produced (gal/month)	Effluent To Canal (gal/month)	Effluent to Ponds ^{18/} (gal/month)	Surface Rainfall ^{19/} (gal/month)	Surface Evaporation ^{20/} (gal/month)	Pond Percolation ^{21/} (gal/month)	(gal/month)	(gal)
January	31	5.14	0.90	Daily Effluent Production ^{5/} =	1,200,000	gpd	37,200,000	0	37,200,000	7,047,043	1,233,918	34,676,405	8,336,720	17,457,612
February	28	3.70	1.46	Pond Wet Area ^{7/} =	23.24	acres	33,600,000	0	33,600,000	5,072,774	2,001,689	31,320,624	5,350,461	22,808,073
March	31	4.53	2.09	Pond Storage =	185.9	ac-ft	37,200,000	0	37,200,000	6,210,721	2,865,432	34,676,405	5,868,884	28,676,957
April	30	2.76	3.71	Pond Percolation Rate =	0.60	in/day	36,000,000	0	36,000,000	3,784,015	5,086,484	33,557,812	1,139,719	29,816,676
May	31	0.01	6.21	Additional Pond Wet Area =	27.25	acres	37,200,000	0	37,200,000	13,710	8,514,034	34,676,405	(5,976,729)	23,839,947
June	30	0.31	6.85	Additional Pond Storage =	163.5	ac-ft	36,000,000	0	36,000,000	425,016	9,391,487	33,557,812	(6,524,283)	17,315,664
July	31	0.00	8.14	Estimated Pond Percolation Rate =	1.00	in/day	37,200,000	0	37,200,000	0	11,160,103	34,676,405	(8,636,508)	8,679,156
August	31	0.00	6.99	Total Storage =	349.4	ac-ft	37,200,000	0	37,200,000	0	9,583,430	34,676,405	(7,059,835)	1,619,321
September	30	1.10	4.68	Total Storage =	113,859,014	gal	36,000,000	0	36,000,000	1,508,122	6,416,374	33,557,812	(2,466,064)	0*
October	31	1.58	3.09				37,200,000	0	37,200,000	2,166,212	4,236,452	34,676,405	453,355	453,355
November	30	3.16	1.20				36,000,000	0	36,000,000	4,332,423	1,645,224	33,557,812	5,129,387	5,582,742
December	31	1.59	0.85				37,200,000	0	37,200,000	2,179,922	1,165,367	34,676,405	3,538,150	9,120,892
Total	365	23.88	46.17				Total (gal)	438,000,000	0	438,000,000	32,739,958	63,299,994	408,286,707	-846,743
				Total Area =	50.5	acres	Total (ac-ft)	1,344.2	0.0	1,344.2	100.5	194.3	1,253.0	-2.6

1/ Rainfall Data per the Western Regional Climate Center.
 3/ Evaporation data per WRCC X 0.75
 5/ Design Capacity Effluent Production
 7/ Total existing wet area of the existing lagoons.
 19/ Surface Rainfall = Volume of 100 Year rainfall on the existing WWTF treatment and storage ponds and proposed storage ponds.
 20/ Surface Evaporation = Volume of effluent and rain water evaporating from the existing WWTF treatment and disposal ponds.
 21/ Pond Percolation = Volume of effluent and rain water percolating into the ground for existing ponds 1 through 8 plus proposed additional ponds.
 23/ Required Storage = Theoretical starting point Sept. 1st where pond storage starts at zero with monthly contributions.
 36/ Maximum Storage Needed = Peak end of month pond storage volume needed (gallons & ac-ft).
 37/ Storage Available from all ponds = Total volume of available storage.
 39/ Check Balance = Comparison of this value with 16/.

Maximum Required storage	29,816,676
Total Storage Available ^{37/}	113,859,014 gal
Extra Storage ^{38/}	84,042,338 gal
	258 ac-ft
Total Effluent Production ^{16/}	438,000,000 gal
Total Effluent Exported ^{17/}	0 gal
Total Surface Rainfall ^{19/}	32,739,958 gal
Total Evaporation ^{20/}	63,299,994 gal
Total Percolation ^{21/}	408,286,707 gal
Effluent Applied to Crop ^{28/}	0 gal
Check Balance ^{39/}	438,846,743 gal

Updated: 4/14/08
 Print Date: 7/25/08



Table 9
 Malaga County Water District
 Wastewater Treatment & Disposal Facilities
 1.65 MGD Capacity Wastewater Disposal - Average Year Rainfall Water Balance, Discharge and Storage

DATA:

Month	Number of Days per Month	Average Yr. Rainfall ^{1/} (in/month)	Average Yr. Evaporation ^{3/} (in/month)	Discharge to canal	0 MGD
				Daily Effluent Production ^{5/} =	1,650,000 gpd
January	31	2.11	0.98	Pond Wet Area =	23.24 acres
February	28	1.91	1.58	Pond Storage =	185.9 ac-ft
March	31	1.89	3.15	Pond Percolation Rate =	0.60 in/day
April	30	1.00	4.73		
May	31	0.37	6.98	Additional Pond Wet Area =	39.50 acres
June	30	0.15	8.55	Additional Pond Storage =	237.0 ac-ft
July	31	0.01	9.30	Estimated Pond Percolation Rate =	1.00 in/day
August	31	0.01	8.03	Total Storage =	422.9 ac-ft
September	30	0.17	5.93	Total Storage =	137,809,096 gal
October	31	0.53	3.75		
November	30	1.19	1.73		
December	31	1.58	0.90		
Total	365	10.92	55.61	Total Area =	62.7 acres

WWTF POND CALCULATIONS:

Effluent Produced (gal/month)	Effluent To Canal (gal/month)	Effluent to Ponds ^{18/} (gal/month)	Surface Rainfall ^{19/} (gal/month)	Surface Evaporation ^{20/} (gal/month)	Pond Percolation ^{21/} (gal/month)	Monthly Change in Storage ^{22/} (gal/month)	Required Storage Capacity ^{23/} (gal)
51,150,000	0	51,150,000	3,594,723	1,669,587	44,988,246	8,086,890	21,126,112
46,200,000	0	46,200,000	3,253,991	2,691,783	40,634,545	6,127,663	27,253,775
51,150,000	0	51,150,000	3,219,917	5,366,529	44,988,246	4,015,142	31,268,917
49,500,000	0	49,500,000	1,703,660	8,058,312	43,537,013	(391,665)	30,877,252
51,150,000	0	51,150,000	630,354	11,891,547	44,988,246	(5,099,439)	25,777,813
49,500,000	0	49,500,000	255,549	14,566,293	43,537,013	(8,347,757)	17,430,056
51,150,000	0	51,150,000	17,037	15,844,038	44,988,246	(9,665,247)	7,764,809
51,150,000	0	51,150,000	17,037	13,680,390	44,988,246	(7,501,599)	263,210
49,500,000	0	49,500,000	289,622	10,102,704	43,537,013	(3,850,095)	0*
51,150,000	0	51,150,000	902,940	6,388,725	44,988,246	675,969	675,969
49,500,000	0	49,500,000	2,027,355	2,947,332	43,537,013	5,043,010	5,718,979
51,150,000	0	51,150,000	2,691,783	1,533,294	44,988,246	7,320,243	13,039,222
Total (gal)	602,250,000	0	602,250,000	18,603,968	94,740,534	529,700,319	-3,586,885
Total (ac-ft)	1,848.2	0.0	1,848.2	57.1	290.7	1,625.6	-11.0

* Start at 0 Stored September 1st

1/ Rainfall Data per the Western Regional Climate Center.
 3/ Evaporation data per WRCC X 0.75
 5/ Average Daily Effluent Production
 7/ Total wet area of the existing lagoons.
 19/ Surface Rainfall = Volume of Average-Year rainfall on the existing WWTF treatment and storage ponds and proposed storage ponds.
 20/ Surface Evaporation = Volume of effluent and rain water evaporating from the existing WWTF treatment and disposal ponds.
 21/ Pond Percolation = Volume of effluent and rain water percolating into the ground for existing ponds 1 through 8 plus additional proposed ponds.
 23/ Required Storage = Theoretical starting point Sept. 1st where pond storage starts at zero with monthly contributions.
 36/ Maximum Storage Needed = Peak end of month pond storage volume needed (gallons & ac-ft).
 37/ Storage Available from all ponds = Total volume of available storage.
 39/ Check Balance = Comparison of this value with 16/.

Maximum Required storage	31,268,917
Total Storage Available ^{37/}	137,809,096 gal
Extra Storage ^{38/}	106,540,179 gal
	327 ac-ft
Total Effluent Production ^{16/}	602,250,000 gal
Total Effluent Exported ^{17/}	0 gal
Total Surface Rainfall ^{19/}	18,603,968 gal
Total Evaporation ^{20/}	94,740,534 gal
Total Percolation ^{21/}	529,700,319 gal
Effluent Applied to Crop ^{28/}	0 gal
Check Balance ^{39/}	605,836,885 gal

Updated: 4/14/08
 Print Date: 7/25/08



Table 10
 Malaga County Water District
 Wastewater Treatment & Disposal Facilities
 1.65 MGD Capacity Wastewater Disposal - 100 Year Rainfall Water Balance, Discharge and Storage

DATA:

Month	Number of Days per Month	100 Yr. Rainfall ^{1/} (in/month)	100 Yr. Evaporation ^{2/} (in/month)	Discharge to canal	0 MGD
				Daily Effluent Production ^{5/} =	1,650,000 gpd
January	31	5.14	0.90	Pond Wet Area ^{7/} =	23.24 acres
February	28	3.70	1.46	Pond Storage =	185.9 ac-ft
March	31	4.53	2.09	Pond Percolation Rate =	0.60 in/day
April	30	2.76	3.71		
May	31	0.01	6.21	Additional Pond Wet Area =	43.00 acres
June	30	0.31	6.85	Additional Pond Storage =	258.0 ac-ft
July	31	0.00	8.14	Estimated Pond Percolation Rate =	1.00 in/day
August	31	0.00	6.99	Total Storage =	443.9 ac-ft
September	30	1.10	4.68	Total Storage =	144,651,976 gal
October	31	1.58	3.09		
November	30	3.16	1.20		
December	31	1.59	0.85		
Total	365	23.88	46.17	Total Area =	66.2 acres

WWTF POND CALCULATIONS:

Effluent Produced (gal/month)	Effluent To Canal (gal/month)	Effluent to Ponds ^{18/} (gal/month)	Surface Rainfall ^{19/} (gal/month)	Surface Evaporation ^{20/} (gal/month)	Pond Percolation ^{21/} (gal/month)	Monthly Change in Storage ^{22/} (gal/month)	Required Storage Capacity ^{23/} (gal)
51,150,000	0	51,150,000	9,245,318	1,618,830	47,934,486	10,842,002	22,525,270
46,200,000	0	46,200,000	6,655,190	2,626,102	43,295,665	6,933,423	29,458,693
51,150,000	0	51,150,000	8,148,111	3,759,283	47,934,486	7,604,342	37,063,035
49,500,000	0	49,500,000	4,964,412	6,673,177	46,388,213	1,403,022	38,466,057
51,150,000	0	51,150,000	17,987	11,169,927	47,934,486	(7,936,426)	30,529,631
49,500,000	0	49,500,000	557,597	12,321,095	46,388,213	(8,651,711)	21,877,920
51,150,000	0	51,150,000	0	14,641,418	47,934,486	(11,425,904)	10,452,016
51,150,000	0	51,150,000	0	12,572,913	47,934,486	(9,357,399)	1,094,617
49,500,000	0	49,500,000	1,978,570	8,417,916	46,388,213	(3,327,559)	0*
51,150,000	0	51,150,000	2,841,946	5,557,983	47,934,486	499,477	499,477
49,500,000	0	49,500,000	5,683,892	2,158,440	46,388,213	6,637,239	7,136,716
51,150,000	0	51,150,000	2,859,933	1,528,895	47,934,486	4,546,552	11,683,268
Total (gal)	602,250,000	0	602,250,000	42,952,956	83,045,979	564,389,919	-2,232,942
Total (ac-ft)	1,848.2	0.0	1,848.2	131.8	254.9	1,732.0	-6.9

* Start at 0 Stored September 1st
 -2,232,942

1/ Rainfall Data per the Western Regional Climate Center.
 3/ Evaporation data per WRCC X 0.75
 5/ Design Capacity Effluent Production
 7/ Total existing wet area of the existing lagoons.
 19/ Surface Rainfall = Volume of 100 Year rainfall on the existing WWTF treatment and storage ponds and proposed storage ponds.
 20/ Surface Evaporation = Volume of effluent and rain water evaporating from the existing WWTF treatment and disposal ponds.
 21/ Pond Percolation = Volume of effluent and rain water percolating into the ground for existing ponds 1 through 8 plus proposed additional ponds.
 23/ Required Storage = Theoretical starting point Sept. 1st where pond storage starts at zero with monthly contributions.
 36/ Maximum Storage Needed = Peak end of month pond storage volume needed (gallons & ac-ft).
 37/ Storage Available from all ponds = Total volume of available storage.
 39/ Check Balance = Comparison of this value with 16/.

Maximum Required storage	38,466,057
Total Storage Available ^{37/}	144,651,976 gal
Extra Storage ^{38/}	106,185,919 gal
	326 ac-ft
Total Effluent Production ^{16/}	602,250,000 gal
Total Effluent Exported ^{17/}	0 gal
Total Surface Rainfall ^{19/}	42,952,956 gal
Total Evaporation ^{20/}	83,045,979 gal
Total Percolation ^{21/}	564,389,919 gal
Effluent Applied to Crop ^{28/}	0 gal
Check Balance ^{39/}	604,482,942 gal

Updated: 4/14/08
 Print Date: 7/25/08



Table 11
 Malaga County Water District
 Wastewater Treatment & Disposal Facilities
 Disposal Pond Acreage Required to Replace 0.45 MGD Discharge to Central Canal

DATA:

Month	Number of Days per Month	Average Yr. Rainfall ^{1/} (in/month)	Average Yr. Evaporation ^{3/} (in/month)
January	31	2.11	0.98
February	28	1.91	1.58
March	31	1.89	3.15
April	30	1.00	4.73
May	31	0.37	6.98
June	30	0.15	8.55
July	31	0.01	9.30
August	31	0.01	8.03
September	30	0.17	5.93
October	31	0.53	3.75
November	30	1.19	1.73
December	31	1.58	0.90
Total	365	10.92	55.61

Daily Effluent Production ^{5/} =	450,000	gpd
Pond Wet Area =	0.00	acres
Pond Storage =	0.0	ac-ft
Pond Percolation Rate =	0.60	in/day
Additional Pond Wet Area =	15.00	acres
Additional Pond Storage =	90.0	ac-ft
Estimated Pond Percolation Rate =	1.00	in/day
Total Storage =	90.0	ac-ft
Total Storage =	29,326,631	gal
Total (gal)		

Total Area = 15.0 acres Total (ac-ft)

WWTF POND CALCULATIONS:

Effluent Produced (gal/month)	Effluent To Canal (gal/month)	Effluent to Ponds ^{18/} (gal/month)	Surface Rainfall ^{19/} (gal/month)	Surface Evaporation ^{20/} (gal/month)	Pond Percolation ^{21/} (gal/month)	Monthly Change in Storage ^{22/} (gal/month)	Required Storage Capacity ^{23/} (gal)
13,950,000	0	13,950,000	859,433	399,168	12,626,744	1,783,521	4,456,076
12,600,000	0	12,600,000	777,970	643,557	11,404,801	1,329,612	5,785,688
13,950,000	0	13,950,000	769,824	1,283,040	12,626,744	810,040	6,595,728
13,500,000	0	13,500,000	407,314	1,926,597	12,219,429	(238,712)	6,357,016
13,950,000	0	13,950,000	150,706	2,843,054	12,626,744	(1,369,092)	4,987,924
13,500,000	0	13,500,000	61,097	3,482,537	12,219,429	(2,140,869)	2,847,055
13,950,000	0	13,950,000	4,073	3,788,023	12,626,744	(2,460,694)	386,361
13,950,000	0	13,950,000	4,073	3,270,734	12,626,744	(1,943,405)	0
13,500,000	0	13,500,000	69,243	2,415,374	12,219,429	(1,065,560)	0*
13,950,000	0	13,950,000	215,877	1,527,429	12,626,744	11,704	11,704
13,500,000	0	13,500,000	484,704	704,654	12,219,429	1,060,621	1,072,325
13,950,000	0	13,950,000	643,557	366,583	12,626,744	1,600,230	2,672,555
Total (gal)	164,250,000	0	4,447,871	22,650,750	148,669,725	-2,622,604	September 1st

* Start at 0 Stored September 1st

1/ Rainfall Data per the Western Regional Climate Center.

3/ Evaporation data per WRCC X 0.75

5/ Average Daily Effluent Production

7/ Total wet area of the existing lagoons.

19/ Surface Rainfall = Volume of Average-Year rainfall on the existing WWTF treatment and storage ponds and proposed storage ponds.

20/ Surface Evaporation = Volume of effluent and rain water evaporating from the existing WWTF treatment and disposal ponds.

21/ Pond Percolation = Volume of effluent and rain water percolating into the ground for existing ponds 1 through 8 plus additional proposed ponds.

23/ Required Storage = Theoretical starting point Sept. 1st where pond storage starts at zero with monthly contributions.

36/ Maximum Storage Needed = Peak end of month pond storage volume needed (gallons & ac-ft).

37/ Storage Available from all ponds = Total volume of available storage.

39/ Check Balance = Comparison of this value with 16/.

Maximum Required storage	6,595,728
Total Storage Available ^{37/} :	29,326,631 gal
Extra Storage ^{38/} :	22,730,903 gal
	70 ac-ft
Total Effluent Production ^{16/} :	164,250,000 gal
Total Effluent Exported ^{17/} :	0 gal
Total Surface Rainfall ^{19/} :	4,447,871 gal
Total Evaporation ^{20/} :	22,650,750 gal
Total Percolation ^{21/} :	148,669,725 gal
Effluent Applied to Crop ^{28/} :	0 gal
Check Balance ^{39/} :	166,872,604 gal

Updated: 4/14/08

Print Date: 7/25/08



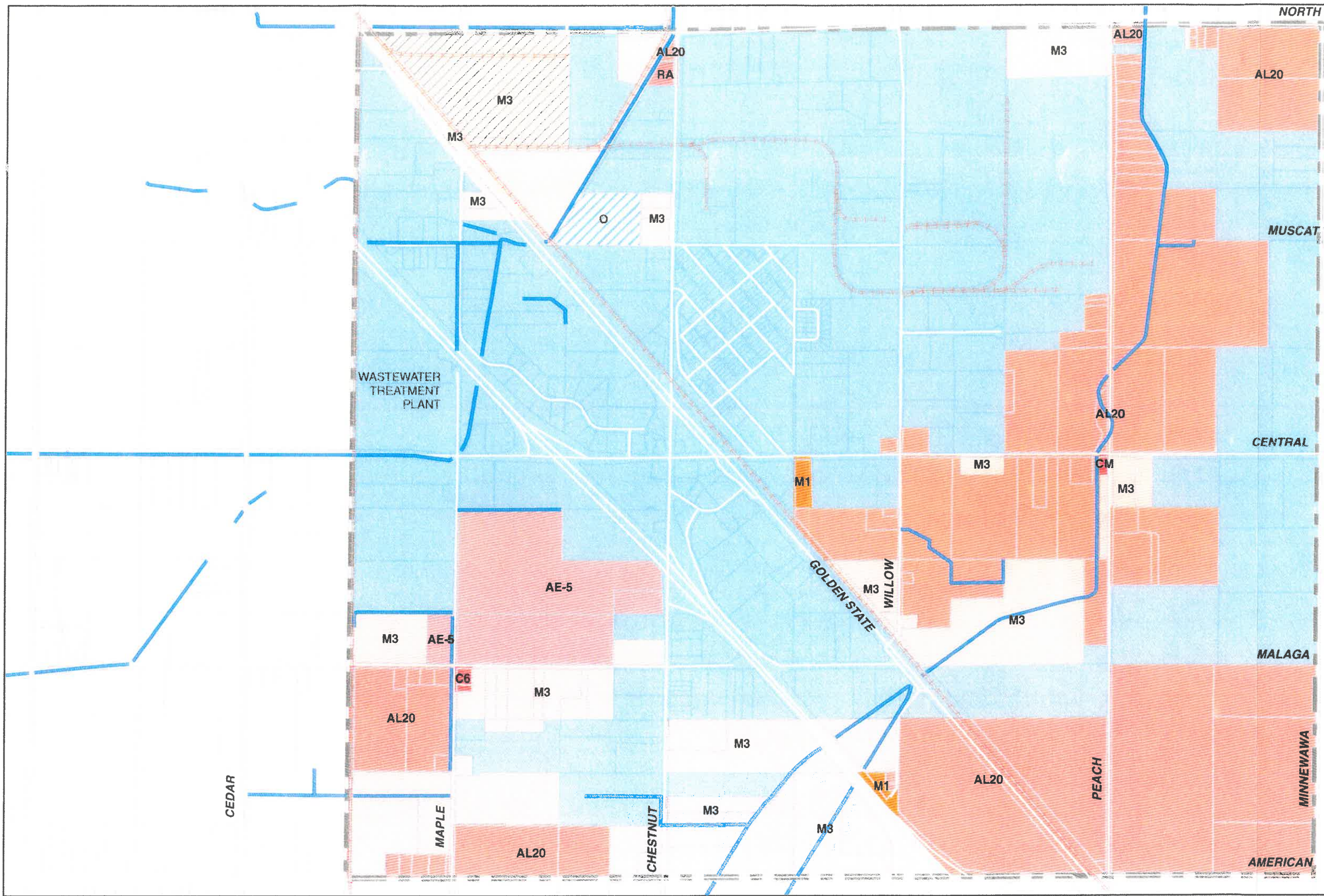
TABLE 12

Malaga County Water District
Potential Disposal Sites

APN	Owner	Total Acreage	Pond Acreage
330 031 60S	Southern Pacific Pipe	13.8	10.9
330 031 42S	Southern Pacific Pipe	12.8	10.4
330 031 11	Sargenti	4.34	3.7
330 031 46S	Parnagian	53.7	33.0
330 031 45	Parnagian	27.9	24.0
330 021 20	Raco	18.4	13.5
330 021 18	TRICOZ	13.3	11.0

Treatment Plant Capacity	0.8 MGD	1.2 MGD	1.65 MGD
Additional Disposal Pond Acreage	13.25	27.25	43.00

FIGURES



Legend

Malaga CWD	Fresno County Zoning
Served by the City of Fresno	AE-5 / 95.1 Ac
Canal	AL20 / 738.4 Ac
Railroad	C6 / 1.7 Ac
	CM / 0.8 AC
	M1 / 6.4 Ac
	M3 / 456.0 Ac
	O / 14.3 Ac
	RA / 2.3 Ac

0 0.125 0.25 Miles



EST. 1951
PROVOST & PRITCHARD
 ENGINEERING GROUP
 An Integrated Design Company

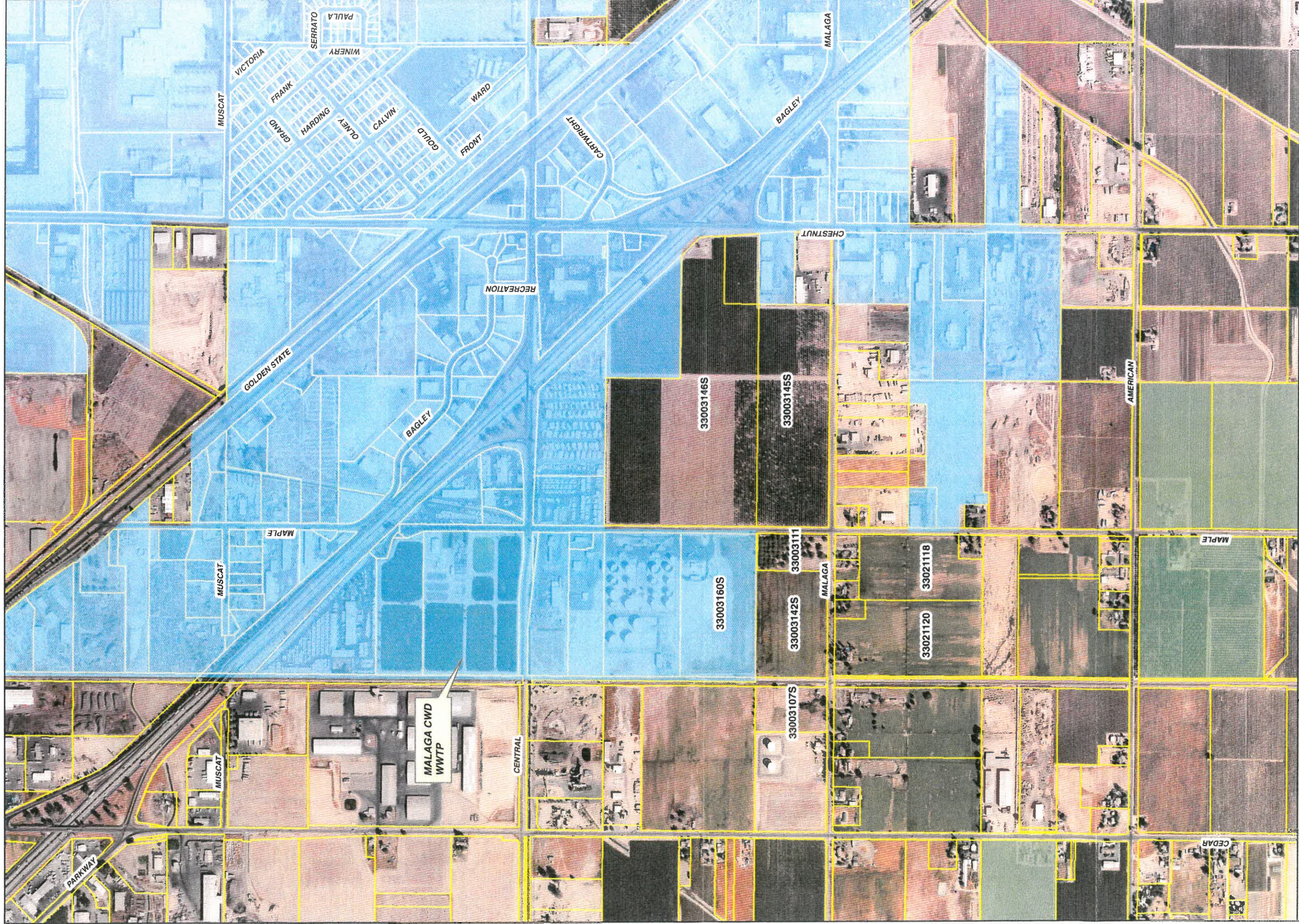
286 W. Cromwell Ave.
 Fresno, CA 93711-6162
 (559) 449-2700

MALAGA COUNTY WATER DISTRICT

**EXISTING ZONING
 JULY 2008**

Figure 1

Zoning
 Malaga CWD



0 400 800 Feet

EST. 1966
PROVOST & PRITCHARD
 ENGINEERING GROUP
A Professional Services Company

286 W. Cromwell Ave.
 Fresno, CA 93711-6162
 (559) 449-2700

Legend




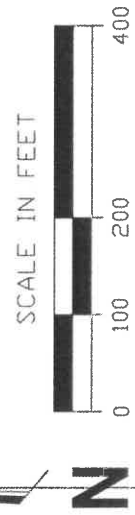
-  Malaga CWD Boundary
-  Fresno Co. Parcel
-  Ag Preserve Parcel

Figure 2

Disposal Capacity Study
 Malaga CWD

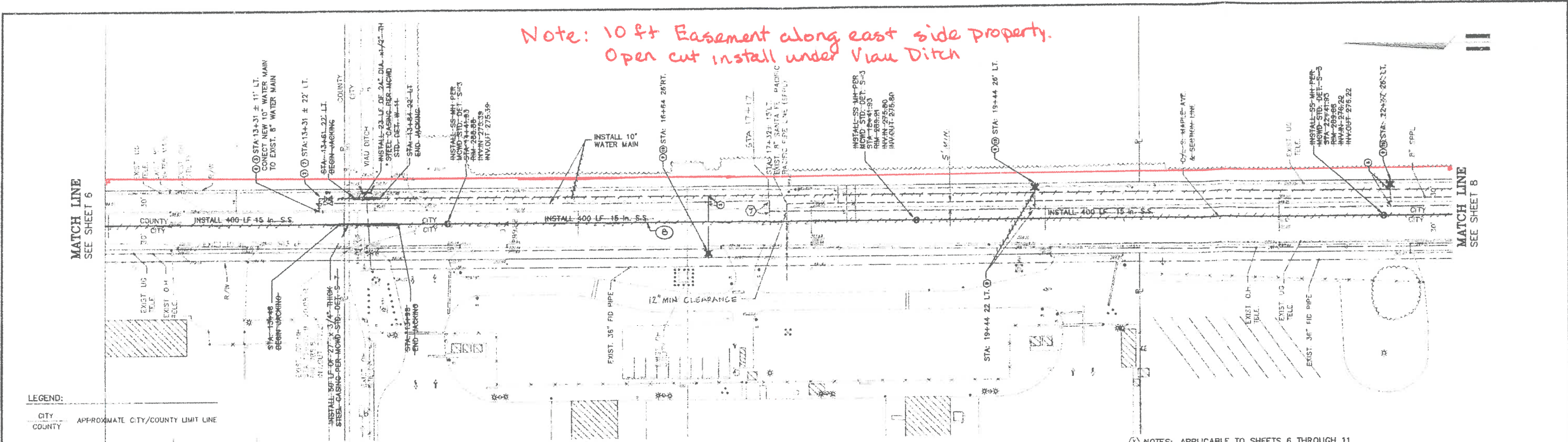


APN 330 031 42S
 OWNER: SP PIPE
 MALAGA COUNTY WATER DISTRICT
 FRESNO COUNTY, CA

DESIGN ENGINEER:
 MICHAEL TAYLOR
 DRAFTER: IRM
 SCALE: 1"=200'
 DATE: 5/16/2008
 JOB NO: 10570801 410
 SHEET DF

DISPOSAL SITE LAYOUT
 FIGURE 3

Note: 10 ft Easement along east side property.
Open cut install under Vau Ditch



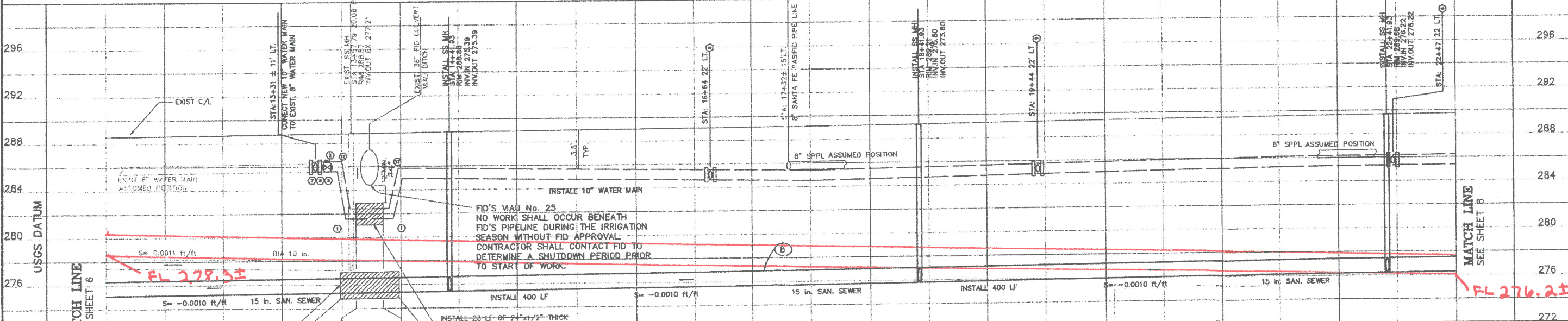
LEGEND:
CITY APPROXIMATE CITY/COUNTY LIMIT LINE
COUNTY

48 HOURS
BEFORE EXCAVATING
CALL "U.S.A." TOLL FREE
800 642-2444
UNDERGROUND SERVICE
ALERT

EFFECTIVE JAN. 1, 1996
NEW "U.S.A." TOLL FREE
TEL. NO. 800 227-2600

SOUTH MAPLE AVENUE

- NOTES: APPLICABLE TO SHEETS 6 THROUGH 11
- 1. INSTALL 45° BEND 10"x10" W/ THRUST BLOCK PER MCWD STD. DET. W-6
 - 2. INSTALL 10" WATER VALVE AND BOX W/ TRAFFIC LID PER MCWD STD. DET. W-1
 - 3. INSTALL 10"x8" REDUCER
 - 4. INSTALL 10" PLUG
 - 5. INSTALL 10"x10"x6" TEE W/ THRUST BLOCK PER MCWD STD. DET. W-6
 - 6. INSTALL 10" CROSS
 - 7. INSTALL 90° BEND 10"x10" W/ THRUST BLOCK PER MCWD STD. DET. W-6
 - 8. INSTALL 8"x8"x8" TEE W/ THRUST BLOCK PER MCWD STD. DET. W-6
 - 9. INSTALL F.H. ASSEMBLY PER MCWD STD. DET. W-2
 - 10. INSTALL F.H. PROTECTION POSTS PER MCWD STD. DET. W-3
 - 11. INSTALL BLOW OFF ASSEMBLY PER STD. DET. W-7
 - 12. INSTALL THE ROD PER DETAIL ON SHEET 50



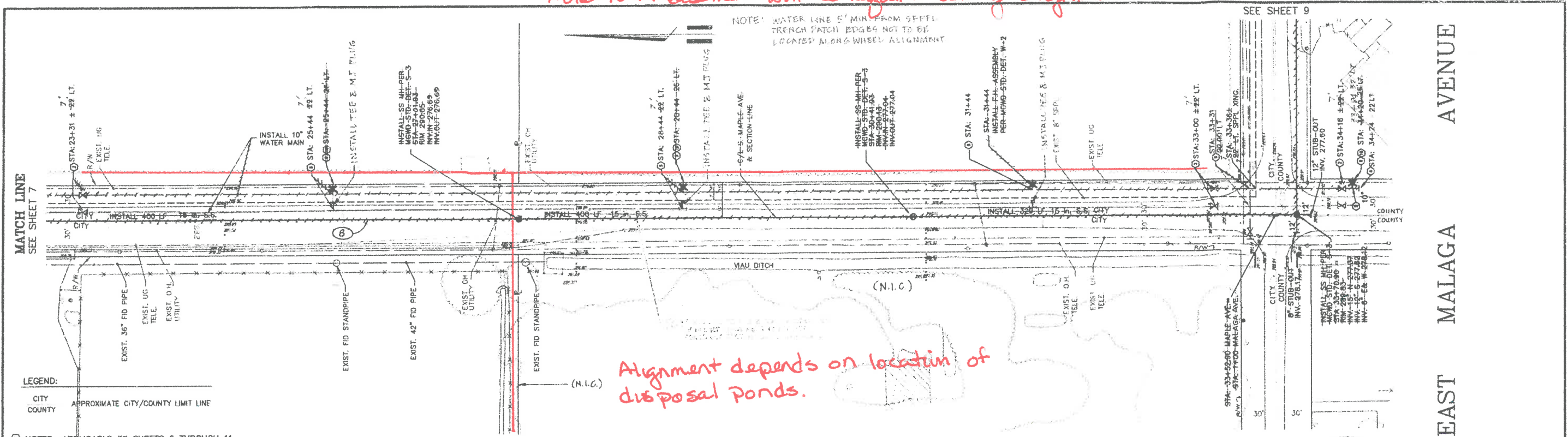
<p>RECORD DOCUMENT DATE 4-5-99</p>		<p>MALAGA COUNTY WATER DISTRICT 3580 SOUTH FRANK STREET, FRESNO, CALIFORNIA 93726 PHONE (209) 485-7555 FAX (209) 485-7519</p>	
<p>CONSTRUCTION OF WATER & SEWER IMPROVEMENTS PLAN AND PROFILE SHEET - SOUTH MAPLE AVENUE STA 11+50 TO STA 23+00</p>		<p>SCALE: HORIZ 1"=40' VERT 1"=4'</p>	
<p>DESIGN ENGINEER: DE. LICENSE NC</p>		<p>REVISIONS: 10-13-95</p>	
<p>DATE: 12-31-95</p>		<p>SHEET 7 OF 62 SHEETS</p>	
<p>DESIGNER: 9510101</p>		<p>APPROVAL: 95-0232</p>	

FIGURE 4

Note: 10 ft easement will be require along alignment

NOTE: WATER LINE 5' MIN. FROM SPFL TRENCH PATCH EDGES NOT TO BE LOCATED ALONG WHEEL ALIGNMENT

SEE SHEET 9



MATCH LINE SEE SHEET 7

LEGEND:
CITY COUNTY APPROXIMATE CITY/COUNTY LIMIT LINE

- NOTES: APPLICABLE TO SHEETS 6 THROUGH 11
- 1. INSTALL 45° BEND 10"x10" W/ THRUST BLOCK PER MCWD STD. DET. W-6
 - 2. INSTALL 10" W/ W/ BOX 4 TRAFFIC LID PER MCWD STD. DET. W-1
 - 3. INSTALL 10"x6" REDUCER
 - 4. INSTALL 10" PLUG
 - 5. INSTALL 10"x10"x6" TEE W/ THRUST BLOCK PER MCWD STD. DET. W-6
 - 6. INSTALL 10" CROSS
 - 7. INSTALL 90° BEND 10"x10" W/ THRUST BLOCK PER MCWD STD. DET. W-6
 - 8. INSTALL 8"x8"x8" TEE W/ THRUST BLOCK PER MCWD STD. DET. W-6
 - 9. INSTALL 10" F.H. ASSEMBLY PER MCWD STD. DET. W-2
 - 10. INSTALL F.H. PROTECTION POSTS PER MCWD STD. DET. W-3
 - 11. INSTALL BLOW OFF ASSEMBLY PER MCWD STD. DET. W-7
 - 12. INSTALL TIE ROD PER DETAIL ON SHEET 50

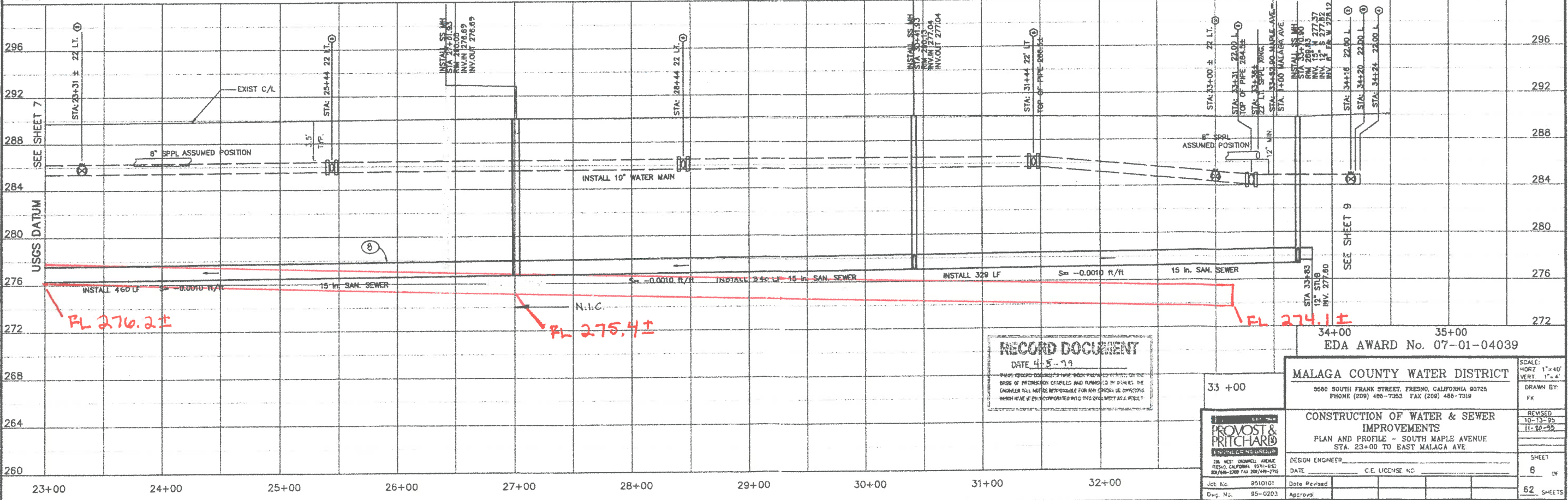
SOUTH MAPLE AVENUE

EFFECTIVE JAN. 1, 1996
NEW "U.S.A." TOLL FREE
TEL. NO. 800 227-2600

48 HOURS
BEFORE EXCAVATING
CALL "U.S.A." TOLL FREE
800 642-2444
UNDERGROUND SERVICE
ALERT

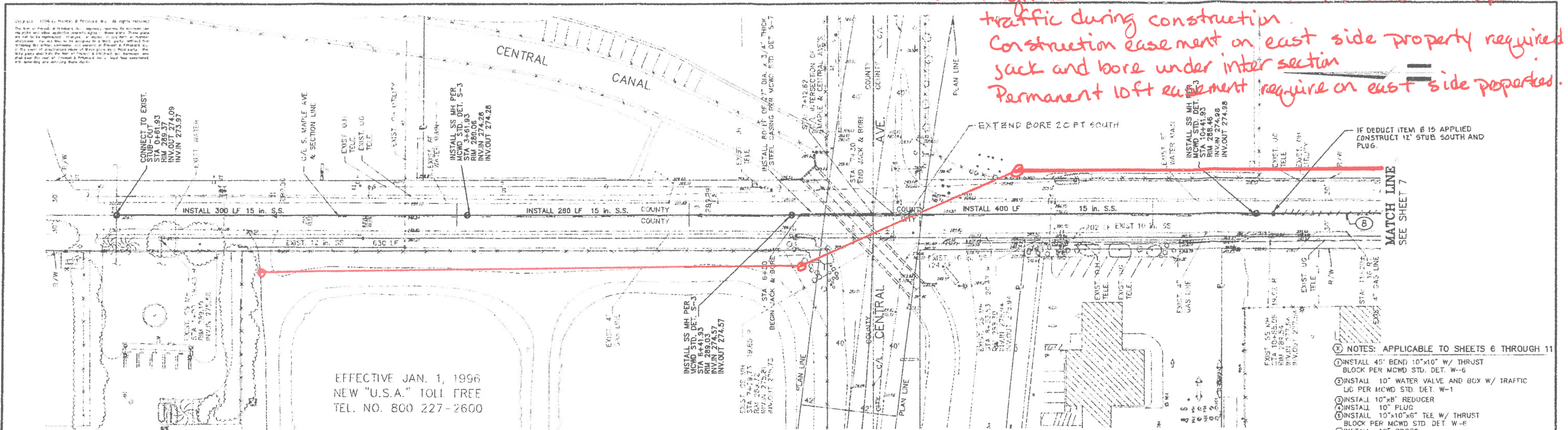


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FIGURES

Note: Alignment reflects need to keep intersection open for traffic during construction.
 Construction easement on east side property required for jack and bore under intersection.
 Permanent 10ft easement require on east side properties.



EFFECTIVE JAN. 1, 1996
 NEW "U.S.A." TOLL FREE
 TEL. NO. 800 227-2600

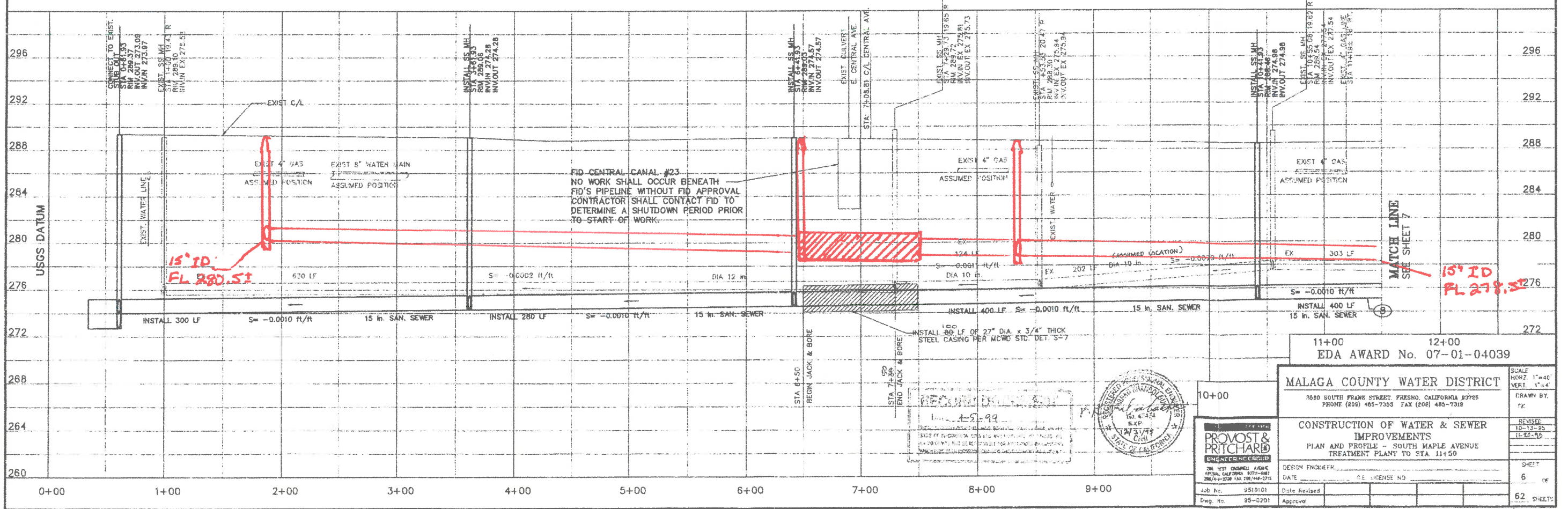
48 HOURS
 BEFORE EXCAVATING
 CALL "U.S.A." TOLL FREE
 800 642-2444
 UNDERGROUND SERVICE
 ALERT

SOUTH MAPLE AVENUE

NOTE: CONTRACTOR SHALL VERIFY IN FIELD THE LOCATION OF ALL UTILITY LINES AND OTHER IMPROVEMENTS AND PROTECT THEM FROM DAMAGE.

LEGEND:
 CITY APPROXIMATE CITY/COUNTY LIMIT LINE
 COUNTY

- NOTES: APPLICABLE TO SHEETS 6 THROUGH 11
- 1. INSTALL 45° BEND 10"x10" W/ THRUST BLOCK PER MCWD STD. DET. W-6
 - 2. INSTALL 10" WATER VALVE AND BOX W/ TRAFFIC LID PER MCWD STD. DET. W-1
 - 3. INSTALL 10"x8" REDUCER
 - 4. INSTALL 10" PLUG
 - 5. INSTALL 10"x10"x8" TEE W/ THRUST BLOCK PER MCWD STD. DET. W-6
 - 6. INSTALL 10" CROSS
 - 7. INSTALL 90° BEND 10"x10" W/ THRUST BLOCK PER MCWD STD. DET. W-6
 - 8. INSTALL 8"x8"x8" TEE W/ THRUST BLOCK PER MCWD STD. DET. W-6
 - 9. INSTALL F.H. ASSEMBLY PER MCWD STD. DET. W-2
 - 10. INSTALL F.H. PROTECTION POSTS PER MCWD STD. DET. W-3
 - 11. INSTALL BLOW OFF ASSEMBLY PER STD. DET. W-7
 - 12. INSTALL TIE ROD PER DETAIL ON SHEET 50



11+00 12+00
 EDA AWARD No. 07-01-04039

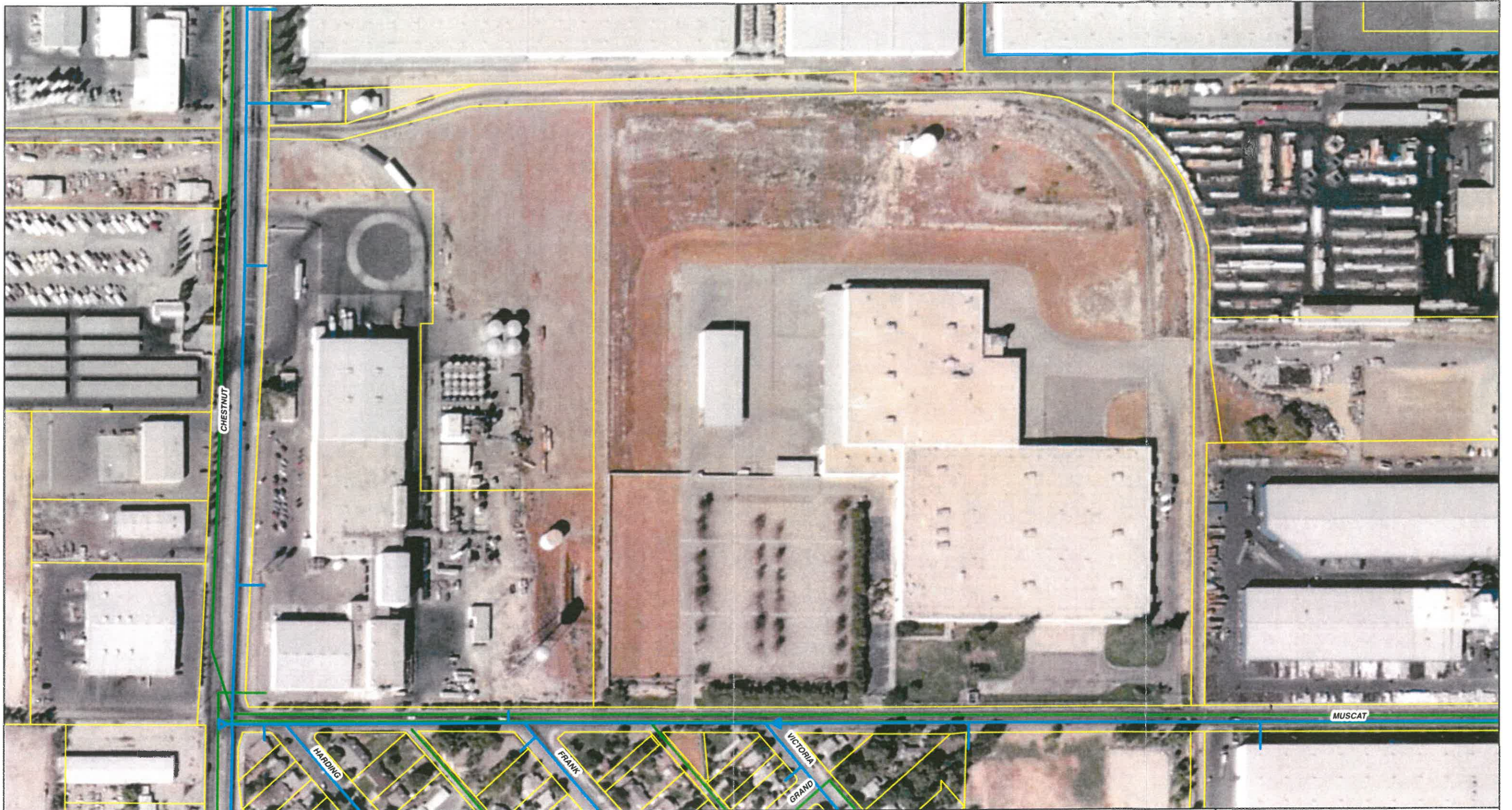
MALAGA COUNTY WATER DISTRICT
 3580 SOUTH FRANK STREET, FRESNO, CALIFORNIA 93725
 PHONE (209) 465-7353 FAX (209) 465-7318

CONSTRUCTION OF WATER & SEWER IMPROVEMENTS
 PLAN AND PROFILE - SOUTH MAPLE AVENUE TREATMENT PLANT TO STA 11+50

SCALE: HORIZ. 1"=40' VERT. 1"=4'
 DRAWN BY: TK
 REVISED: 10-13-95 (E-22-95)
 SHEET: 6 OF 62 SHEETS

DESIGN ENGINEER: [Signature]
 DATE: [Blank] P.E. LICENSE NO. [Blank]
 Job No. 9510101 Date Revised [Blank]
 Dwg. No. 95-0201 Approver [Blank]

FIGURE 5A



0 100 200 Feet



EST. 1964
PROVOST & PRITCHARD
 ENGINEERING GROUP
An Engineer/Owner Company

286 W. Cromwell Ave.
 Fresno, CA 93711-6162
 (559) 449-2700

Legend

- Existing Water Main
- Existing Sewer Main
- Fresno County Parcel

Figure 6

Disposal Alternatives
 ADM and Calpine Property
 Malaga CWD

Photography by AirPhoto USA, 2007



PARK AREA 5.3 AC.

0 100 200 Feet



Legend

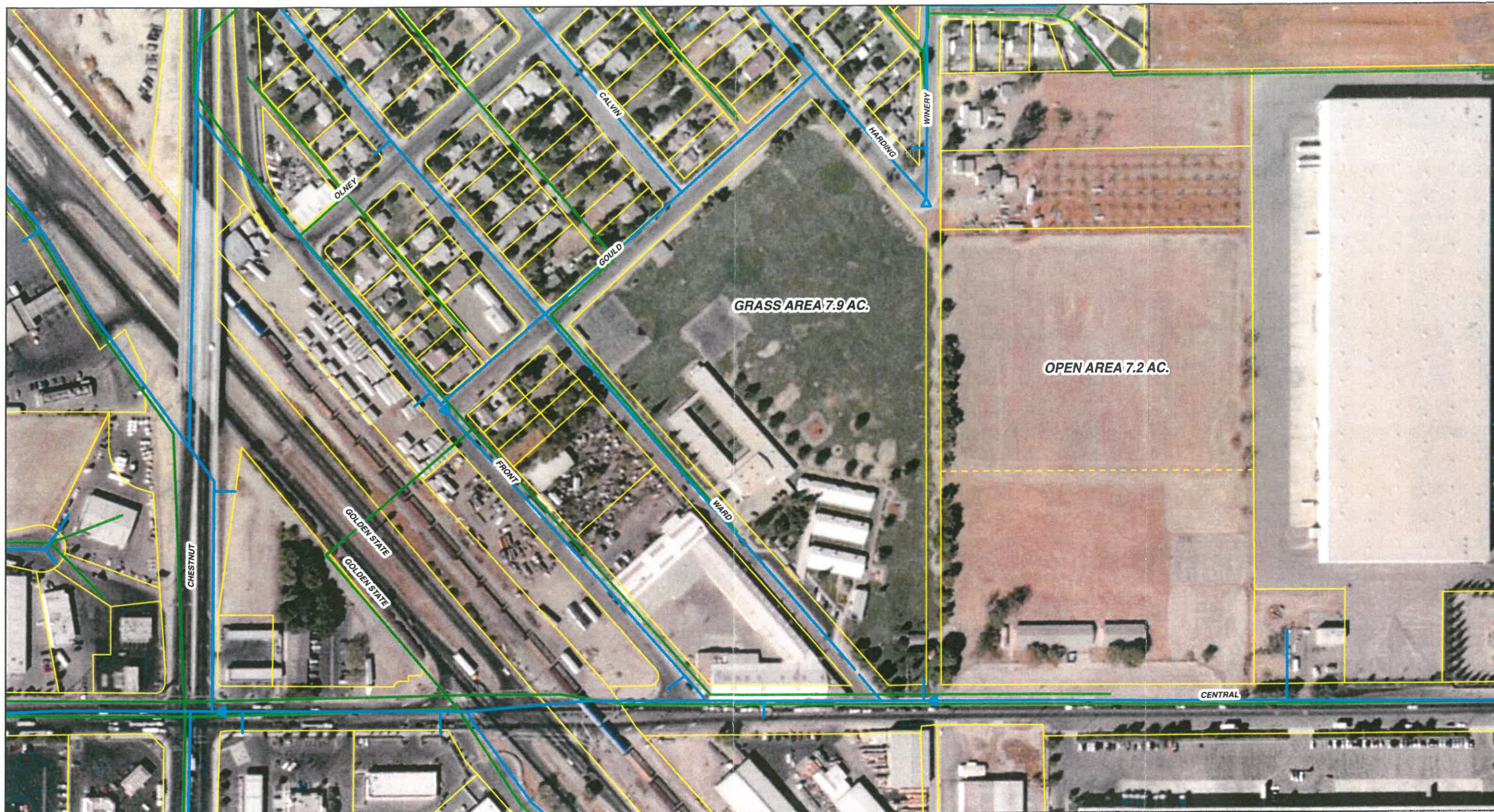
- Existing Water Main
- Existing Sewer Main
- Fresno County Parcel

PROVOST & PRITCHARD
 EST. 1984
 ENGINEERING GROUP
 An Engineer-Share Company
 286 W. Cromwell Ave.
 Fresno, CA 93711-6162
 (559) 449-2700

Figure 7

Disposal Alternatives
 Community Park Property
 Malaga CWD

Photography by AirPhoto USA, 2007



Legend

- Existing Water Main
- Existing Sewer Main
- ⊕ Fresno County Parcel

Figure 8

Disposal Alternatives
Konkel Property
Malaga CWD

Photography by AirPhoto USA, 2007

0 100 200
Feet



EST. 1968
PROVOST & PRITCHARD
ENGINEERING GROUP
An Engineering Division of

286 W. Cromwell Ave.
Fresno, CA 93711-6162
(559) 449-2700



OPEN AREA 7.8 AC.

GRASS AREA 15.6 AC.

PEACH



0 100 200 Feet

PROVOST & PRITCHARD
EST. 1968
ENGINEERING GROUP
AN ENGINEERING CONSULTING FIRM

286 W. Cromwell Ave.
Fresno, CA 93711-6162
(559) 449-2700

Legend



-  Existing Water Main
-  Existing Sewer Main
-  Fresno County Parcel

Figure 9

Disposal Alternatives
PPG Property
Malaga CWD

Photography by AirPhoto USA, 2007



0 100 200 Feet



EST. 1963
PROVOST & PRITCHARD
 ENGINEERING GROUP
All Engineering Services Consulting

286 W. Cromwell Ave.
 Fresno, CA 93711-6162
 (559) 449-2700

Legend




-  Existing Water Main
-  Existing Sewer Main
-  Fresno County Parcel

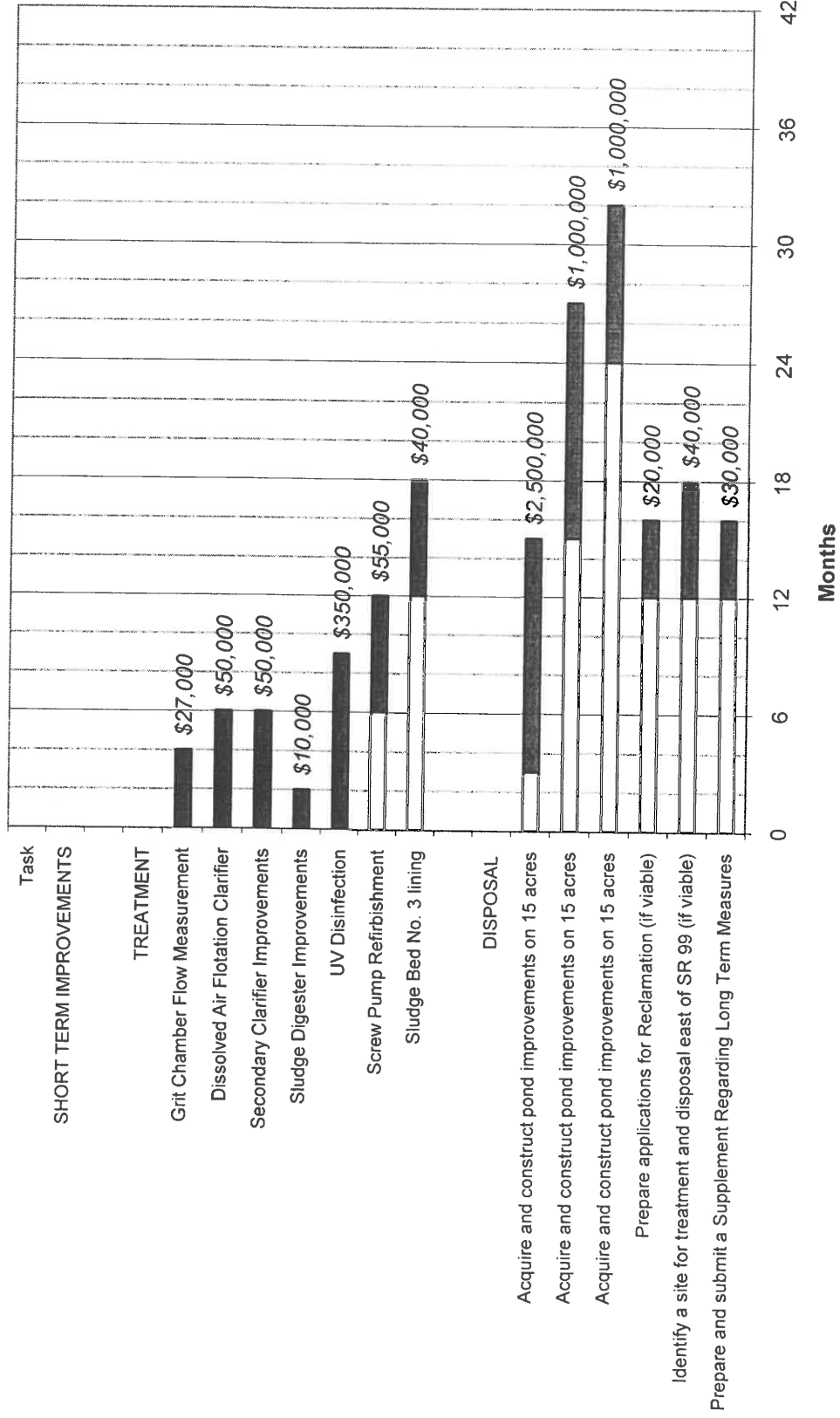
Figure 10

Disposal Alternatives
 Rio Bravo Property
 Malaga CWD

Photography by AirPhoto USA, 2007

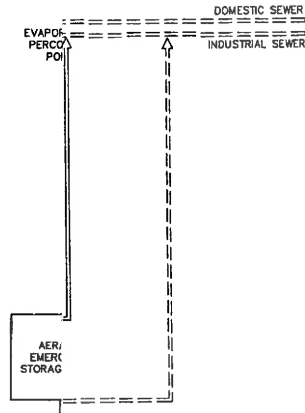
FIGURE 11

DRAFT
Malaga County Water District
Short term Treatment and Disposal Facilities Improvement Schedule



APPENDIX

APPENDIX A
Design Criteria Summary



LEGEND

	EXIT STRUCTURE
	NEW OR MODIFIED STRUCTURE
	NEW PIPING
	EXISTING PIPING
	AA PIPING

DESIGN CRITERIA

INFLUENT	EFFLUENT
FLOWRATE 1.65 MGD AVERAGE FLOW	BIOCHEMICAL OXYGEN DEMAND: _____
3.00 MGD PEAK FLOW	SUSPENDED SOLIDS: _____
BIOCHEMICAL OXYGEN DEMAND: _____ 650 MG/L	
SUSPENDED SOLIDS: _____ 408 MG/L	
TOTAL SOLIDS: _____ 925 MG/L	
OILS AND GREASE: _____ 140 MG/L	

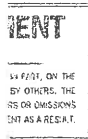
1.2 MGD
PROPOSED
FLOW

HEADWORKS

PUMP LIFT STATION		
30 INCH SREW PUMPS, NUMBER	CH	2
CAPACITY EACH, GPM X RPM	ACH	54 x 28
HORSEPOWER, EACH		13.5
		152,600
BARMINUTOR		
18 INCH BARMINUTOR, NUMBER		1
HORSEPOWER		32 x 12
		9.5
FLOWMETER		
9" THROAT PARSHALL FLUME, NUMBER		23,200
CAPACITY, RANGE, MGD		
GRIT REMOVAL		
AERATED GRIT TANK, NUMBER		3
INDUSTRIAL GRIT TANK VOLUME, GALLONS		30,000
DOMESTIC GRIT TANK VOLUME, GALLONS = (NIS)		
RETENTION TIME AT PEAK FLOW, MINUTES		
GRIT CONCENTRATION TANK, NUMBER		8
VOLUME OF TANK, GALLONS		21.66
		8
		3
12 INCH GRIT SREW CONVEYOR, NUMBER	RE-FEET (8 FT.)	173.26
HORSEPOWER		

PRIMARY SEDIMENTATION AND FLOTATION FACILITIES

FLOCCULATION TANK		
FLOCCULATION MIXER, NUMBER		1
HORSEPOWER, EACH		1.24
FLOCCULATION PADDLE MIXER		8
HORSEPOWER, EACH	E-FEET (8 FT.)	3
FLOCCULATION TANK VOLUME, GALLONS		9.92
AVERAGE DETENTION TIME, HOURS		
FLOTATION/SEDIMENTATION		
FLOCCULATION/SEDIMENTATION TANK, NUMBER		6
DIAMETER X SIDEWATER DEPTH, FT X FT		5.0
SLUDGE COLLECTOR & SCUM SKIMMER DRIVE		
NUMBER X HORSEPOWER		
VOLUME OF TANK, GALLONS, EACH		
SURFACE AREA, SQ. FT., EACH		
AVERAGE DETENTION TIME, HOURS		
SURFACE OVERFLOW RATE, GPD/SQ. FT.		
WEIR OVERFLOW RATE, GPD/FT.		
9 INCH DIA. SCUM SREW CONVEYOR, NUMBER		
HORSEPOWER, EACH		
SCUM MIXING TANK, NUMBER		
VOLUME OF TANK, GALLONS, TOTAL		
GREASE AND SCUM PUMP, NUMBER		
CAPACITY, GPM X DISCHARGE HEAD, PSI		
HORSEPOWER, EACH		
DISSOLVED AIR FLOTATION EQUIPMENT		
RECYCLE PUMP, NUMBER		
CAPACITY, GPM X TOTAL HEAD IN PSI		
HORSEPOWER, EACH		
AIR COMPRESSOR, NUMBER		
CAPACITY, SCFM X DISCHARGE PRESSURE, PSI		
HORSEPOWER, EACH		
SATURATION TANK, NUMBER		
VOLUME OF TANK, GALLONS, EACH		



EDA AWARD No. 07-01-04039

MALAGA COUNTY WATER DISTRICT 3580 SOUTH FRANK STREET, FRESNO, CALIFORNIA 93725 PHONE (209) 485-7353 FAX (209) 485-7319		SCALE
		AS SHOWN
CONSTRUCTION OF WATER & SEWER IMPROVEMENTS PROCESS SHEET AND DESIGN CRITERIA		DRAWN BY
		D. WILSON
		REVISED
		08-12-94
DESIGN ENGINEER _____ DATE _____ C.E. LICENSE NO. _____		01-03-95
		01-06-95
		01-10-95
		SHEET
No. 9510101-612 No. 95-0160		15 OF
		62 SHEETS

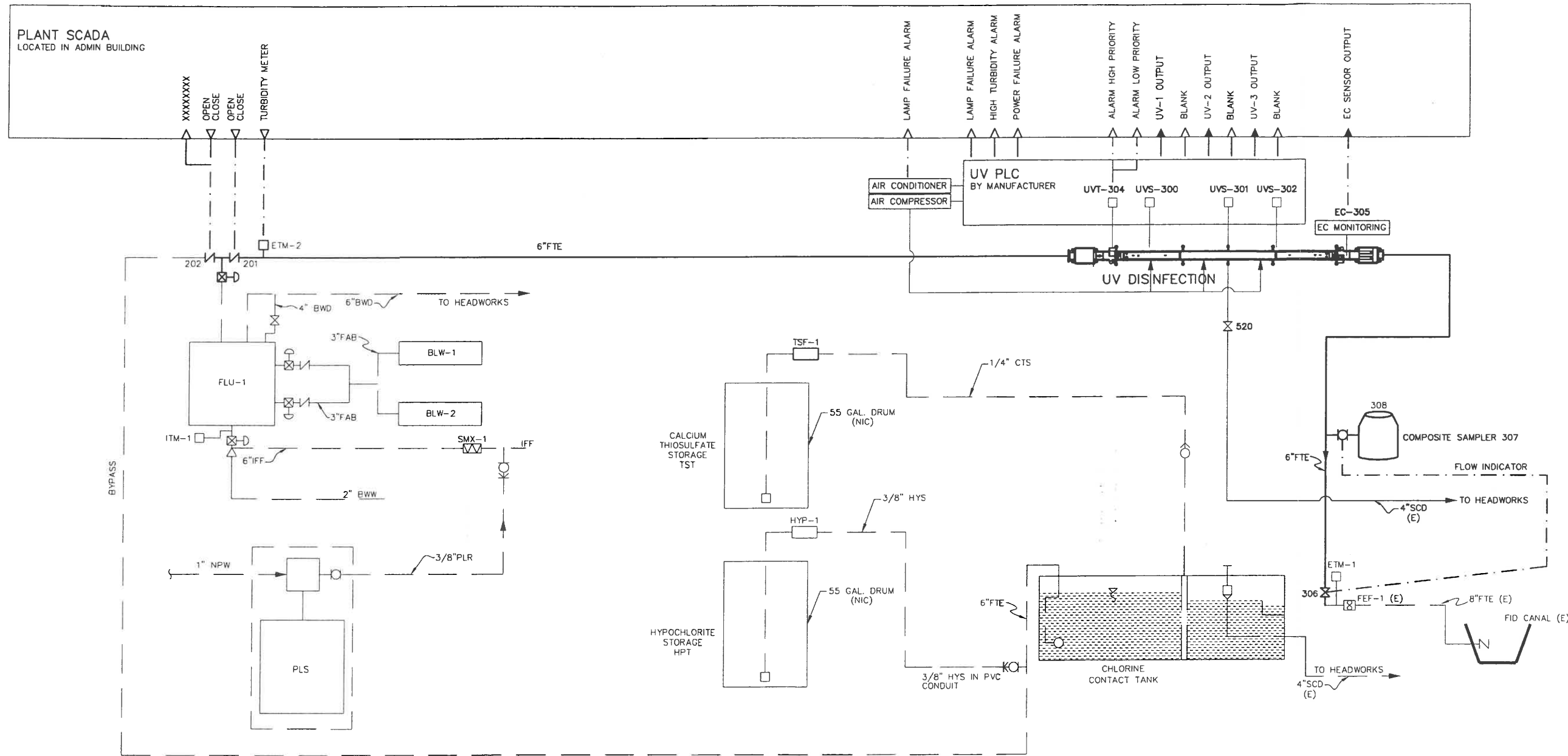
PROVOST & RITCHARD
 ENGINEERING GROUP
 38 WEST CROWMELL AVENUE
 LESNO, CALIFORNIA 93711-6162
 9/440-2700 FAX 209/448-2715

APPENDIX B

Master Plan of Wastewater Treatment Facilities



Know what's below.
Call before you dig.



PROCESS SCHEMATIC

N.T.S.

- LEGEND
- PROPOSED PROCESS LINE
 - PROPOSED AUXILIARY LINE
 - - - EXISTING PROCESS LINE

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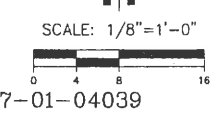
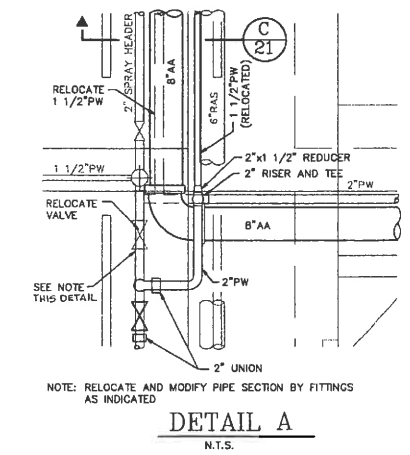
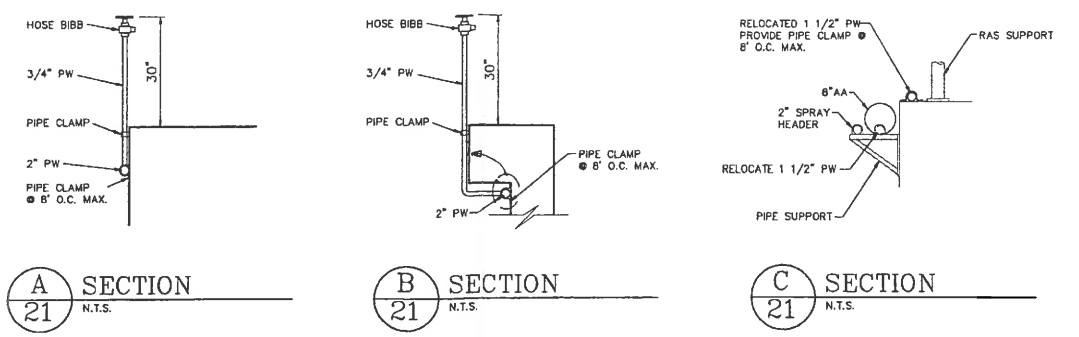
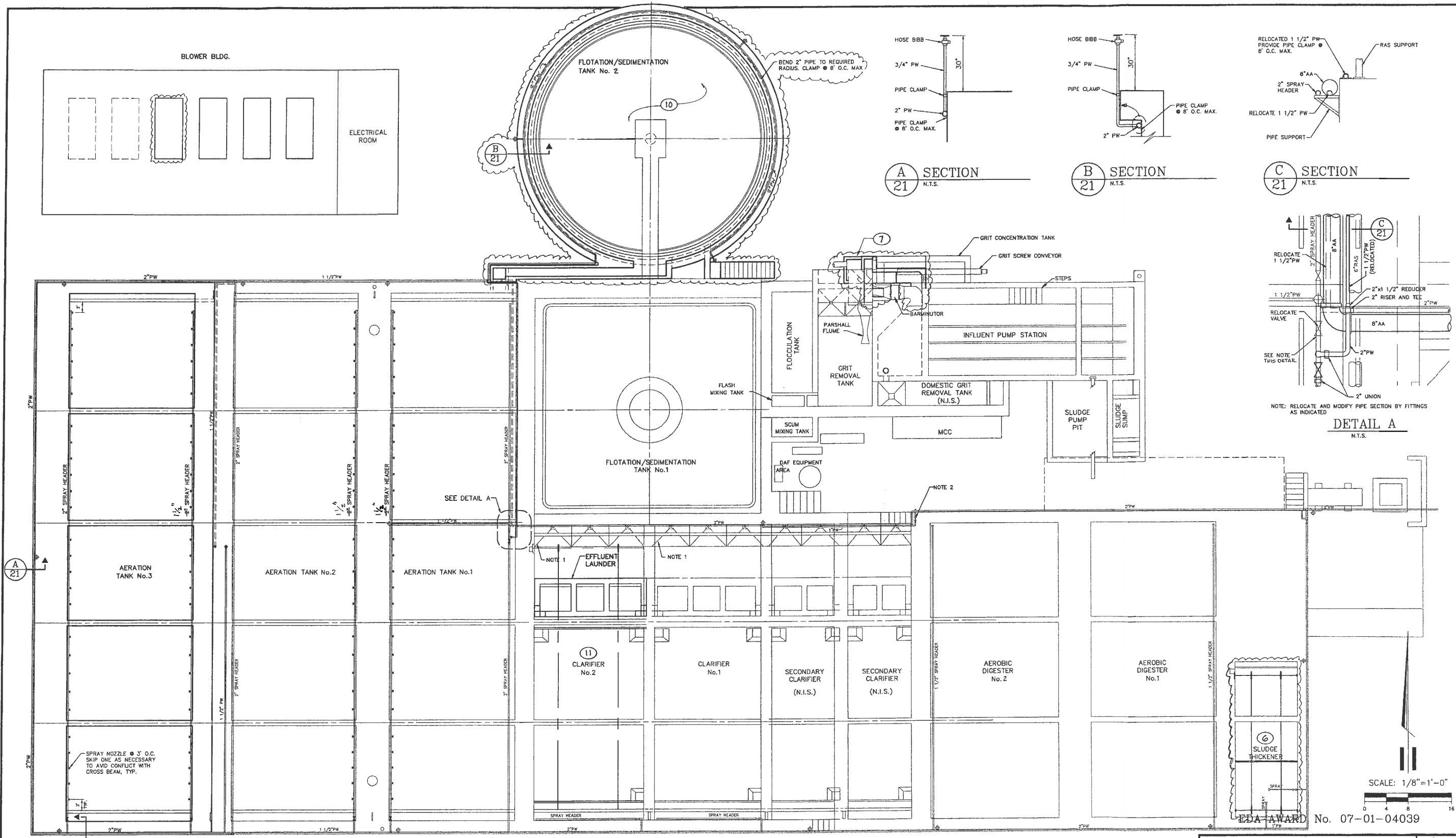
PRELIMINARY
NOT FOR CONSTRUCTION
01/03/2007

REVISION
BY
DATE

MALAGA WWTP MODIFICATIONS
WASTEWATER TREATMENT PLANT
MALAGA COUNTY WATER DISTRICT
FRESNO COUNTY
UV DISINFECTION
PROCESS AND INSTRUMENTATION

EST. 1968
PROVOST & PRITCHARD
ENGINEERING GROUP
An Employee Owned Company
286 WEST CROWNELL AVENUE
FRESNO, CALIFORNIA 93711-6162
557/449-2000 FAX 557/449-2715
www.peng.com

DESIGN ENGINEER:
MICHAEL TAYLOR
LICENSE NO:
DRAFTED BY: DWM
CHECKED BY:
SCALE: AS SHOWN
DATE: 2-14-2008
JOB NO: 10570802
DWG. NO:
SHEET
3 OF 13



EDA-AWARD No. 07-01-04039

RECORD DOCUMENT
 DATE: 4-7-99
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- LEGEND**
- | | EXISTING | NEW |
|--------------|----------|-----|
| WATER LINES | | |
| HOSE BIBB | | |
| GATE VALVES | | |
| SPRAY NOZZLE | | |
- NOTES:
 1. MODIFY AND REROUT ELECT CONDUIT TO CLARIFIER DRIVES TO CROSS ABOVE 8" AA PIPING.
 2. MODIFY AND REROUT 1" PW AS REQUIRED TO CLEAR WAY FOR NEW 8" AA UNDER CONC. STEPS.



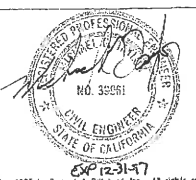
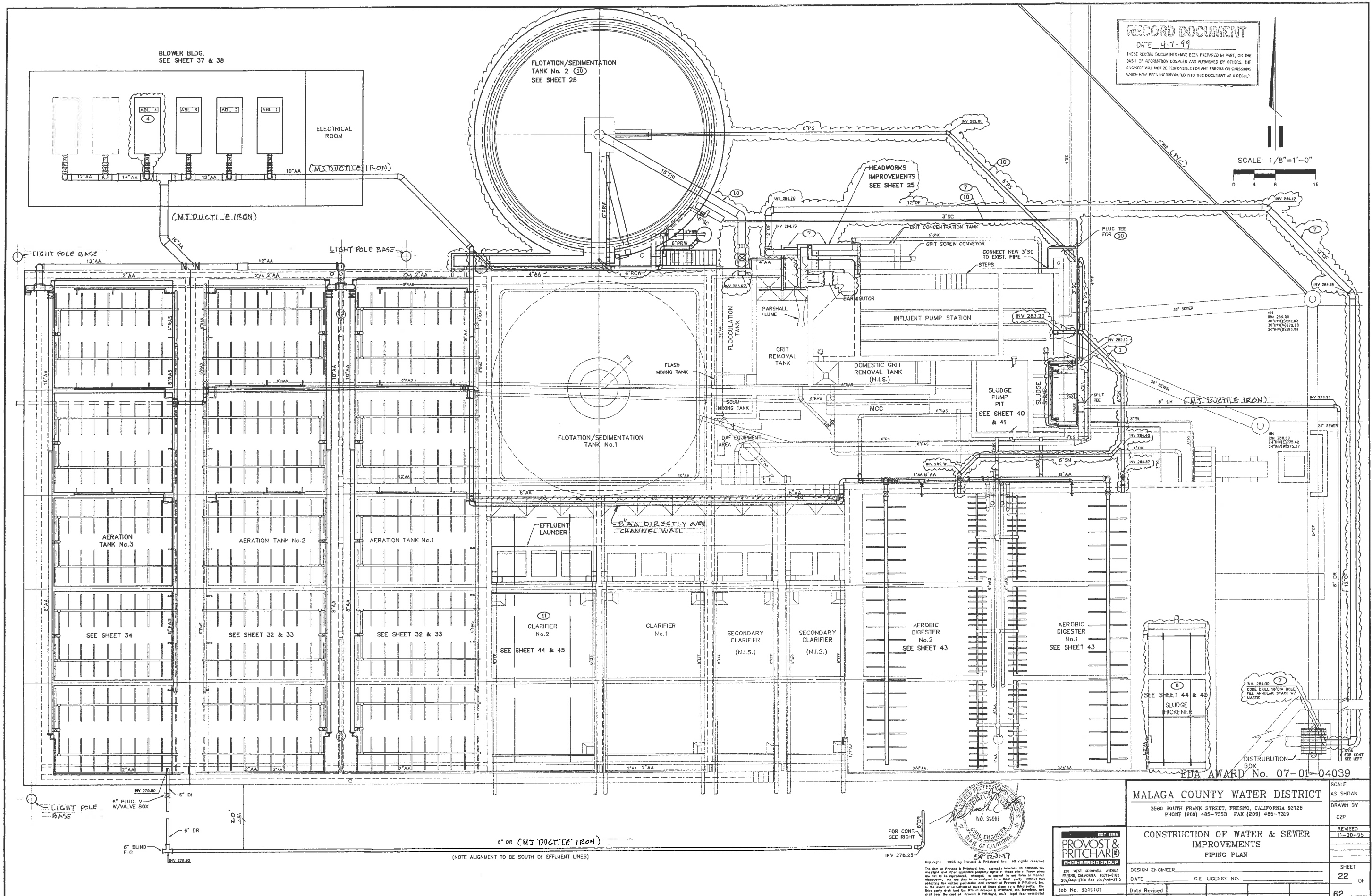
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 Job No. 9510101
 Dwg. No. 95-0161

MALAGA COUNTY WATER DISTRICT		SCALE AS SHOWN
3580 SOUTH FRANK STREET, FRESNO, CALIFORNIA 93725 PHONE (209) 485-7353 FAX (209) 485-7318		DRAWN BY C2P
CONSTRUCTION OF WATER & SEWER IMPROVEMENTS		REVISED 11-20-95
PLANT WATER PIPING, SECTIONS & DETAILS		SHEET 21 OF
DESIGN ENGINEER	C.E. LICENSE NO.	DATE
Date Revised	Approval	
		62 SHEETS

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 DATE 4-7-99
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SCALE: 1/8"=1'-0"
 0 4 8 16



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 209/449-2700 FAX 209/449-2715
 Job No. 9510101
 Dwg. No. 95-0161

MALAGA COUNTY WATER DISTRICT
 3560 SOUTH FRANK STREET, FRESNO, CALIFORNIA 93725
 PHONE (209) 485-7353 FAX (209) 485-7319

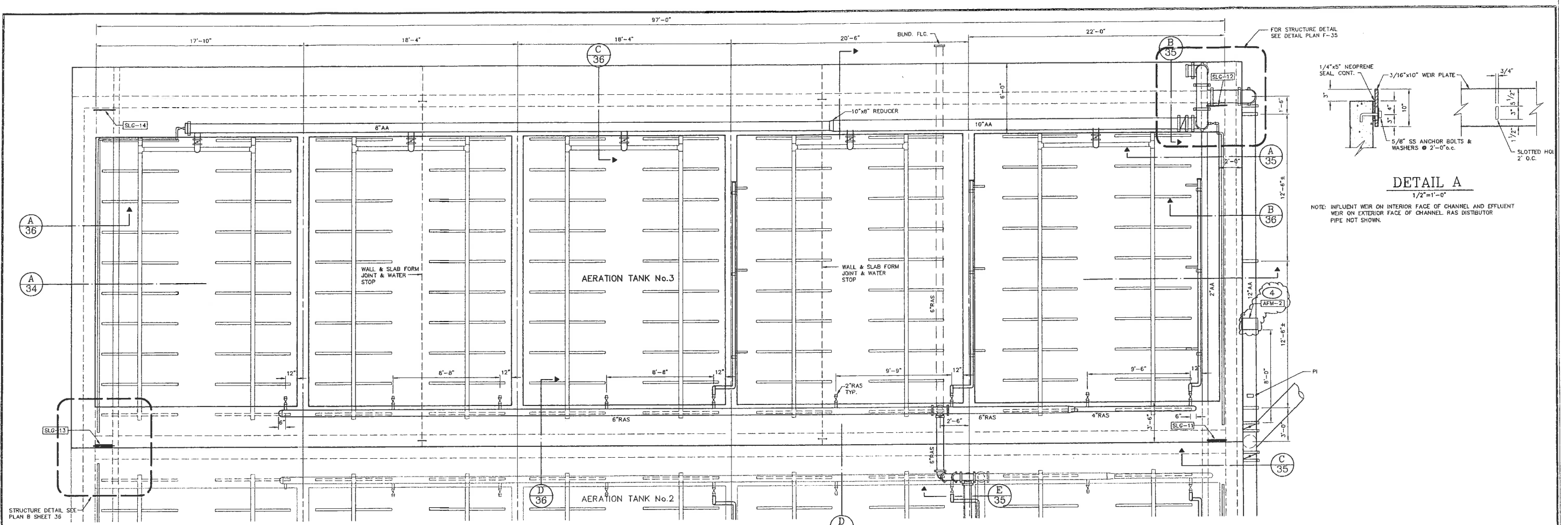
CONSTRUCTION OF WATER & SEWER IMPROVEMENTS
 PIPING PLAN

DESIGN ENGINEER _____
 DATE _____ C.E. LICENSE NO. _____
 Date Revised _____
 Approval _____

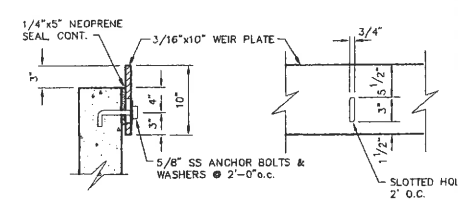
SCALE AS SHOWN
 DRAWN BY C2P
 REVISED 11-20-95
 SHEET 22 OF 62 SHEETS

(NOTE ALIGNMENT TO BE SOUTH OF EFFLUENT LINES)

EDA AWARD No. 07-01-04039

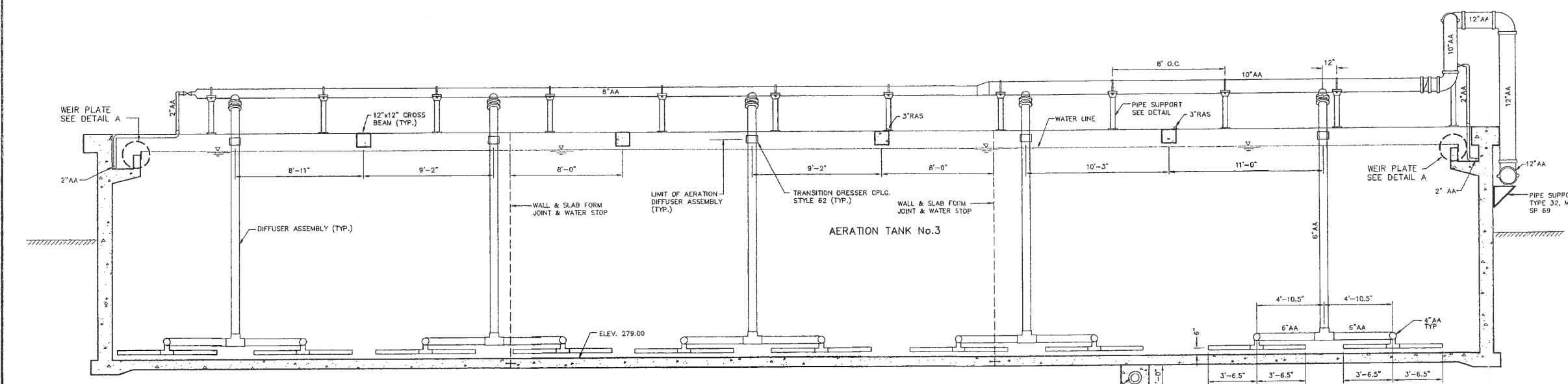


PLAN
1/4"=1'-0"



DETAIL A
1/2"=1'-0"

NOTE: INFLUENT WEIR ON INTERIOR FACE OF CHANNEL AND EFFLUENT WEIR ON EXTERIOR FACE OF CHANNEL. RAS DISTRIBUTOR PIPE NOT SHOWN.



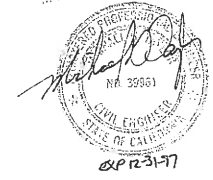
SECTION
A 33 A 34
1/4"=1'-0"

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NOTE: SEE SPECIFICATIONS FOR ACCEPTABLE ALTERNATE DIFFUSERS.

SCALE 1/4"=1'-0"
0 2 4 8

EDA AWARD No. 07-01-04039



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208/443-2700 FAX 209/443-2715
Job No. 9510101 Date Revised
Dwg. No. 95-0182 Approval

MALAGA COUNTY WATER DISTRICT		SCALE AS SHOWN
3580 SOUTH FRANK STREET, FRESNO, CALIFORNIA 93725 PHONE (209) 485-7353 FAX (209) 485-7319		DRAWN BY: CZP
CONSTRUCTION OF WATER & SEWER IMPROVEMENTS		REVISED
WWTP- AERATION TANK PLAN & SECTIONS		SHEET 34 OF 62 SHEETS
DESIGN ENGINEER	C.E. LICENSE NO.	
DATE		
DATE REVISED		
APPROVAL		

APPENDIX C

Preliminary Opinion of Cost for Disposal Facilities

Malaga County Water District

PRELIMINARY Estimate for Disposal Pond Expansion
February, 2008

			Located in Maple Avenue		Located in Easements East of Maple		Located in Easements Adjacent to Railroad Tracks	
Property	APN 330 031 42S	\$ 20,000 per Ac	12.8 Ac	\$ 256,000	12.8 Ac	\$ 256,000	12.8 Ac	\$ 256,000
Easements								
	Permanent	\$ 20,000 per Ac	0.1 Ac	\$ 2,755	0.6 Ac	\$ 12,000	0.5 Ac	\$ 10,000
	Construction	\$ 10,000 per Ac	0 Ac	\$ -	0.6 Ac	\$ 6,000	1.0 Ac	\$ 10,000
Fencing		\$ 15 LF	3000 LF	\$ 45,000	3000 LF	\$ 45,000	3000 LF	\$ 45,000
Pond Construction (Earthwork) (15100 CY Off Haul)		\$ 8 CY	42000 CY	\$ 336,000	42000 CY	\$ 336,000	42000 CY	\$ 336,000
Piping to Property (Gravity Main)		\$ 90 LF	3150 LF	\$ 283,500	3150 LF	\$ 283,500	3535 LF	\$ 318,150
	On WWTP Site		600		600		1400	
	Off WWTP Site		2550		2550		2135	
Jack & Bore		\$ 350 LF	150 LF	\$ 52,500	150 LF	\$ 52,500	75 LF	\$ 26,250
Lift Station			LS	\$ 125,000	LS	\$ 125,000	LS	\$ 125,000
Gravel Surfacing			LS	\$ 100,000	LS	\$ 100,000	LS	\$ 100,000
Trench Resurfacing		\$ 25 LF	2400 LF	\$ 60,000	300 LF	\$ 7,500	50 LF	\$ 1,250
Electrical and Controls			LS	\$ 200,000	LS	\$ 200,000	LS	\$ 200,000
Traffic Control			LS	\$ 150,000	LS	\$ 100,000	LS	\$ 50,000
Environmental			LS	\$ 50,000	LS	\$ 50,000	LS	\$ 50,000
Planning			LS	\$ 50,000	LS	\$ 50,000	LS	\$ 50,000
Permitting			LS	\$ 50,000	LS	\$ 50,000	LS	\$ 50,000
Design and Construction Review			LS	\$ 300,000	LS	\$ 300,000	LS	\$ 300,000
Subtotal				\$ 2,060,755		\$ 1,973,500		\$ 1,927,650
Contingencies (30%)				\$ 618,226		\$ 592,050		\$ 578,295
Total				\$ 2,678,981		\$ 2,565,550		\$ 2,505,945

Note: This preliminary estimate is applicable only for APN 330 031 42S and does not include APN 330-031-60S, APN 330-031-45S, APN 330-031-46S, APN 330-211-20, or APN 330-211-18, and is dependent on the property owners willingness to move forward. APN 330-031-42S could provide 10.5 acres of additional pond disposal, about 25% of the additional disposal area required for the ultimate 1.65 MGD capacity of the WWTP.

Appendix C
Resolution 10-13-09 (Moratorium)

RESOLUTION NO. 10-13-09
A RESOLUTION OF THE BOARD OF DIRECTORS OF
MALAGA COUNTY WATER DISTRICT IMPOSING MORATORIUM
ON THE ESTABLISHMENT OF NEW CONNECTIONS
FOR WATER AND SEWER SERVICE WITHIN THE
BOUNDARIES OF THE MALAGA COUNTY WATER DISTRICT

WHEREAS, Malaga County Water District is a county water district organized and existing under the Water Code of the State of California and, as such, provides water and sewer service to residents and businesses within its territorial boundaries as established by law; and

WHEREAS, the wastewater treatment facilities owned and operated by Malaga County Water District depends on a system of ponds and discharge of treated wastewater into canals operated by Fresno Irrigation District for the disposal of treated wastewater; and

WHEREAS, the ponds have reached capacity and, without further capital improvements to the disposal system, Malaga cannot accommodate any further discharge from any new construction or development within the District boundaries; and

WHEREAS, the Fresno Irrigation District, requires the canals into which effluent is discharged to be empty for purposes of maintenance during certain periods of the year and cannot accommodate any further discharge into its canals; and

WHEREAS, the District has sought, but has not been granted state and/or federal grant funding for necessary improvements needed to increase the capacity of its disposal system by the establishment of new ponds and/or upgrades to its current treatment facilities which funding would enable the District to increase its disposal capacity and allow it to accommodate further discharge from new construction or development within District boundaries, thereby enhancing economic conditions and creating jobs.

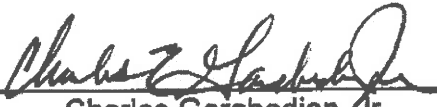
NOW, THEREFORE, be it resolved by the Board of Directors of the Malaga County Water District that:

1. The foregoing recitals are true and correct.
2. There is hereby established a moratorium on establishing further connections for water and/or sewer service by the Malaga County Water District for new construction or development occurring within the District's boundaries. New construction or development does not include the expansion or improvement of existing commercial or residential uses of property already within the boundaries of the District. The District Board will periodically review the circumstances giving rise to the imposition of this moratorium on further connections and will

rescind and/or modify this resolution if and when necessary capital improvements are completed to increase the capacity levels of the wastewater system maintained and operated by the Malaga County Water District. While this moratorium is in effect, the Malaga County Water District shall not authorize, prevent, or issue any will serve letter for new construction or development occurring within District's boundaries for establishment of water and/or sewer service in the District.

PASSED AND ADOPTED by the Board of Directors of the Malaga County Water District at a regular meeting thereof on 10-13-, 2010.

AYES: BOARD MEMBERS:
NOES: BOARD MEMBERS:
ABSENT: BOARD MEMBERS:
ABSTAIN: BOARD MEMBERS:



Charles Garabedian, Jr.
President, Board of Directors
Malaga County Water District

ATTEST:



Secretary

Appendix D
Property Purchase (APN 330-031-11)

Client Detail Report

Listings as of 08/16/12 at 9:58am

Active 03/29/12	Listing # 389966	4335 S Maple Ave Fresno, CA 93725	Listing Price: \$450,000
	County: Fresno	Cross St: S/ W/Hwy 99	



Prop Type	Residential	Prop Subtype(s)	Single Family
Area	725	Approx Square Feet	1198 Tax Records
Beds	3	Price/Sq Ft	\$375.63
Baths	1	Pool	No
APN	33003111	Lot Sq Ft (approx)	188615 ((Tax Records))
DOM/CDOM	140/140	Lot Acres (approx)	4.330

1939

School District Fowler Unified	HIGH Fowler	JRHI Sutter	GRAD Malaga
---------------------------------------	--------------------	--------------------	--------------------

Directions From HWY 99 South go East on Central Exit, make a left on Maple. Property on Corner of Maple and Malaga.
Marketing Remark Property Located in the City of Fresno in a Heavy Industrial area, close to HWY 99.

General Information

Region	Rural	# of Stories	Single Story
Sewer/Water	Domestic Water, Septic Tank	Gas & Electric	Public Utilities
Interior Features		Foundation	Concrete
Heating & Cooling	Evaporative Cool	Exterior	Stucco
Laundry	On Porch		
Exterior Features			
Roofing	Comp Shingle		
Financial Data			
REO/Bank Owned	No		

Presented By:	Lisa M Padgett	Raco-Smith Realty, Inc.
	Lic: 01111886	Lic: 00638762
	Primary: 559-250-9506	448 E. Olive
	Secondary: 559-442-5000	Fresno, CA 93728
	Other:	559-442-5000
	Fax : 559-442-5003	See our listings online:
	E-mail: lisa@racosmithrealty.com	http://racosmithrealty.com
August 2012	Web Page:	

Information herein deemed reliable but not guaranteed, representations are approximate, individual verification recommended.
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 U.S. Patent 6,910,045



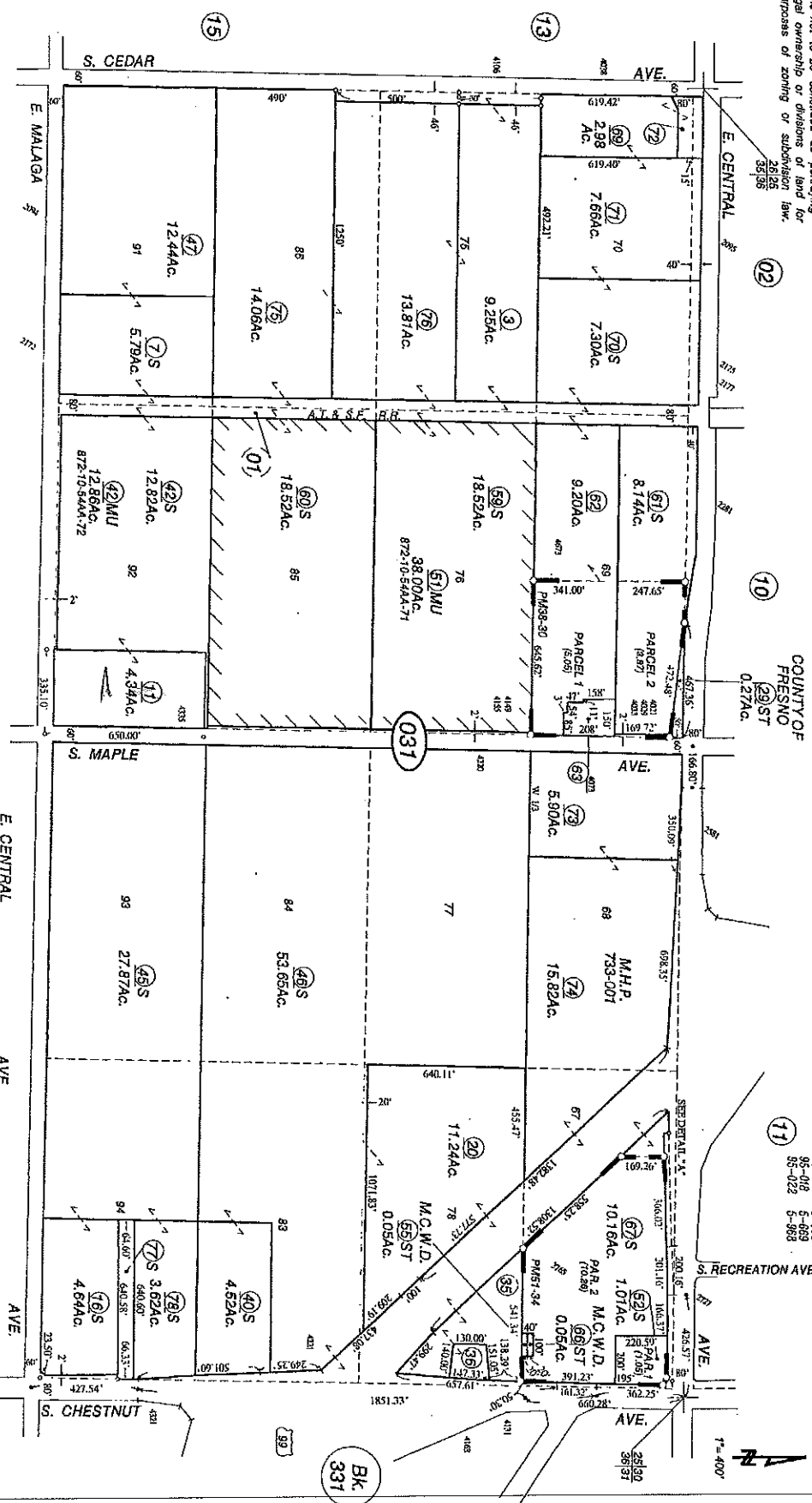
NOTE
 This map is for Assessment purposes only.
 It is not to be construed as portraying
 legal ownership or divisions of land for
 purposes of zoning or subdivision law.

SUBDIVIDED LAND IN P.O.R. SEC. 36, T.14 S., R.20 E., M.D.B. & M.

Tax Rate Area

330-03

- 95-012 5-687
- 95-015 5-688
- 95-018 5-689
- 95-022 5-988



Malaga Tract, Tract No. 1795 - Plat Bk. 2, Pg. 17
 Parcel Map No. 6011 - Bk. 38, Pgs. 30 & 31
 Parcel Map No. 7417 - Bk. 51, Pg. 34

05-08-09

NOTE - Assessor's Block Numbers Shown in Ellipses.
 Assessor's Parcel Numbers Shown in Circles.

Assessor's Map Bk. 330 - Pg. 03
 County of Fresno, Calif.



MAY 3 2009



CALIFORNIA
ASSOCIATION
OF REALTORS®

**CALIFORNIA
RESIDENTIAL PURCHASE AGREEMENT
AND JOINT ESCROW INSTRUCTIONS**

For Use With Single Family Residential Property — Attached or Detached
(C.A.R. Form RPA-CA, Revised 4/10)

Date August 17, 2012

1. OFFER:

- A. THIS IS AN OFFER FROM Russell Holcomb ("Buyer").
 B. THE REAL PROPERTY TO BE ACQUIRED is described as 4335 S. Maple Ave., Fresno, CA 93725, situated in _____, Assessor's Parcel No. 33003111, County of Fresno, California, ("Property").
 C. THE PURCHASE PRICE offered is Three Hundred Thousand (Dollars \$ 300,000.00).
 D. CLOSE OF ESCROW shall occur on _____ (date) (or 10 Days After Acceptance).

2. AGENCY:

- A. DISCLOSURE: Buyer and Seller each acknowledge prior receipt of a "Disclosure Regarding Real Estate Agency Relationships" (C.A.R. Form AD).
 B. POTENTIALLY COMPETING BUYERS AND SELLERS: Buyer and Seller each acknowledge receipt of a disclosure of the possibility of multiple representation by the Broker representing that principal. This disclosure may be part of a listing agreement, buyer representation agreement or separate document (C.A.R. Form DA). Buyer understands that Broker representing Buyer may also represent other potential buyers, who may consider, make offers on or ultimately acquire the Property. Seller understands that Broker representing Seller may also represent other sellers with competing properties of interest to this Buyer.
 C. CONFIRMATION: The following agency relationships are hereby confirmed for this transaction:
 Listing Agent Raco-Smith Realty, Inc. (Print Firm Name) is the agent of (check one): the Seller exclusively; or both the Buyer and Seller.
 Selling Agent Raco-Smith Realty, Inc. (Print Firm Name) (if not the same as the Listing Agent) is the agent of (check one): the Buyer exclusively; or the Seller exclusively; or both the Buyer and Seller. Real Estate Brokers are not parties to the Agreement between Buyer and Seller.

3. FINANCE TERMS: Buyer represents that funds will be good when deposited with Escrow Holder.

- A. INITIAL DEPOSIT: Deposit shall be in the amount of \$ 5,000.00
 (1) Buyer shall deliver deposit directly to Escrow Holder by personal check, electronic funds transfer, Other _____ within 3 business days after acceptance (or Other _____);
 OR (2) (If checked) Buyer has given the deposit by personal check (or cashier check) to the agent submitting the offer (or to _____), made payable to Raco-Smith Realty, Inc.. The deposit shall be held uncashed until Acceptance and then deposited with Escrow Holder (or into Broker's trust account) within 3 business days after Acceptance (or Other _____).
 B. INCREASED DEPOSIT: Buyer shall deposit with Escrow Holder an increased deposit in the amount of \$ _____ within _____ Days After Acceptance, or _____.
 If a liquidated damages clause is incorporated into this Agreement, Buyer and Seller shall sign a separate liquidated damages clause (C.A.R. Form RID) for any increased deposit at the time it is deposited.
 C. LOAN(S):
 (1) FIRST LOAN: in the amount of \$ _____
 This loan will be conventional financing or, if checked, FHA, VA, Seller (C.A.R. Form SFA), assumed financing (C.A.R. Form PAA), Other _____. This loan shall be at a fixed rate not to exceed _____ % or, an adjustable rate loan with initial rate not to exceed _____ %. Regardless of the type of loan, Buyer shall pay points not to exceed _____ % of the loan amount.
 (2) SECOND LOAN: in the amount of \$ _____
 This loan will be conventional financing or, if checked, Seller (C.A.R. Form SFA), assumed financing (C.A.R. Form PAA), Other _____. This loan shall be at a fixed rate not to exceed _____ % or, an adjustable rate loan with initial rate not to exceed _____ %. Regardless of the type of loan, Buyer shall pay points not to exceed _____ % of the loan amount.
 (3) FHA/VA: For any FHA or VA loan specified above, Buyer has 17 (or _____) Days After Acceptance to Deliver to Seller written notice (C.A.R. Form FVA) of any lender-required repairs or costs that Buyer requests Seller to pay for or repair. Seller has no obligation to pay for repairs or satisfy lender requirements unless otherwise agreed in writing.
 D. ADDITIONAL FINANCING TERMS: All Cash
 E. BALANCE OF PURCHASE PRICE OR DOWN PAYMENT: in the amount of \$ 295,000.00 to be deposited with Escrow Holder within sufficient time to close escrow.
 F. PURCHASE PRICE (TOTAL): \$ 300,000.00

Buyer's Initials (_____) (_____)

Seller's Initials (_____) (_____)



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Reviewed by [Signature] Date 8-17-12

RPA-CA REVISED 4/10 (PAGE 1 OF 8)

CALIFORNIA RESIDENTIAL PURCHASE AGREEMENT (RPA-CA PAGE 1 OF 8)

Agent: Lisa Padgett Phone: 559.442.5000 Fax: 559.442.5003 Prepared using zipForm® software
 Broker: Raco-Smith Realty, Inc. 448 E. Olive Fresno, CA 93728

G. VERIFICATION OF DOWN PAYMENT AND CLOSING COSTS: Buyer (or Buyer's lender or loan broker pursuant to 3H(1)) shall, within 7 (or _____) Days After Acceptance, Deliver to Seller written verification of Buyer's down payment and closing costs. (If checked, verification attached.)

H. LOAN TERMS:

(1) LOAN APPLICATIONS: Within 7 (or _____) Days After Acceptance, Buyer shall Deliver to Seller a letter from lender or loan broker stating that, based on a review of Buyer's written application and credit report, Buyer is prequalified or preapproved for any NEW loan specified in 3C above. (If checked, letter attached.)

(2) LOAN CONTINGENCY: Buyer shall act diligently and in good faith to obtain the designated loan(s). Obtaining the loan(s) specified above is a contingency of this Agreement unless otherwise agreed in writing. Buyer's contractual obligations to obtain and provide deposit, balance of down payment and closing costs are not contingencies of this Agreement.

(3) LOAN CONTINGENCY REMOVAL:

(i) Within 17 (or _____) Days After Acceptance, Buyer shall, as specified in paragraph 14, in writing remove the loan contingency or cancel this Agreement;

OR (ii) (if checked) the loan contingency shall remain in effect until the designated loans are funded.

(4) NO LOAN CONTINGENCY (If checked): Obtaining any loan specified above is NOT a contingency of this Agreement. If Buyer does not obtain the loan and as a result Buyer does not purchase the Property, Seller may be entitled to Buyer's deposit or other legal remedies.

I. APPRAISAL CONTINGENCY AND REMOVAL: This Agreement is (or, if checked, is NOT) contingent upon a written appraisal of the Property by a licensed or certified appraiser at no less than the specified purchase price. If there is a loan contingency, Buyer's removal of the loan contingency shall be deemed removal of this appraisal contingency (or, if checked, Buyer shall, as specified in paragraph 14B(3), in writing remove the appraisal contingency or cancel this Agreement within 17 (or _____) Days After Acceptance). If there is no loan contingency, Buyer shall, as specified in paragraph 14B(3), in writing remove the appraisal contingency or cancel this Agreement within 17 (or _____) Days After Acceptance.

J. ALL CASH OFFER (If checked): Buyer shall, within 7 (or 4) Days After Acceptance, Deliver to Seller written verification of sufficient funds to close this transaction. (If checked, verification attached.)

K. BUYER STATED FINANCING: Seller has relied on Buyer's representation of the type of financing specified (including but not limited to, as applicable, amount of down payment, contingent or non contingent loan, or all cash). If Buyer seeks alternate financing, (i) Seller has no obligation to cooperate with Buyer's efforts to obtain such financing, and (ii) Buyer shall also pursue the financing method specified in this Agreement. Buyer's failure to secure alternate financing does not excuse Buyer from the obligation to purchase the Property and close escrow as specified in this Agreement.

4. ALLOCATION OF COSTS (If checked): Unless otherwise specified in writing, this paragraph only determines who is to pay for the inspection, test or service ("Report") mentioned; it does not determine who is to pay for any work recommended or identified in the Report.

A. INSPECTIONS AND REPORTS:

(1) Buyer Seller shall pay for an inspection and report for wood destroying pests and organisms ("Wood Pest Report") prepared by _____ a registered structural pest control company.

(2) Buyer Seller shall pay to have septic or private sewage disposal systems pumped and inspected _____

(3) Buyer Seller shall pay to have domestic wells tested for water potability and productivity _____

(4) Buyer Seller shall pay for a natural hazard zone disclosure report prepared by _____

(5) Buyer Seller shall pay for the following inspection or report _____

(6) Buyer Seller shall pay for the following inspection or report _____

B. GOVERNMENT REQUIREMENTS AND RETROFIT:

(1) Buyer Seller shall pay for smoke detector installation and/or water heater bracing, if required by Law. Prior to Close Of Escrow, Seller shall provide Buyer written statement(s) of compliance in accordance with state and local Law, unless exempt.

(2) Buyer Seller shall pay the cost of compliance with any other minimum mandatory government retrofit standards, inspections and reports if required as a condition of closing escrow under any Law. _____

C. ESCROW AND TITLE:

(1) Buyer Seller shall pay escrow fee 1/2 and 1/2
Escrow Holder shall be Chicago Title -- Charlene Friesen

(2) Buyer Seller shall pay for owner's title insurance policy specified in paragraph 12E _____
Owner's title policy to be issued by Chicago Title -- Charlene Friesen

(Buyer shall pay for any title insurance policy insuring Buyer's lender, unless otherwise agreed in writing.)

D. OTHER COSTS:

(1) Buyer Seller shall pay County transfer tax or fee _____

(2) Buyer Seller shall pay City transfer tax or fee _____

(3) Buyer Seller shall pay Homeowner's Association ("HOA") transfer fee _____

(4) Buyer Seller shall pay HOA document preparation fees _____

(5) Buyer Seller shall pay for any private transfer fee _____

(6) Buyer Seller shall pay the cost, not to exceed \$ _____, of a one-year home warranty plan, issued by _____, with the following optional coverages:

Air Conditioner Pool/Spa Code and Permit upgrade Other: _____

Buyer is informed that home warranty plans have many optional coverages in addition to those listed above. Buyer is advised to investigate these coverages to determine those that may be suitable for Buyer.

(7) Buyer Seller shall pay for _____

(8) Buyer Seller shall pay for _____

Buyer's Initials (_____) (_____)

Seller's Initials (_____) (_____)



Property Address: Fresno, CA 93725

5. CLOSING AND POSSESSION:

- A. Buyer intends (or does not intend) to occupy the Property as Buyer's primary residence.
- B. Seller-occupied or vacant property: Possession shall be delivered to Buyer at 5 PM or (_____ AM PM), on the date of Close Of Escrow; on _____; or no later than _____ Days After Close Of Escrow. If transfer of title and possession do not occur at the same time, Buyer and Seller are advised to: (i) enter into a written occupancy agreement (C.A.R. Form PAA, paragraph 2); and (ii) consult with their insurance and legal advisors.

- C. Tenant-occupied property:
 - (i) Property shall be vacant at least 5 (or _____) Days Prior to Close Of Escrow, unless otherwise agreed in writing. **Note to Seller: If you are unable to deliver Property vacant in accordance with rent control and other applicable Law, you may be in breach of this Agreement.**
 - OR (ii) (if checked) Tenant to remain in possession. (C.A.R. Form PAA, paragraph 3)

- D. At Close Of Escrow, (i) Seller assigns to Buyer any assignable warranty rights for items included in the sale, and (ii) Seller shall Deliver to Buyer available Copies of warranties. Brokers cannot and will not determine the assignability of any warranties.
- E. At Close Of Escrow, unless otherwise agreed in writing, Seller shall provide keys and/or means to operate all locks, mailboxes, security systems, alarms and garage door openers. If Property is a condominium or located in a common interest subdivision, Buyer may be required to pay a deposit to the Homeowners' Association ("HOA") to obtain keys to accessible HOA facilities.

6. STATUTORY DISCLOSURES (INCLUDING LEAD-BASED PAINT HAZARD DISCLOSURES) AND CANCELLATION RIGHTS:

- A. (1) Seller shall, within the time specified in paragraph 14A, Deliver to Buyer, if required by Law: (i) Federal Lead-Based Paint Disclosures (C.A.R. Form FLD) and pamphlet ("Lead Disclosures"); and (ii) disclosures or notices required by sections 1102 et. seq. and 1103 et. seq. of the Civil Code ("Statutory Disclosures"). Statutory Disclosures include, but are not limited to, a Real Estate Transfer Disclosure Statement ("TDS"), Natural Hazard Disclosure Statement ("NHD"), notice or actual knowledge of release of illegal controlled substance, notice of special tax and/or assessments (or, if allowed, substantially equivalent notice regarding the Mello-Roos Community Facilities Act and Improvement Bond Act of 1915) and, if Seller has actual knowledge, of industrial use and military ordinance location (C.A.R. Form SPQ or SSD).
- (2) Buyer shall, within the time specified in paragraph 14B(1), return Signed Copies of the Statutory and Lead Disclosures to Seller.
- (3) In the event Seller, prior to Close Of Escrow, becomes aware of adverse conditions materially affecting the Property, or any material inaccuracy in disclosures, information or representations previously provided to Buyer, Seller shall promptly provide a subsequent or amended disclosure or notice, in writing, covering those items. **However, a subsequent or amended disclosure shall not be required for conditions and material inaccuracies of which Buyer is otherwise aware, or which are disclosed in reports provided to or obtained by Buyer or ordered and paid for by Buyer.**
- (4) If any disclosure or notice specified in 6A(1), or subsequent or amended disclosure or notice is Delivered to Buyer after the offer is Signed, Buyer shall have the right to cancel this Agreement within 3 Days After Delivery in person, or 5 Days After Delivery by deposit in the mail, by giving written notice of cancellation to Seller or Seller's agent.
- (5) **Note to Buyer and Seller: Waiver of Statutory and Lead Disclosures is prohibited by Law.**

- B. NATURAL AND ENVIRONMENTAL HAZARDS: Within the time specified in paragraph 14A, Seller shall, if required by Law: (i) Deliver to Buyer earthquake guides (and questionnaire) and environmental hazards booklet; (ii) even if exempt from the obligation to provide a NHD, disclose if the Property is located in a Special Flood Hazard Area; Potential Flooding (Inundation) Area; Very High Fire Hazard Zone; State Fire Responsibility Area; Earthquake Fault Zone; Seismic Hazard Zone; and (iii) disclose any other zone as required by Law and provide any other information required for those zones.

- C. WITHHOLDING TAXES: Within the time specified in paragraph 14A, to avoid required withholding, Seller shall Deliver to Buyer or qualified substitute, an affidavit sufficient to comply with federal (FIRPTA) and California withholding Law, (C.A.R. Form AS or QS).

- D. MEGAN'S LAW DATABASE DISCLOSURE: Notice: Pursuant to Section 290.46 of the Penal Code, information about specified registered sex offenders is made available to the public via an Internet Web site maintained by the Department of Justice at www.meganslaw.ca.gov. Depending on an offender's criminal history, this information will include either the address at which the offender resides or the community of residence and ZIP Code in which he or she resides. (Neither Seller nor Brokers are required to check this website. If Buyer wants further information, Broker recommends that Buyer obtain information from this website during Buyer's inspection contingency period. Brokers do not have expertise in this area.)

7. CONDOMINIUM/PLANNED DEVELOPMENT DISCLOSURES:

- A. SELLER HAS: 7 (or _____) Days After Acceptance to disclose to Buyer whether the Property is a condominium, or is located in a planned development or other common interest subdivision (C.A.R. Form SPQ or SSD).
- B. If the Property is a condominium or is located in a planned development or other common interest subdivision, Seller has 3 (or _____) Days After Acceptance to request from the HOA (C.A.R. Form HOA): (i) Copies of any documents required by Law; (ii) disclosure of any pending or anticipated claim or litigation by or against the HOA; (iii) a statement containing the location and number of designated parking and storage spaces; (iv) Copies of the most recent 12 months of HOA minutes for regular and special meetings; and (v) the names and contact information of all HOAs governing the Property (collectively, "CI Disclosures"). Seller shall itemize and Deliver to Buyer all CI Disclosures received from the HOA and any CI Disclosures in Seller's possession. Buyer's approval of CI Disclosures is a contingency of this Agreement as specified in paragraph 14B(3).

8. ITEMS INCLUDED IN AND EXCLUDED FROM PURCHASE PRICE:

- A. NOTE TO BUYER AND SELLER: Items listed as included or excluded in the MLS, flyers or marketing materials are not included in the purchase price or excluded from the sale unless specified in 8B or C.
- B. ITEMS INCLUDED IN SALE:
 - (1) All EXISTING fixtures and fittings that are attached to the Property;
 - (2) EXISTING electrical, mechanical, lighting, plumbing and heating fixtures, ceiling fans, fireplace inserts, gas logs and grates, solar systems, built-in appliances, window and door screens, awnings, shutters, window coverings, attached floor coverings, television antennas, satellite dishes, private integrated telephone systems, air coolers/conditioners, pool/spa equipment, garage door openers/remote controls, mailbox, in-ground landscaping, trees/shrubs, water softeners, water purifiers, security systems/alarms; (If checked stove(s), refrigerator(s); and
 - (3) The following additional items: _____
 - (4) Seller represents that all items included in the purchase price, unless otherwise specified, are owned by Seller.
 - (5) All items included shall be transferred free of liens and without Seller warranty.
- C. ITEMS EXCLUDED FROM SALE: Unless otherwise specified, audio and video components (such as flat screen TVs and speakers) are excluded if any such item is not itself attached to the Property, even if a bracket or other mechanism attached to the component is attached to the Property; and _____

Buyer's Initials (_____) (_____)

Seller's Initials (_____) (_____)

Reviewed by _____ Date 8-17-12



Property Address: Fresno, CA 93725

9. CONDITION OF PROPERTY: Unless otherwise agreed: (i) the Property is sold (a) in its PRESENT physical ("as-is") condition as of the date of Acceptance and (b) subject to Buyer's Investigation rights; (ii) the Property, including pool, spa, landscaping and grounds, is to be maintained in substantially the same condition as on the date of Acceptance; and (iii) all debris and personal property not included in the sale shall be removed by Seller by Close Of Escrow.

- A. Seller shall, within the time specified in paragraph 14A, DISCLOSE KNOWN MATERIAL FACTS AND DEFECTS affecting the Property, including known insurance claims within the past five years, and make any and all other disclosures required by law.
B. Buyer has the right to inspect the Property and, as specified in paragraph 14B, based upon information discovered in those inspections: (i) cancel this Agreement; or (ii) request that Seller make Repairs or take other action.
C. Buyer is strongly advised to conduct investigations of the entire Property in order to determine its present condition. Seller may not be aware of all defects affecting the Property or other factors that Buyer considers important. Property improvements may not be built according to code, in compliance with current Law, or have had permits issued.

10. BUYER'S INVESTIGATION OF PROPERTY AND MATTERS AFFECTING PROPERTY:

- A. Buyer's acceptance of the condition of, and any other matter affecting the Property, is a contingency of this Agreement as specified in this paragraph and paragraph 14B. Within the time specified in paragraph 14B(1), Buyer shall have the right, at Buyer's expense unless otherwise agreed, to conduct inspections, investigations, tests, surveys and other studies ("Buyer Investigations"), including, but not limited to, the right to: (i) inspect for lead-based paint and other lead-based paint hazards; (ii) inspect for wood destroying pests and organisms; (iii) review the registered sex offender database; (iv) confirm the insurability of Buyer and the Property; and (v) satisfy Buyer as to any matter specified in the attached Buyer's Inspection Advisory (C.A.R. Form BIA). Without Seller's prior written consent, Buyer shall neither make nor cause to be made: (i) invasive or destructive Buyer Investigations; or (ii) inspections by any governmental building or zoning inspector or government employee, unless required by Law.
B. Seller shall make the Property available for all Buyer Investigations. Buyer shall (i) as specified in paragraph 14B, complete Buyer Investigations and, either remove the contingency or cancel this Agreement, and (ii) give Seller, at no cost, complete Copies of all Investigation reports obtained by Buyer, which obligation shall survive the termination of this Agreement.
C. Seller shall have water, gas, electricity and all operable pilot lights on for Buyer's Investigations and through the date possession is made available to Buyer.
D. Buyer indemnity and Seller protection for entry upon property: Buyer shall: (i) keep the Property free and clear of liens; (ii) repair all damage arising from Buyer Investigations; and (iii) indemnify and hold Seller harmless from all resulting liability, claims, demands, damages and costs of Buyer's investigations. Buyer shall carry, or Buyer shall require anyone acting on Buyer's behalf to carry, policies of liability, workers' compensation and other applicable insurance, defending and protecting Seller from liability for any injuries to persons or property occurring during any Buyer Investigations or work done on the Property at Buyer's direction prior to Close Of Escrow. Seller is advised that certain protections may be afforded Seller by recording a "Notice of Non-responsibility" (C.A.R. Form NNR) for Buyer Investigations and work done on the Property at Buyer's direction. Buyer's obligations under this paragraph shall survive the termination or cancellation of this Agreement and Close of Escrow.

11. SELLER DISCLOSURES; ADDENDA; ADVISORIES; OTHER TERMS:

- A. Seller Disclosures (if checked): Seller shall, within the time specified in paragraph 14A, complete and provide Buyer with a:
[] Seller Property Questionnaire (C.A.R. Form SPQ) OR [] Supplemental Contractual and Statutory Disclosure (C.A.R. Form SSD)
[] Addendum # 1 (C.A.R. Form ADM)
B. Addenda (if checked):
[] Wood Destroying Pest Inspection and Allocation of Cost Addendum (C.A.R. Form WPA)
[] Purchase Agreement Addendum (C.A.R. Form PAA) [] Septic, Well and Property Monument Addendum (C.A.R. Form SWPI)
[] Short Sale Addendum (C.A.R. Form SSA) [] Other
C. Advisories (if checked):
[] Probate Advisory (C.A.R. Form PAK) [] Statewide Buyer and Seller Advisory (C.A.R. Form SBSA)
[] Trust Advisory (C.A.R. Form TA) [] REO Advisory (C.A.R. Form REO)
D. Other Terms:

12. TITLE AND VESTING:

- A. Within the time specified in paragraph 14, Buyer shall be provided a current preliminary title report, which shall include a search of the General Index. Seller shall within 7 Days After Acceptance give Escrow Holder a completed Statement of Information. The preliminary report is only an offer by the title insurer to issue a policy of title insurance and may not contain every item affecting title. Buyer's review of the preliminary report and any other matters which may affect title are a contingency of this Agreement as specified in paragraph 14B.
B. Title is taken in its present condition subject to all encumbrances, easements, covenants, conditions, restrictions, rights and other matters, whether of record or not, as of the date of Acceptance except: (i) monetary liens of record unless Buyer is assuming those obligations or taking the Property subject to those obligations; and (ii) those matters which Seller has agreed to remove in writing.
C. Within the time specified in paragraph 14A, Seller has a duty to disclose to Buyer all matters known to Seller affecting title, whether of record or not.
D. At Close Of Escrow, Buyer shall receive a grant deed conveying title (or, for stock cooperative or long-term lease, an assignment of stock certificate or of Seller's leasehold interest), including oil, mineral and water rights if currently owned by Seller. Title shall vest as designated in Buyer's supplemental escrow instructions. THE MANNER OF TAKING TITLE MAY HAVE SIGNIFICANT LEGAL AND TAX CONSEQUENCES. CONSULT AN APPROPRIATE PROFESSIONAL.
E. Buyer shall receive a CLTA/ALTA Homeowner's Policy of Title Insurance. A title company, at Buyer's request, can provide information about the availability, desirability, coverage, survey requirements, and cost of various title insurance coverages and endorsements. If Buyer desires title coverage other than that required by this paragraph, Buyer shall instruct Escrow Holder in writing and pay any increase in cost.

13. SALE OF BUYER'S PROPERTY:

- A. This Agreement is NOT contingent upon the sale of any property owned by Buyer.
OR B. [] (If checked): The attached addendum (C.A.R. Form COP) regarding the contingency for the sale of property owned by Buyer is incorporated into this Agreement.

Buyer's Initials () ()

Seller's Initials () ()

Reviewed by [Signature] Date 8/17/12



4335 S. Maple Ave.
Fresno, CA 93725

Date: August 17, 2012

Property Address: Fresno, CA 93725

14. TIME PERIODS; REMOVAL OF CONTINGENCIES; CANCELLATION RIGHTS: The following time periods may only be extended, altered, modified or changed by mutual written agreement. Any removal of contingencies or cancellation under this paragraph by either Buyer or Seller must be exercised in good faith and in writing (C.A.R. Form CR or CC).

A. SELLER HAS: 7 (or _____) Days After Acceptance to Deliver to Buyer all Reports, disclosures and information for which Seller is responsible under paragraphs 4, 6A, B and C, 7A, 9A, 11A and B, and 12. Buyer may give Seller a Notice to Seller to Perform (C.A.R. Form NSP) if Seller has not Delivered the items within the time specified.

B. (1) BUYER HAS: 17 (or 4) Days After Acceptance, unless otherwise agreed in writing, to:
(i) complete all Buyer Investigations; approve all disclosures, reports and other applicable information, which Buyer receives from Seller; and approve all other matters affecting the Property; and
(ii) Deliver to Seller Signed Copies of Statutory and Lead Disclosures Delivered by Seller in accordance with paragraph 6A.
(2) Within the time specified in 14B(1), Buyer may request that Seller make repairs or take any other action regarding the Property (C.A.R. Form RR). Seller has no obligation to agree to or respond to Buyer's requests.
(3) Within the time specified in 14B(1) (or as otherwise specified in this Agreement), Buyer shall Deliver to Seller either (i) a removal of the applicable contingency (C.A.R. Form CR), or (ii) a cancellation (C.A.R. Form CC) of this Agreement based upon a contingency or Seller's failure to Deliver the specified items. However, if any report, disclosure or information for which Seller is responsible is not Delivered within the time specified in 14A, then Buyer has 5 (or _____) Days After Delivery of any such items, or the time specified in 14B(1), whichever is later, to Deliver to Seller a removal of the applicable contingency or cancellation of this Agreement.
(4) Continuation of Contingency: Even after the end of the time specified in 14B(1) and before Seller cancels this Agreement, if at all, pursuant to 14C, Buyer retains the right to either (i) in writing remove remaining contingencies, or (ii) cancel this Agreement based upon a remaining contingency or Seller's failure to Deliver the specified terms. Once Buyer's written removal of all contingencies is Delivered to Seller, Seller may not cancel this Agreement pursuant to 14C(1).

C. SELLER RIGHT TO CANCEL:

(1) Seller right to Cancel; Buyer Contingencies: If, within time specified in this Agreement, Buyer does not, in writing, Deliver to Seller a removal of the applicable contingency or cancellation of this Agreement then Seller, after first Delivering to Buyer a Notice to Buyer to Perform (C.A.R. Form NBP) may cancel this Agreement. In such event, Seller shall authorize return of Buyer's deposit.
(2) Seller right to Cancel; Buyer Contract Obligations: Seller, after first Delivering to Buyer a NBP may cancel this Agreement for any of the following reasons: (i) if Buyer fails to deposit funds as required by 3A or 3B; (ii) if the funds deposited pursuant to 3A or 3B are not good when deposited; (iii) if Buyer fails to Deliver a notice of FHA or VA costs or terms as required by 3C(3) (C.A.R. Form FVA); (iv) if Buyer fails to Deliver a letter as required by 3H; (v) if Buyer fails to Deliver verification as required by 3G or 3J; (vi) if Seller reasonably disapproves of the verification provided by 3G or 3J; (vii) if Buyer fails to return Statutory and Lead Disclosures as required by paragraph 6A(2); or (viii) if Buyer fails to sign or initial a separate liquidated damage form for an increased deposit as required by paragraphs 3B and 25. In such event, Seller shall authorize return of Buyer's deposit.
(3) Notice To Buyer To Perform: The NBP shall: (i) be in writing; (ii) be signed by Seller; and (iii) give Buyer at least 2 (or _____) Days After Delivery (or until the time specified in the applicable paragraph, whichever occurs last) to take the applicable action. A NBP may not be Delivered any earlier than 2 Days Prior to the expiration of the applicable time for Buyer to remove a contingency or cancel this Agreement or meet an obligation specified in 14C(2).

D. EFFECT OF BUYER'S REMOVAL OF CONTINGENCIES: If Buyer removes, in writing, any contingency or cancellation rights, unless otherwise specified in a separate written agreement between Buyer and Seller, Buyer shall with regard to that contingency or cancellation right conclusively be deemed to have: (i) completed all Buyer Investigations, and review of reports and other applicable information and disclosures; (ii) elected to proceed with the transaction; and (iii) assumed all liability, responsibility and expense for Repairs or corrections or for inability to obtain financing.

E. CLOSE OF ESCROW: Before Seller or Buyer may cancel this Agreement for failure of the other party to close escrow pursuant to this Agreement, Seller or Buyer must first give the other a demand to close escrow (C.A.R. Form DCE).

F. EFFECT OF CANCELLATION ON DEPOSITS: If Buyer or Seller gives written notice of cancellation pursuant to rights duly exercised under the terms of this Agreement, Buyer and Seller agree to Sign mutual instructions to cancel the sale and escrow and release deposits, if any, to the party entitled to the funds, less fees and costs incurred by that party. Fees and costs may be payable to service providers and vendors for services and products provided during escrow. Release of funds will require mutual Signed release instructions from Buyer and Seller, judicial decision or arbitration award. A Buyer or Seller may be subject to a civil penalty of up to \$1,000 for refusal to sign such instructions if no good faith dispute exists as to who is entitled to the deposited funds (Civil Code §1057.3).

15. REPAIRS: Repairs shall be completed prior to final verification of condition unless otherwise agreed in writing. Repairs to be performed at Seller's expense may be performed by Seller or through others, provided that the work complies with applicable Law, including governmental permit, inspection and approval requirements. Repairs shall be performed in a good, skillful manner with materials of quality and appearance comparable to existing materials. It is understood that exact restoration of appearance or cosmetic items following all Repairs may not be possible. Seller shall: (i) obtain receipts for Repairs performed by others; (ii) prepare a written statement indicating the Repairs performed by Seller and the date of such Repairs; and (iii) provide Copies of receipts and statements to Buyer prior to final verification of condition.

16. FINAL VERIFICATION OF CONDITION: Buyer shall have the right to make a final inspection of the Property within 5 (or _____) Days Prior to Close Of Escrow, NOT AS A CONTINGENCY OF THE SALE, but solely to confirm: (i) the Property is maintained pursuant to paragraph 9; (ii) Repairs have been completed as agreed; and (iii) Seller has complied with Seller's other obligations under this Agreement (C.A.R. Form VP).

17. PRORATIONS OF PROPERTY TAXES AND OTHER ITEMS: Unless otherwise agreed in writing, the following items shall be PAID CURRENT and prorated between Buyer and Seller as of Close Of Escrow: real property taxes and assessments, interest, rents, HOA regular, special, and emergency dues and assessments imposed prior to Close Of Escrow, premiums on insurance assumed by Buyer, payments on bonds and assessments assumed by Buyer, and payments on Mello-Roos and other Special Assessment District bonds and assessments that are a current lien. The following items shall be assumed by Buyer WITHOUT CREDIT toward the purchase price: prorated payments on Mello-Roos and other Special Assessment District bonds and assessments and HOA special assessments that are a current lien but not yet due. Property will be reassessed upon change of ownership. Any supplemental tax bills shall be paid as follows: (i) for periods after Close Of Escrow, by Buyer; and (ii) for periods prior to Close Of Escrow, by Seller (see C.A.R. Form SPT or SBSA for further information). TAX BILLS ISSUED AFTER CLOSE OF ESCROW SHALL BE HANDLED DIRECTLY BETWEEN BUYER AND SELLER. Prorations shall be made based on a 30-day month.

Buyer's Initials (_____) (_____)

Seller's Initials (_____) (_____)

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RPA-CA REVISED 4/10 (PAGE 5 OF 8)

Reviewed by [Signature] Date 8-17-12



4335 S. Maple Ave.
Fresno, CA 93725

Date: August 17, 2012

- Property Address: Fresno, CA 93725
18. **SELECTION OF SERVICE PROVIDERS:** Brokers do not guarantee the performance of any vendors, service or product providers ("Providers"), whether referred by Broker or selected by Buyer, Seller or other person. Buyer and Seller may select ANY Providers of their own choosing.
19. **MULTIPLE LISTING SERVICE ("MLS"):** Brokers are authorized to report to the MLS a pending sale and, upon Close Of Escrow, the sales price and other terms of this transaction shall be provided to the MLS to be published and disseminated to persons and entities authorized to use the information on terms approved by the MLS.
20. **EQUAL HOUSING OPPORTUNITY:** The Property is sold in compliance with federal, state and local anti-discrimination Laws.
21. **ATTORNEY FEES:** In any action, proceeding, or arbitration between Buyer and Seller arising out of this Agreement, the prevailing Buyer or Seller shall be entitled to reasonable attorney fees and costs from the non-prevailing Buyer or Seller, except as provided in paragraph 26A.
22. **DEFINITIONS:** As used in this Agreement:
- A. "Acceptance" means the time the offer or final counter offer is accepted in writing by a party and is delivered to and personally received by the other party or that party's authorized agent in accordance with the terms of this offer or a final counter offer.
 - B. "C.A.R. Form" means the specific form referenced or another comparable form agreed to by the parties.
 - C. "Close Of Escrow" means the date the grant deed, or other evidence of transfer of title, is recorded.
 - D. "Copy" means copy by any means including photocopy, NCR, facsimile and electronic.
 - E. "Days" means calendar days. However, After Acceptance, the last Day for performance of any act required by this Agreement (including Close Of Escrow) shall not include any Saturday, Sunday, or legal holiday and shall instead be the next Day.
 - F. "Days After" means the specified number of calendar days after the occurrence of the event specified, not counting the calendar date on which the specified event occurs, and ending at 11:59PM on the final day.
 - G. "Days Prior" means the specified number of calendar days before the occurrence of the event specified, not counting the calendar date on which the specified event is scheduled to occur.
 - H. "Deliver", "Delivered" or "Delivery", regardless of the method used (i.e. messenger, mail, email, fax, other), means and shall be effective upon (i) personal receipt by Buyer or Seller or the individual Real Estate Licensee for that principal as specified in paragraph D of the section titled Real Estate Brokers on page 8; OR (ii) if checked, per the attached addendum (C.A.R. Form RDN).
 - I. "Electronic Copy" or "Electronic Signature" means, as applicable, an electronic copy or signature complying with California Law. Buyer and Seller agree that electronic means will not be used by either party to modify or alter the content or integrity of this Agreement without the knowledge and consent of the other party.
 - J. "Law" means any law, code, statute, ordinance, regulation, rule or order, which is adopted by a controlling city, county, state or federal legislative, judicial or executive body or agency.
 - K. "Repairs" means any repairs (including pest control), alterations, replacements, modifications or retrofitting of the Property provided for under this Agreement.
 - L. "Signed" means either a handwritten or electronic signature on an original document, Copy or any counterpart.
23. **BROKER COMPENSATION:** Seller or Buyer, or both, as applicable, agrees to pay compensation to Broker as specified in a separate written agreement between Broker and that Seller or Buyer. Compensation is payable upon Close Of Escrow, or if escrow does not close, as otherwise specified in the agreement between Broker and that Seller or Buyer.
24. **JOINT ESCROW INSTRUCTIONS TO ESCROW HOLDER:**
- A. The following paragraphs, or applicable portions thereof, of this Agreement constitute the joint escrow instructions of Buyer and Seller to Escrow Holder, which Escrow Holder is to use along with any related counter offers and addenda, and any additional mutual instructions to close the escrow: 1, 3, 4, 6C, 11B and D, 12, 13B, 14F, 17, 22, 23, 24, 28, 30, and paragraph D of the section titled Real Estate Brokers on page 8. If a Copy of the separate compensation agreement(s) provided for in paragraph 23, or paragraph D of the section titled Real Estate Brokers on page 8 is deposited with Escrow Holder by Broker, Escrow Holder shall accept such agreement(s) and pay out of Buyer's or Seller's funds, or both, as applicable, the respective Broker's compensation provided for in such agreement(s). The terms and conditions of this Agreement not specifically referenced above, in the specified paragraphs are additional matters for the information of Escrow Holder, but about which Escrow Holder need not be concerned. Buyer and Seller will receive Escrow Holder's general provisions directly from Escrow Holder and will execute such provisions upon Escrow Holder's request. To the extent the general provisions are inconsistent or conflict with this Agreement, the general provisions will control as to the duties and obligations of Escrow Holder only. Buyer and Seller will execute additional instructions, documents and forms provided by Escrow Holder that are reasonably necessary to close the escrow.
 - B. A Copy of this Agreement shall be delivered to Escrow Holder within 3 business days after Acceptance (or _____). Escrow Holder shall provide Seller's Statement of information to Title company when received from Seller. Buyer and Seller authorize Escrow Holder to accept and rely on Copies and Signatures as defined in this Agreement as originals, to open escrow and for other purposes of escrow. The validity of this Agreement as between Buyer and Seller is not affected by whether or when Escrow Holder Signs this Agreement.
 - C. Brokers are a party to the escrow for the sole purpose of compensation pursuant to paragraphs 23 and paragraph D of the section titled Real Estate Brokers on page 8. Buyer and Seller irrevocably assign to Brokers compensation specified in paragraphs 23, respectively, and irrevocably instruct Escrow Holder to disburse those funds to Brokers at Close Of Escrow or pursuant to any other mutually executed cancellation agreement. Compensation instructions can be amended or revoked only with the written consent of Brokers. Buyer and Seller shall release and hold harmless Escrow Holder from any liability resulting from Escrow Holder's payment to Broker(s) of compensation pursuant to this Agreement. Escrow Holder shall immediately notify Brokers: (i) if Buyer's initial or any additional deposit is not made pursuant to this Agreement, or is not good at time of deposit with Escrow Holder; or (ii) if either Buyer or Seller instruct Escrow Holder to cancel escrow.
 - D. A Copy of any amendment that affects any paragraph of this Agreement for which Escrow Holder is responsible shall be delivered to Escrow Holder within 2 business days after mutual execution of the amendment.

Buyer's Initials (_____) (_____)

Seller's Initials (_____) (_____)

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RPA-CA REVISED 4/10 (PAGE 6 OF 8) Print Date

Reviewed by [Signature] Date 8-17-12



25. LIQUIDATED DAMAGES: If Buyer fails to complete this purchase because of Buyer's default, Seller shall retain, as liquidated damages, the deposit actually paid. If the Property is a dwelling with no more than four units, one of which Buyer intends to occupy, then the amount retained shall be no more than 3% of the purchase price. Any excess shall be returned to Buyer. Release of funds will require mutual, Signed release instructions from both Buyer and Seller, judicial decision or arbitration award. AT TIME OF THE INCREASED DEPOSIT BUYER AND SELLER SHALL SIGN A SEPARATE LIQUIDATED DAMAGES PROVISION FOR ANY INCREASED DEPOSIT. (C.A.R. FORM RID).

Buyer's Initials _____ / _____ Seller's Initials _____ / _____

26. DISPUTE RESOLUTION:

A. MEDIATION: Buyer and Seller agree to mediate any dispute or claim arising between them out of this Agreement, or any resulting transaction, before resorting to arbitration or court action. Buyer and Seller also agree to mediate any disputes or claims with Broker(s), who, in writing, agree to such mediation prior to, or within a reasonable time after, the dispute or claim is presented to the Broker. Mediation fees, if any, shall be divided equally among the parties involved. If, for any dispute or claim to which this paragraph applies, any party (i) commences an action without first attempting to resolve the matter through mediation, or (ii) before commencement of an action, refuses to mediate after a request has been made, then that party shall not be entitled to recover attorney fees, even if they would otherwise be available to that party in any such action. THIS MEDIATION PROVISION APPLIES WHETHER OR NOT THE ARBITRATION PROVISION IS INITIALED. Exclusions from this mediation agreement are specified in paragraph 26C.

B. ARBITRATION OF DISPUTES:

Buyer and Seller agree that any dispute or claim in Law or equity arising between them out of this Agreement or any resulting transaction, which is not settled through mediation, shall be decided by neutral, binding arbitration. Buyer and Seller also agree to arbitrate any disputes or claims with Broker(s), who, in writing, agree to such arbitration prior to, or within a reasonable time after, the dispute or claim is presented to the Broker. The arbitrator shall be a retired judge or justice, or an attorney with at least 5 years of residential real estate Law experience, unless the parties mutually agree to a different arbitrator. The parties shall have the right to discovery in accordance with Code of Civil Procedure §1283.05. In all other respects, the arbitration shall be conducted in accordance with Title 9 of Part 3 of the Code of Civil Procedure. Judgment upon the award of the arbitrator(s) may be entered into any court having jurisdiction. Enforcement of this agreement to arbitrate shall be governed by the Federal Arbitration Act. Exclusions from this arbitration agreement are specified in paragraph 26C.

"NOTICE: BY INITIALING IN THE SPACE BELOW YOU ARE AGREEING TO HAVE ANY DISPUTE ARISING OUT OF THE MATTERS INCLUDED IN THE 'ARBITRATION OF DISPUTES' PROVISION DECIDED BY NEUTRAL ARBITRATION AS PROVIDED BY CALIFORNIA LAW AND YOU ARE GIVING UP ANY RIGHTS YOU MIGHT POSSESS TO HAVE THE DISPUTE LITIGATED IN A COURT OR JURY TRIAL. BY INITIALING IN THE SPACE BELOW YOU ARE GIVING UP YOUR JUDICIAL RIGHTS TO DISCOVERY AND APPEAL, UNLESS THOSE RIGHTS ARE SPECIFICALLY INCLUDED IN THE 'ARBITRATION OF DISPUTES' PROVISION. IF YOU REFUSE TO SUBMIT TO ARBITRATION AFTER AGREEING TO THIS PROVISION, YOU MAY BE COMPELLED TO ARBITRATE UNDER THE AUTHORITY OF THE CALIFORNIA CODE OF CIVIL PROCEDURE. YOUR AGREEMENT TO THIS ARBITRATION PROVISION IS VOLUNTARY."

"WE HAVE READ AND UNDERSTAND THE FOREGOING AND AGREE TO SUBMIT DISPUTES ARISING OUT OF THE MATTERS INCLUDED IN THE 'ARBITRATION OF DISPUTES' PROVISION TO NEUTRAL ARBITRATION."

Buyer's Initials _____ / _____ Seller's Initials _____ / _____

C. ADDITIONAL MEDIATION AND ARBITRATION TERMS:

(1) EXCLUSIONS: The following matters shall be excluded from mediation and arbitration: (i) a judicial or non-judicial foreclosure or other action or proceeding to enforce a deed of trust, mortgage or installment land sale contract as defined in Civil Code §2985; (ii) an unlawful detainer action; (iii) the filing or enforcement of a mechanic's lien; and (iv) any matter that is within the jurisdiction of a probate, small claims or bankruptcy court. The filing of a court action to enable the recording of a notice of pending action, for order of attachment, receivership, injunction, or other provisional remedies, shall not constitute a waiver or violation of the mediation and arbitration provisions.

(2) BROKERS: Brokers shall not be obligated or compelled to mediate or arbitrate unless they agree to do so in writing. Any Broker(s) participating in mediation or arbitration shall not be deemed a party to the Agreement.

27. TERMS AND CONDITIONS OF OFFER:

This is an offer to purchase the Property on the above terms and conditions. The liquidated damages paragraph or the arbitration of disputes paragraph is incorporated in this Agreement if initialed by all parties or if incorporated by mutual agreement in a counter offer or addendum. If at least one but not all parties initial such paragraph(s), a counter offer is required until agreement is reached. Seller has the right to continue to offer the Property for sale and to accept any other offer at any time prior to notification of Acceptance. If this offer is accepted and Buyer subsequently defaults, Buyer may be responsible for payment of Brokers' compensation. This Agreement and any supplement, addendum or modification, including any Copy, may be Signed in two or more counterparts, all of which shall constitute one and the same writing.

28. TIME OF ESSENCE; ENTIRE CONTRACT; CHANGES: Time is of the essence. All understandings between the parties are incorporated in this Agreement. Its terms are intended by the parties as a final, complete and exclusive expression of their Agreement with respect to its subject matter, and may not be contradicted by evidence of any prior agreement or contemporaneous oral agreement. If any provision of this Agreement is held to be ineffective or invalid, the remaining provisions will nevertheless be given full force and effect. Except as otherwise specified, this Agreement shall be interpreted and disputes shall be resolved in accordance with the laws of the State of California. Neither this Agreement nor any provision in it may be extended, amended, modified, altered or changed, except in writing Signed by Buyer and Seller.

Buyer's Initials (_____) (_____)

Seller's Initials (_____) (_____)





BUYER'S INSPECTION ADVISORY

(C.A.R. Form BIA-A, Revised 10/02)

Property Address: 4335 S. Maple Ave., Fresno, CA 93725 ("Property").

A. IMPORTANCE OF PROPERTY INVESTIGATION: The physical condition of the land and improvements being purchased is not guaranteed by either Seller or Brokers. For this reason, you should conduct thorough investigations of the Property personally and with professionals who should provide written reports of their investigations. A general physical inspection typically does not cover all aspects of the Property nor items affecting the Property that are not physically located on the Property. If the professionals recommend further investigations, including a recommendation by a pest control operator to inspect inaccessible areas of the Property, you should contact qualified experts to conduct such additional investigations.

B. BUYER RIGHTS AND DUTIES: You have an affirmative duty to exercise reasonable care to protect yourself, including discovery of the legal, practical and technical implications of disclosed facts, and the investigation and verification of information and facts that you know or that are within your diligent attention and observation. The purchase agreement gives you the right to investigate the Property. If you exercise this right, and you should, you must do so in accordance with the terms of that agreement. This is the best way for you to protect yourself. It is extremely important for you to read all written reports provided by professionals and to discuss the results of inspections with the professional who conducted the inspection. You have the right to request that Seller make repairs, corrections or take other action based upon items discovered in your investigations or disclosed by Seller. If Seller is unwilling or unable to satisfy your requests, or you do not want to purchase the Property in its disclosed and discovered condition, you have the right to cancel the agreement if you act within specific time periods. If you do not cancel the agreement in a timely and proper manner, you may be in breach of contract.

C. SELLER RIGHTS AND DUTIES: Seller is required to disclose to you material facts known to him/her that affect the value or desirability of the Property. However, Seller may not be aware of some Property defects or conditions. Seller does not have an obligation to inspect the Property for your benefit nor is Seller obligated to repair, correct or otherwise cure known defects that are disclosed to you or previously unknown defects that are discovered by you or your inspectors during escrow. The purchase agreement obligates Seller to make the Property available to you for investigations.

D. BROKER OBLIGATIONS: Brokers do not have expertise in all areas and therefore cannot advise you on many items, such as soil stability, geologic or environmental conditions, hazardous or illegal controlled substances, structural conditions of the foundation or other improvements, or the condition of the roof, plumbing, heating, air conditioning, electrical, sewer, septic, waste disposal, or other system. The only way to accurately determine the condition of the Property is through an inspection by an appropriate professional selected by you. If Broker gives you referrals to such professionals, Broker does not guarantee their performance. You may select any professional of your choosing. In sales involving residential dwellings with no more than four units, Brokers have a duty to make a diligent visual inspection of the accessible areas of the Property and to disclose the results of that inspection. However, as some Property defects or conditions may not be discoverable from a visual inspection, it is possible Brokers are not aware of them. If you have entered into a written agreement with a Broker, the specific terms of that agreement will determine the nature and extent of that Broker's duty to you. YOU ARE STRONGLY ADVISED TO INVESTIGATE THE CONDITION AND SUITABILITY OF ALL ASPECTS OF THE PROPERTY. IF YOU DO NOT DO SO, YOU ARE ACTING AGAINST THE ADVICE OF BROKERS.

E. YOU ARE ADVISED TO CONDUCT INVESTIGATIONS OF THE ENTIRE PROPERTY, INCLUDING, BUT NOT LIMITED TO THE FOLLOWING:

- 1. GENERAL CONDITION OF THE PROPERTY, ITS SYSTEMS AND COMPONENTS: Foundation, roof, plumbing, heating, air conditioning, electrical, mechanical, security, pool/spa, other structural and non-structural systems and components, fixtures, built-in appliances, any personal property included in the sale, and energy efficiency of the Property. (Structural engineers are best suited to determine possible design or construction defects, and whether improvements are structurally sound.)
2. SQUARE FOOTAGE, AGE, BOUNDARIES: Square footage, room dimensions, lot size, age of improvements and boundaries. Any numerical statements regarding these items are APPROXIMATIONS ONLY and have not been verified by Seller and cannot be verified by Brokers. Fences, hedges, walls, retaining walls and other natural or constructed barriers or markers do not necessarily identify true Property boundaries. (Professionals such as appraisers, architects, surveyors and civil engineers are best suited to determine square footage, dimensions and boundaries of the Property.)
3. WOOD DESTROYING PESTS: Presence of, or conditions likely to lead to the presence of wood destroying pests and organisms and other infestation or infection. Inspection reports covering these items can be separated into two sections: Section 1 identifies areas where infestation or infection is evident. Section 2 identifies areas where there are conditions likely to lead to infestation or infection. A registered structural pest control company is best suited to perform these inspections.
4. SOIL STABILITY: Existence of fill or compacted soil, expansive or contracting soil, susceptibility to slippage, settling or movement, and the adequacy of drainage. (Geotechnical engineers are best suited to determine such conditions, causes and remedies.)

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BIA-A REVISED 10/02 (PAGE 1 OF 2)

Buyer's Initials () ()

Seller's Initials () ()

Reviewed by [Signature] Date 8/27/07



BUYER'S INSPECTION ADVISORY (BIA-A PAGE 1 OF 2)

Agent: Lisa Padgett Phone: 559.442.5000 Fax: 559.442.5003 Prepared using zipForm® software
Broker: Raco-Smith Realty, Inc. 448 E. Olive Fresno, CA 93728

5. **ROOF:** Present condition, age, leaks, and remaining useful life. (Roofing contractors are best suited to determine these conditions.)
6. **POOL/SPA:** Cracks, leaks or operational problems. (Pool contractors are best suited to determine these conditions.)
7. **WASTE DISPOSAL:** Type, size, adequacy, capacity and condition of sewer and septic systems and components, connection to sewer, and applicable fees.
8. **WATER AND UTILITIES; WELL SYSTEMS AND COMPONENTS:** Water and utility availability, use restrictions and costs. Water quality, adequacy, condition, and performance of well systems and components.
9. **ENVIRONMENTAL HAZARDS:** Potential environmental hazards, including, but not limited to, asbestos, lead-based paint and other lead contamination, radon, methane, other gases, fuel oil or chemical storage tanks, contaminated soil or water, hazardous waste, waste disposal sites, electromagnetic fields, nuclear sources, and other substances, materials, products, or conditions (including mold (airborne, toxic or otherwise), fungus or similar contaminants). (For more information on these items, you may consult an appropriate professional or read the booklets "Environmental Hazards: A Guide for Homeowners, Buyers, Landlords and Tenants," "Protect Your Family From Lead in Your Home" or both.)
10. **EARTHQUAKES AND FLOODING:** Susceptibility of the Property to earthquake/seismic hazards and propensity of the Property to flood. (A Geologist or Geotechnical Engineer is best suited to provide information on these conditions.)
11. **FIRE, HAZARD AND OTHER INSURANCE:** The availability and cost of necessary or desired insurance may vary. The location of the Property in a seismic, flood or fire hazard zone, and other conditions, such as the age of the Property and the claims history of the Property and Buyer, may affect the availability and need for certain types of insurance. Buyer should explore insurance options early as this information may affect other decisions, including the removal of loan and inspection contingencies. (An insurance agent is best suited to provide information on these conditions.)
12. **BUILDING PERMITS, ZONING AND GOVERNMENTAL REQUIREMENTS:** Permits, inspections, certificates, zoning, other governmental limitations, restrictions, and requirements affecting the current or future use of the Property, its development or size. (Such information is available from appropriate governmental agencies and private information providers. Brokers are not qualified to review or interpret any such information.)
13. **RENTAL PROPERTY RESTRICTIONS:** Some cities and counties impose restrictions that limit the amount of rent that can be charged, the maximum number of occupants; and the right of a landlord to terminate a tenancy. Deadbolt or other locks and security systems for doors and windows, including window bars, should be examined to determine whether they satisfy legal requirements. (Government agencies can provide information about these restrictions and other requirements.)
14. **SECURITY AND SAFETY:** State and local Law may require the installation of barriers, access alarms, self-latching mechanisms and/or other measures to decrease the risk to children and other persons of existing swimming pools and hot tubs, as well as various fire safety and other measures concerning other features of the Property. Compliance requirements differ from city to city and county to county. Unless specifically agreed, the Property may not be in compliance with these requirements. (Local government agencies can provide information about these restrictions and other requirements.)
15. **NEIGHBORHOOD, AREA, SUBDIVISION CONDITIONS; PERSONAL FACTORS:** Neighborhood or area conditions, including schools, proximity and adequacy of law enforcement, crime statistics, the proximity of registered felons or offenders, fire protection, other government services, availability, adequacy and cost of any speed-wired, wireless internet connections or other telecommunications or other technology services and installations, proximity to commercial, industrial or agricultural activities, existing and proposed transportation, construction and development that may affect noise, view, or traffic, airport noise, noise or odor from any source, wild and domestic animals, other nuisances, hazards, or circumstances, protected species, wetland properties, botanical diseases, historic or other governmentally protected sites or improvements, cemeteries, facilities and condition of common areas of common interest subdivisions, and possible lack of compliance with any governing documents or Homeowners' Association requirements, conditions and influences of significance to certain cultures and/or religions, and personal needs, requirements and preferences of Buyer.

Buyer and Seller acknowledge and agree that Broker: (i) Does not decide what price Buyer should pay or Seller should accept; (ii) Does not guarantee the condition of the Property; (iii) Does not guarantee the performance, adequacy or completeness of inspections, services, products or repairs provided or made by Seller or others; (iv) Does not have an obligation to conduct an inspection of common areas or areas off the site of the Property; (v) Shall not be responsible for identifying defects on the Property, in common areas, or offsite unless such defects are visually observable by an inspection of reasonably accessible areas of the Property or are known to Broker; (vi) Shall not be responsible for inspecting public records or permits concerning the title or use of Property; (vii) Shall not be responsible for identifying the location of boundary lines or other items affecting title; (viii) Shall not be responsible for verifying square footage, representations of others or information contained in Investigation reports, Multiple Listing Service, advertisements, flyers or other promotional material; (ix) Shall not be responsible for providing legal or tax advice regarding any aspect of a transaction entered into by Buyer or Seller; and (x) Shall not be responsible for providing other advice or information that exceeds the knowledge, education and experience required to perform real estate licensed activity. Buyer and Seller agree to seek legal, tax, insurance, title and other desired assistance from appropriate professionals.

By signing below, Buyer and Seller each acknowledge that they have read, understand, accept and have received a Copy of this Advisory. Buyer is encouraged to read it carefully.

Buyer Signature _____ Date _____
Russell Holcomb


Buyer Signature _____ Date _____

Seller Signature _____ Date _____
Marie Sargenti

Seller Signature _____ Date _____

THIS FORM HAS BEEN APPROVED BY THE CALIFORNIA ASSOCIATION OF REALTORS® (C.A.R.). NO REPRESENTATION IS MADE AS TO THE LEGAL VALIDITY OR ADEQUACY OF ANY PROVISION IN ANY SPECIFIC TRANSACTION. A REAL ESTATE BROKER IS THE PERSON QUALIFIED TO ADVISE ON REAL ESTATE TRANSACTIONS. IF YOU DESIRE LEGAL OR TAX ADVICE, CONSULT AN APPROPRIATE PROFESSIONAL.
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REAL ESTATE BUSINESS SERVICES, INC.
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 525 South Virgil Avenue, Los Angeles, California 90020

Reviewed by [Signature] Date 8/17/12 

Property Address: 4335 S. Maple Ave.
Fresno, CA 93725

Date: August 17, 2012

29. EXPIRATION OF OFFER: This offer shall be deemed revoked and the deposit shall be returned unless the offer is Signed by Seller and a Copy of the Signed offer is personally received by Buyer, or by Fred Raco/Lisa Padgett, who is authorized to receive it, by 5:00 PM on the third Day after this offer is signed by Buyer (or, if checked, by AM PM, on _____ (date)).

Buyer has read and acknowledges receipt of a Copy of the offer and agrees to the above confirmation of agency relationships.

Date _____

Date _____

BUYER _____

BUYER _____

Russell Holcomb
(Print name)

(Print name)

(Address)

Additional Signature Addendum attached (C.A.R. Form ASA).

30. ACCEPTANCE OF OFFER: Seller warrants that Seller is the owner of the Property, or has the authority to execute this Agreement. Seller accepts the above offer, agrees to sell the Property on the above terms and conditions, and agrees to the above confirmation of agency relationships. Seller has read and acknowledges receipt of a Copy of this Agreement, and authorizes Broker to Deliver a Signed Copy to Buyer.

(If checked) SUBJECT TO ATTACHED COUNTER OFFER (C.A.R. Form CO) DATED: _____

Date _____

Date _____

SELLER _____

SELLER _____

Marie Sargenti
(Print name)

(Print name)

4335 S. Maple, Fresno, CA 93725
(Address)

Additional Signature Addendum attached (C.A.R. Form ASA).

(_____/_____) CONFIRMATION OF ACCEPTANCE: A Copy of Signed Acceptance was personally received by Buyer or Buyer's authorized agent on (date) _____ at _____ AM PM. A binding Agreement is created when a Copy of Signed Acceptance is personally received by Buyer or Buyer's authorized agent whether or not confirmed in this document. Completion of this confirmation is not legally required in order to create a binding Agreement. It is solely intended to evidence the date that Confirmation of Acceptance has occurred.

REAL ESTATE BROKERS:

- A. Real Estate Brokers are not parties to the Agreement between Buyer and Seller.
- B. Agency relationships are confirmed as stated in paragraph 2.
- C. If specified in paragraph 3A(2), Agent who submitted the offer for Buyer acknowledges receipt of deposit.
- D. COOPERATING BROKER COMPENSATION: Listing Broker agrees to pay Cooperating Broker (Selling Firm) and Cooperating Broker agrees to accept, out of Listing Broker's proceeds in escrow: (i) the amount specified in the MLS, provided Cooperating Broker is a Participant of the MLS in which the Property is offered for sale or a reciprocal MLS; or (ii) (if checked) the amount specified in a separate written agreement (C.A.R. Form CBC) between Listing Broker and Cooperating Broker. Declaration of License and Tax (C.A.R. Form DLT) may be used to document that tax reporting will be required or that an exemption exists.

Real Estate Broker (Selling Firm) Raco-Smith Realty, Inc. DRE Lic. # 00881420
By Fred Raco/Lisa Padgett DRE Lic. # 01111886 Date 08/17/2012
Address 448 E. Olive Ave. City Fresno State CA Zip 93728
Telephone (559) 442-5000 Fax (559) 442-5003 E-mail lisa@racosmithrealty.com

Real Estate Broker (Listing Firm) Raco-Smith Realty, Inc. DRE Lic. # 00881420
By Fred Raco/Lisa Padgett DRE Lic. # 01111886 Date _____
Address 448 E. Olive Ave. City Fresno State _____ Zip _____
Telephone _____ Fax (559) 442-5003 E-mail lisa@racosmithrealty.com

ESCROW HOLDER ACKNOWLEDGMENT:

Escrow Holder acknowledges receipt of a Copy of this Agreement, (if checked, a deposit in the amount of \$ _____), counter offer numbered _____, Seller's Statement of Information and Other _____, and agrees to act as Escrow Holder subject to paragraph 24 of this Agreement, any supplemental escrow instructions and the terms of Escrow Holder's general provisions if any.

Escrow Holder is advised that the date of Confirmation of Acceptance of the Agreement as between Buyer and Seller is _____

Escrow Holder _____ Escrow # _____
By _____ Date _____

Address _____
Phone/Fax/E-mail _____
Escrow Holder is licensed by the California Department of Corporations, Insurance, Real Estate. License # _____

PRESENTATION OF OFFER: (_____) Listing Broker presented this offer to Seller on _____ (date).
Broker or Designee Initials _____

REJECTION OF OFFER: (_____) (_____) No counter offer is being made. This offer was rejected by Seller on _____ (date).
Seller's Initials _____

THIS FORM HAS BEEN APPROVED BY THE CALIFORNIA ASSOCIATION OF REALTORS® (C.A.R.). NO REPRESENTATION IS MADE AS TO THE LEGAL VALIDITY OR ADEQUACY OF ANY PROVISION IN ANY SPECIFIC TRANSACTION. A REAL ESTATE BROKER IS THE PERSON QUALIFIED TO ADVISE ON REAL ESTATE TRANSACTIONS. IF YOU DESIRE LEGAL OR TAX ADVICE, CONSULT AN APPROPRIATE PROFESSIONAL.
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REAL ESTATE BUSINESS SERVICES, INC.
a subsidiary of the California Association of REALTORS®
525 South Virgil Avenue, Los Angeles, California 90020

Reviewed by _____ Date 8-17-12
Broker or Designee _____
EQUAL HOUSING OPPORTUNITY

Chicago Title Company
CTI Fresno - Fresno Palm
RECEIPT FOR FUNDS

Cost Center 7710	Profit Center 4450	Escrow No. 0045039505	Title No. 0045039505	Date 8/23/2012	Instrument No. 5001037568
Bank Code 0001	Bank Name Bank of America, N.A.				

Amount \$ 629.26
 Received From: Malaga County Water District
 Property Address: 4335 S. Maple Avenue Fresno, CA 93725
 for the account of Buyer/Borrower Selling Broker Listing Broker Seller
 Insert Name: Malaga County Water District

O R I G I N A L

Cashier's Check Draft Inter Company Draft Money Order Personal Check
 Official Check ** CASH

Maker of Check: Malaga County Water District	Check #: 0019200569	Date of Check: 8/23/2012
Bank Drawn on: WFB	ABA# 121000248	

to be applied in accordance with instructions of: BUYER/BORROWER SELLER LENDER

OTHER

R E C E I P T

Received the above funds: * **CASH DEPOSIT VERIFIED**
 Date: 8/23/12 By: Charlene Friesen

Instrument No. 5001037568

The parties to this escrow acknowledge that the maintenance of escrow accounts with some depository institutions may result in Escrow Holder or its affiliates being provided with bank services, accommodations or other benefits by the depository institution. Escrow Holder or its affiliates also may elect to enter into other business transactions with or obtain loans for investment or other purposes from the depository institution. All such services, accommodations and other benefits shall accrue to Escrow Holder or its affiliates, and Escrow Holder or its affiliates shall have no obligation to account to the parties to the escrow for the value of such services, accommodations or

PRINTED ON LINEN/ARK PAPER. HOLD TO LIGHT TO VIEW FOR ADDITIONAL SECURITY FEATURES/REMARKS.

0000192 11-24
Office AU # 1210(8)

CASHIER'S CHECK

0019200569

August 23, 2012

Operator I.D.: cu000423

45039506
CR7

PAY TO THE ORDER OF *****CHICAGO TITLE*****

*****Six hundred twenty-nine dollars and 28 cents*****

****\$629.28****

WELLS FARGO BANK, N.A.
1206 VAN NESS AVE
FRESNO, CA 93721
FOR INQUIRIES CALL (480) 394-3122

VOID IF OVER US \$ 629.28
Richard Levy
CONTROLLER

Security Features Included. Details on Back.

Chicago Title Company
CTI Fresno – Fresno Palm
RECEIPT FOR FUNDS

Cost Center 7710	Profit Center 4450	Escrow No. 0045039505	Title No. 0045039505	Date 8/23/2012	Instrument No. 5001037568
Bank Code 0001	Bank Name Bank of America, N.A.				

Amount \$ 629.26

Received From: Malaga County Water District

Property Address: 4335 S. Maple Avenue Fresno, CA 93725

for the account of Buyer/Borrower Selling Broker Listing Broker Seller

Insert Name: Malaga County Water District

O R I G I N A L

Cashier's Check Draft Inter Company Draft Money Order Personal Check

Official Check ** CASH

Maker of Check: <u>Malaga County Water District</u>	Check #: 0019200569	Date of Check: 8/23/2012
Bank Drawn on: WFB	ABA# 121000248	

to be applied in accordance with instructions of: BUYER/BORROWER SELLER LENDER

OTHER

R E C E I P T

Received the above funds: ** CASH DEPOSIT VERIFIED

Date: _____ By: _____

Charlene Friesen

Instrument No. 5001037568

The parties to this escrow acknowledge that the maintenance of escrow accounts with some depository institutions may result in Escrow Holder or its affiliates being provided with bank services, accommodations or other benefits by the depository institution. Escrow Holder or its affiliates also may elect to enter into other business transactions with or obtain loans for investment or other purposes from the depository institution. All such services, accommodations and other benefits shall accrue to Escrow Holder or its affiliates, and Escrow Holder or its affiliates shall have no obligation to account to the parties to the escrow for the value of such services, accommodations or other benefits.

NOTICE OF OPPORTUNITY TO EARN INTEREST

You have the opportunity to earn interest on your escrowed funds as follows:

1. Request your escrow agent set up an interest bearing account.
2. The charge to set up and service the interest bearing account is \$50.00.
3. As an example, the amount of interest you can earn on a deposit of \$1,000.00 for a thirty day period at an interest of 4% is \$3.33. Interest earned is dependent on the amount of the deposit, length of time of the deposit and the prevailing interest rate.
4. To establish an interest bearing account, ask for an "Escrow Instruction - Interest Bearing Account", complete the form and return it to your escrow officer.

Russ Holcomb

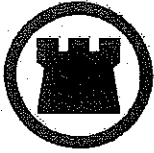
From: Julia Sellers [jsellers@costanzolaw.com]
Sent: Thursday, August 23, 2012 2:05 PM
To: rholcomb@malagacwd.org
Subject: Resolution Authorizing Purchase of Real Property
Attachments: Resolution Authorizing Purchase of Real Property (00011339).DOCX

Russ,

Attached is the resolution you need for the close of escrow on this sale. The Board of Directors authorized the making of an offer to purchase in closed session on August 14. They authorized you to make that offer. When the offer was made and accepted, that created a contract to purchase which the District was immediately bound by. The authorization of the Board of Directors, therefore, giving you the authority to make that offer is the authorization required by law for the acquisition of this property. In other words, by authorizing you to offer \$300,000 to purchase the property, the Board was necessarily contemplating that it would be required to acquire the property at that price in the event their offer was accepted. Accordingly, I do not believe that there is any need for any further Board action to authorize this particular resolution, and it appears to me that the resolution is simply some requirement being imposed by the escrow company handling the sale that they routinely require from artificial entities such as corporations. If you have any questions please call.

Costanzo & Associates
Neal E. Costanzo
575 E. Locust Ave., Ste. 115
Fresno, CA 93720
ph (559)261-0163
fax (559)261-0706
ncostanzo@costanzolaw.com

8/23/2012



CHICAGO TITLE COMPANY _____

PRELIMINARY REPORT

*In response to the application for a policy of title insurance referenced herein, **Chicago Title Company** hereby reports that it is prepared to issue, or cause to be issued, as of the date hereof, a policy or policies of title insurance describing the land and the estate or interest therein hereinafter set forth, insuring against loss which may be sustained by reason of any defect, lien or encumbrance not shown or referred to as an exception herein or not excluded from coverage pursuant to the printed Schedules, Conditions and Stipulations or Conditions of said policy forms.*

The printed Exceptions and Exclusions from the coverage and Limitations on Covered Risks of said policy or policies are set forth in Attachment One. The policy to be issued may contain an arbitration clause. When the Amount of Insurance is less than that set forth in the arbitration clause, all arbitrable matters shall be arbitrated at the option of either the Company or the Insured as the exclusive remedy of the parties. Limitations on Covered Risks applicable to the CLTA and ALTA Homeowner's Policies of Title Insurance which establish a Deductible Amount and a Maximum Dollar Limit of Liability for certain coverages are also set forth in Attachment One. Copies of the policy forms should be read. They are available from the office which issued this report.

This report (and any supplements or amendments hereto) is issued solely for the purpose of facilitating the issuance of a policy of title insurance and no liability is assumed hereby. If it is desired that liability be assumed prior to the issuance of a policy of title insurance, a Binder or Commitment should be requested.

The policy(s) of title insurance to be issued hereunder will be policy(s) of Chicago Title Insurance Company, a Nebraska corporation.

Please read the exceptions shown or referred to herein and the exceptions and exclusions set forth in Attachment One of this report carefully. The exceptions and exclusions are meant to provide you with notice of matters which are not covered under the terms of the title insurance policy and should be carefully considered.

It is important to note that this preliminary report is not a written representation as to the condition of title and may not list all liens, defects and encumbrances affecting title to the land.


Countersigned




Chicago Title Company

BY

 President

ATTEST

 Secretary



Chicago Title Company

ISSUING OFFICE: 8050 N. Palm Ave., Suite 110 • Fresno, CA 93711

FOR SETTLEMENT INQUIRIES, CONTACT: Chicago Title Company - Fresno Palm
7330 N. Palm Avenue, Suite 101 • Fresno, CA 93711
559 451-3700 • FAX : CALL FOR #

PRELIMINARY REPORT

Title Officer: Christine Upton
Escrow Officer: Charlene Friesen
Escrow No.: 12-45039505-CRF

Title No.: 12-45039505-CU
Locate No.: CACTI7710-7710-4450-0045039505

TO: Raco Smith Realty
448 E. Olive Avenue
Fresno, CA 93728

ATTN: Fred Raco/ Lisa Padgett

PROPERTY ADDRESS: 4335 S. Maple Avenue, Fresno, California

EFFECTIVE DATE: August 16, 2012, 07:30 A.M.

The form of policy or policies of title insurance contemplated by this report is:

ALTA Homeowner's Policy of Title Insurance (2/3/10)
ALTA Loan Policy (6/17/06)

1. THE ESTATE OR INTEREST IN THE LAND HEREINAFTER DESCRIBED OR REFERRED TO COVERED BY THIS REPORT IS:

A Fee
2. TITLE TO SAID ESTATE OR INTEREST AT THE DATE HEREOF IS VESTED IN:

Marie Sargenti, a single woman
3. THE LAND REFERRED TO IN THIS REPORT IS DESCRIBED AS FOLLOWS:

SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF

GC\GC 08/21/2012

LEGAL DESCRIPTION

EXHIBIT "A"

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF FRESNO, COUNTY OF FRESNO, STATE OF CALIFORNIA AND IS DESCRIBED AS FOLLOWS:

The South 650 feet of the East 335.10 feet of Lot 92 of Malaga Tract, in the City of Fresno, County of Fresno, State of California, according to the map thereof recorded in Book 2 Page 17 of Plats, in the office of the County Recorder of said County

APN: 330-031-11

AT THE DATE HEREOF, ITEMS TO BE CONSIDERED AND EXCEPTIONS TO COVERAGE IN ADDITION TO THE PRINTED EXCEPTIONS AND EXCLUSIONS IN SAID POLICY FORM WOULD BE AS FOLLOWS:

1. **Property taxes**, which are a lien not yet due and payable, including any assessments collected with taxes to be levied for the fiscal year 2012-2013.
2. **The lien of supplemental taxes**, if any, assessed pursuant to the provisions of Chapter 3.5 (Commencing with Section 75) of the Revenue and Taxation code of the State of California.
3. **Taxes and assessments** levied by the Fresno Irrigation District.

Amounts are unavailable at this time. A report has been ordered and the Company reserves the right to add additional items or make further requirements after review of the requested report.

4. **Said land** lies within the boundaries of the Fresno Metropolitan Flood Control District and is subject to the potential of the payment of drainage fees and/or the requirement of construction of drainage facilities as a condition of development, reconstruction, additions or alterations associated with said land.

If the parties involved in this transaction desire further information as to the effect this resolution may have on said land, they may contact Fresno Metropolitan Flood Control District at (559) 456-3292.

5. No open Deeds of Trust: CONFIRM BEFORE CLOSING
6. **Note: This property** does not meet the criteria for an Alta Homeowners Policy to be issued.

The prospective buyer must sign an escrow instruction acknowledging that a CLTA Owners Policy will be issued in lieu of the ALTA Homeowners Policy.

7. **The application** for title insurance was placed by reference to only a street address or tax identification number.

Based on our records, we believe that the description in this report covers the parcel requested, however, if the legal description is incorrect a new report must be prepared.

If the legal description is incorrect, in order to prevent delays, the seller/buyer/borrower must provide the Company and/or the settlement agent with the correct legal description intended to be the subject of this transaction.

END OF ITEMS

Note 1. Before issuing its policy of title insurance, this Company will require evidence, satisfactory to the Company, that

Corporation name: Malaga County Water District

- (a) is validly formed on the date when documents in this transaction are to be signed,
- (b) is in good standing and authorized to do business in the state or country where the corporation was formed; and
- (c) has complied with the "doing business" laws of the State of California, if applicable.

Note 2. Property taxes for the fiscal year shown below are PAID. For proration purposes the amounts are:

Tax Identification No.: 330-031-11
Fiscal Year: 2011 - 2012
1st Installment: \$342.07
2nd Installment: \$342.07
Exemption: 7,000
Land: \$27,388.00
Improvements: \$23,780.00
Personal Property: \$0.00
Code Area: 005-667

Note 3. The Company is not aware of any matters which would cause it to decline to attach the CLTA Endorsement Form 116 indicating that there is located on said land residential known as 4335 S Maple Ave, Fresno, Ca to an Extended Coverage Loan Policy.

Note 4. There are NO deeds affecting said land, recorded within twenty-four (24) months of the date of this report.

Note 5. The name(s) of the buyer(s) furnished with this application for Title Insurance is/are:

Malaga County Water District

If these names are incorrect, incomplete or misspelled, please notify the Company.

Note 6. Arb No: 330-3-0-74

Note 7. If a county recorder, title insurance company, escrow company, real estate broker, real estate agent or association provides a copy of a declaration, governing document or deed to any person, California law requires that the document provided shall include a statement regarding any unlawful restrictions. Said statement is to be in at least 14-point bold face type and may be stamped on the first page of any document provided or included as a cover page attached to the requested document. Should a party to this transaction request a copy of any document reported herein that fits this category, the statement is to be included in the manner described.

Note 8. Wiring instructions for Chicago Title Company, Fresno, CA, are as follows:

Receiving Bank:	Bank of America 275 Valencia Blvd, 2nd Floor Brea, CA 92823-6340
ABA Routing No.:	026009593
Credit Account Name:	Chicago Title Company - Fresno Palm 7330 N. Palm Avenue, Suite 101, Fresno, CA 93711
Credit Account No.:	12354-83953
Escrow No.:	12-45039505-CRF

These wiring instructions are for this specific transaction involving the Title Department of the Fresno office of Chicago Title Company. These instructions therefore should not be used in other transactions without first verifying the information with our accounting department. It is imperative that the wire text be exactly as indicated. Any extraneous information may cause unnecessary delays in confirming the receipt of funds.

Note 9. Any documents being executed in conjunction with this transaction must be signed in the presence of an authorized Company employee, an authorized employee of an agent, an authorized employee of the insured lender, or by using Bancserv or other approved third-party service. If the above requirements cannot be met, please call the company at the number provided in this report.

END OF NOTES

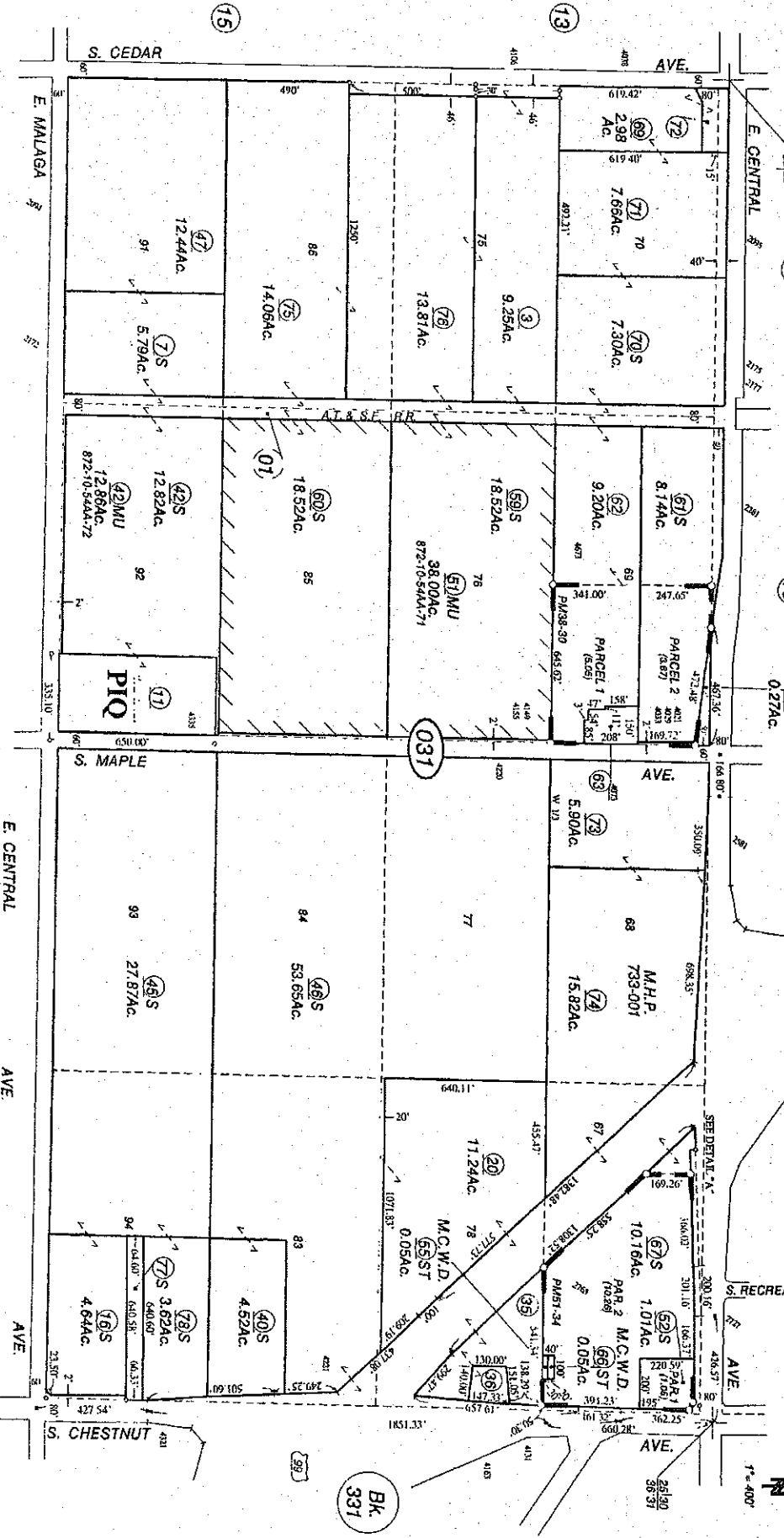
NOTE: This map is for assessment purposes only. It is not to be construed as portraying legal ownership or divisions of land for purposes of zoning or subdivision law.

SUBDIVIDED LAND IN P.O.R. SEC. 36, T.14 S., R. 20 E., M.D.B.&M.

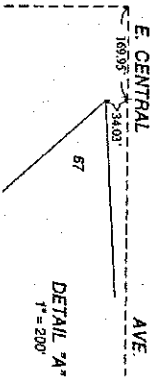
Tax Rate Area

330-03

- 95-012 5-687
- 95-015 5-688
- 95-018 5-689
- 95-022 5-988



Malaga Tract, Tract No. 1795 - Plat Bk. 2, Pg. 17
 Parcel Map No. 6011 - Bk. 38, Pgs. 30 & 31
 Parcel Map No. 7417 - Bk. 51, Pg. 34



NOTE - Assessor's Block Numbers Shown in Ellipses.
 Assessor's Parcel Numbers Shown in Circles.

Assessor's Map Bk. 330 - Pg. 03
 County of Fresno, Calif.

ATTACHMENT ONE
AMERICAN LAND TITLE ASSOCIATION
RESIDENTIAL TITLE INSURANCE POLICY (6-1-87) EXCLUSIONS

In addition to the Exceptions in Schedule B, you are not insured against loss, costs, attorneys' fees, and expenses resulting from:

1. Governmental police power, and the existence or violation of any law or government regulation. This includes building and zoning ordinances and also laws and regulations concerning:
 - land use
 - improvements on the land
 - land division
 - environmental protection

This exclusion does not apply to violations or the enforcement of these matters which appear in the public records at policy date.

This exclusion does not limit the zoning coverage described in Items 12 and 13 of Covered Title Risks.

2. The right to take the land by condemning it, unless:
 - a notice of exercising the right appears in the public records on the Policy Date
 - the taking happened prior to the Policy Date and is binding on you if you bought the land without knowledge of the taking

In addition to the Exclusions, you are not insured against loss, costs, attorneys' fees, and the expenses resulting from:

1. Any rights, interests, or claims of parties in possession of the land not shown by the public records.
2. Any easements or liens not shown by the public records. This does not limit the lien coverage in Item 8 of Covered Title Risks.

3. Title Risks:
 - that are created, allowed, or agreed to by you
 - that are known to you, but not to us, on the Policy Date - unless they appeared in the public records
 - that result in no loss to you
 - that first affect your title after the Policy Date - this does not limit the labor and material lien coverage in Item 8 of Covered Title Risks
4. Failure to pay value for your title.
5. Lack of a right:
 - to any land outside the area specifically described and referred to in Item 3 of Schedule A
 - or
 - in streets, alleys, or waterways that touch your landThis exclusion does not limit the access coverage in Item 5 of Covered Title Risks.

3. Any facts about the land which a correct survey would disclose and which are not shown by the public records. This does not limit the forced removal coverage in Item 12 of Covered Title Risks.
4. Any water rights or claims or title to water in or under the land, whether or not shown by the public records.



Chicago Title Company

7330 N. Palm Avenue, Suite 101, Fresno, CA 93711
559 451-3700 • FAX : CALL FOR #

Malaga County Water District
3580 S. Frank Street
Fresno, CA 93725

DATE: August 22, 2012
ESCROW NO.: 12-45039505-CRF
LOCATE NO.: CACTI7710-7710-4450-0045039505
PROPERTY ADDRESS:
4335 S. Maple Avenue, Fresno, CA 93725

This letter is to confirm that an escrow has been opened with Chicago Title Company under the above-referenced escrow number, for the **purchase** of property known as:
4335 S. Maple Avenue, Fresno, CA 93725

Enclosed please find Escrow Holder's signed copy of Page 8 of your Residential Purchase Agreement and Joint Escrow Instructions dated August 17, 2012 ("Agreement") acknowledging Escrow Holder's receipt of a Copy of the Agreement.

DATE OF COMMUNICATION OF ACCEPTANCE:

The **Date of Acceptance** is deemed to be August 19, 2012.

DATE OF CLOSE OF ESCROW:

The **Date of Close of Escrow** is deemed to be ON OR BEFORE August 29, 2012.

CONFIRMATION OF PURCHASE PRICE:

The **Purchase Price** is \$300,000.00.

ESCROW HOLDER'S GENERAL PROVISIONS:

Enclosed is a copy of Escrow Holder's General Provisions. The terms and conditions of these provisions are deemed to be a part of the Agreement.

APPROVAL OF LEGAL DESCRIPTION FOR SUBJECT PROPERTY:

Seller(s) signature(s) on the conveying Grant Deed, and Buyer(s) approval of the Preliminary Report, shall be deemed each party's approval of the legal description contained therein as the exact description for the subject property of this escrow and Escrow Holder may rely upon such approval in processing this transaction.

CLARIFICATIONS OF INSTRUCTIONS:

See addendum 1

IN THE EVENT THE FOREGOING STATEMENTS AND CLARIFICATION OF INSTRUCTIONS DO NOT REPRESENT WHAT YOU AGREED TO, PLEASE CONTACT YOUR REAL ESTATE AGENT AND ESCROW HOLDER IMMEDIATELY. IT IS YOUR RESPONSIBILITY TO ADVISE THE ESCROW HOLDER IN THE EVENT OF ANY INACCURACY IN THE ABOVE.

Date: August 22, 2012
Escrow No.: 12-45039505-CRF
Locate No.: CACTI7710-7710-4450-0045039505

Page 2

ENCLOSURES:

Please Complete, Sign & Return:

Statement of Identity
Preliminary Change of Ownership
Preliminary Report Approval
Natural Hazard Disclosure Approval
Important Buyer's Information
Fire Insurance letter
Important information regarding tax payment

Please Retain for Your Files:

Copy Package

Thank you for choosing Chicago Title Company. If you find that we may answer any questions or be of assistance to you in any way, please do not hesitate to contact the undersigned.

Sincerely,

Charlene Friesen
Escrow Officer
559 451-3700

CRF
Enclosure(s)

cc: Raco Smith Realty-Lisa Raco/Fred Raco



Chicago Title Company

7330 N. Palm Avenue, Suite 101, Fresno, CA 93711
559 451-3700 • FAX : CALL FOR #

ATTN: Fred Raco/ Lisa Padgett
Raco Smith Realty
448 E. Olive Avenue
Fresno, CA 93728

DATE: August 22, 2012
ESCROW NO.: 12-**45039505**-CRF
LOCATE NO.: CACTI7710-7710-4450-0045039505
TITLE NO.: 12-**45039505**-CU
PROPERTY ADDRESS:
4335 S. Maple Avenue, Fresno, CA 93725

Enclosed please find Escrow Holder's executed copy of your Residential Purchase Agreement and Joint Escrow Instructions dated August 17, 2012 acknowledging acceptance as Escrow Holder under said Purchase Agreement.

- The date of Acceptance is deemed to be August 19, 2012
- The Close of Escrow is to take place on or before August 29, 2012
- The Purchase Price of subject property is \$300,000.00
- The amount of commission being paid to your office is \$18,000.00
- Real Estate Commission order, please sign and return one copy
- Copy of Preliminary Title Report
- Copy of Natural Hazard Disclosure Report
- Copy of Escrow Acceptance
- Copy of letter to buyer or seller

We appreciate the opportunity of being of service to you. If we can be of further assistance, please feel free to call upon us.

Sincerely,

Charlene Friesen
Escrow Officer
Phone: 559 451-3700
FAX: 559 431-8906

CRF

enclosure(s)

RECORDING REQUESTED BY AND
WHEN RECORDED MAIL TO:

Malaga County Water District
c/o Costanzo & Associates
A Professional Corporation
575 E. Locust Avenue, Suite 115
Fresno, CA 93720

CERTIFICATE OF ACCEPTANCE

I, the undersigned, do hereby certify and declare that I am the President of the Board of Directors, duly qualified and acting as such, as of the date hereof, of the Malaga County Water District and am authorized to execute this Certificate of Acceptance pursuant to the authority duly conferred by the Board of Directors of the Malaga County Water District on August 22, 2012.


The Malaga County Water District hereby accepts transfer by Grant Deed of the real property from Marie Sargenti, a single woman, more particularly described as follows:

THE SOUTH 650 FEET OF THE EAST 335.10 FEET OF LOT 92 OF MALAGA TRACT, IN THE CITY OF FRESNO, COUNTY OF FRESNO, STATE OF CALIFORNIA, ACCORDING TO THE MAP THEREOF RECORDED IN BOOK 2 PAGE 17 OF PLATS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

APN: 330-031-11

MALAGA COUNTY WATER DISTRICT

Dated: 8/23, 2012

By: 
Charles Garabedian, Jr., President of
the Board of Directors



Chicago Title Company

7330 N. Palm Avenue, Suite 101, Fresno, CA 93711
559 451-3700 • FAX : CALL FOR #

FIRE INSURANCE INFORMATION FORM

ESCROW NO: 12-45039505-CRF
LOCATE NO.: CACTI7710-7710-4450-0045039505
PROPERTY: 4335 S. Maple Avenue, Fresno, CA 93725

NOTE: IF YOU ARE INTERESTED IN OBTAINING A QUOTATION FROM CHICAGO HERITAGE INSURANCE SERVICES, AN AGENCY AFFILIATED WITH CHICAGO TITLE COMPANY, PLEASE CALL (888) 333-2120.

Prior to the close of escrow you will be required to furnish evidence of insurance covering the real property referred to above. Please provide our office with the following information to avoid a possible delay in the closing of your escrow.

INSURANCE AGENCY: _____

NAME OF AGENT: _____

ADDRESS: Handle O/E _____

PHONE: () _____ FAX: () _____

PREMIUM: _____ POLICY NUMBER: _____

Please contact your agent and discuss the coverages you desire.

This will serve as authorization for the release of all information and documents as required by your agent to issue the evidence of insurance.

CONDOMINIUMS / TOWNHOUSES ONLY:

In most cases your fire insurance is provided by the homeowners association and included in the monthly association dues. However, you may want to obtain additional coverages in which case you should contact your insurance agent or Chicago Heritage Insurance Services.

Thank you for your assistance and cooperation. Please contact us at the address and phone number listed above if you have any questions or if we can be of assistance in any way.

PLEASE COMPLETE, SIGN AND RETURN

Chad Z...
Signature

[Signature]
Signature



Chicago Title Company

7330 N. Palm Avenue, Suite 101, Fresno, CA 93711
559 451-3700 • FAX : CALL FOR #

TO: Charlene Friesen
Chicago Title Company
7330 N. Palm Avenue, Suite 101
Fresno, CA 93711

DATE: August 22, 2012
ESCROW NO.: 12-45039505-CRF
LOCATE NO.: CACTI7710-7710-4450-0045039505
TITLE NO.: 12-45039505-CU
PROPERTY ADDRESS:
4335 S. Maple Avenue, Fresno, CA 93725

PRELIMINARY REPORT APPROVAL

I have read the Preliminary Report dated August 16, 2012, covering the property described in your above numbered escrow, and approve the Policy of Title Insurance to be issued to me as required by my instructions to include as encumbrances therein Item Nos. 1, 2, 3, 4 of said report, in addition, to those specific items described in my escrow instructions or created by me.

I hereby acknowledge receipt of copy of said Preliminary Report and the report has satisfied, or by this acknowledgement we waive, the condition as listed under Paragraph 12A of the purchase agreement.

Malaga County Water District

By: _____

Charles E. Garabedian

By: _____

Russell Holcomb

Chicago Title Company CTI Fresno - Fresno Palm RECEIPT FOR FUNDS

Cost Center 7710	Profit Center 4450	Escrow No. 0045039505	Title No. 0045039505	Date 8/23/2012	Instrument No. 5001037558
Bank Code 0001	Bank Name Bank of America, N.A.				

Amount \$ 295,000.00

Received From: Malaga County Water District

Property Address: 4335 S. Maple Avenue Fresno, CA 93725

for the account of Buyer/Borrower Selling Broker Listing Broker Seller

Insert Name: Malaga County Water District

ORIGINAL

Cashier's Check Draft Inter Company Draft Money Order Personal Check
Official Check ** CASH

Maker of Check: Malaga County Water	Check #: 0019201259	Date of Check: 8/22/2012
Bank Drawn on: WFB	ABA# 121000248	

to be applied in accordance with instructions of: BUYER/BORROWER SELLER LENDER

OTHER

RECEIPT

Received the above funds:

* CASH DEPOSIT VERIFIED

Date: _____ By: Charlene Friesen

Instrument No. 5001037558

The parties to this escrow acknowledge that the maintenance of escrow accounts with some depository institutions may result in Escrow

PRINTED ON LIGNUMARK PAPER - HOLD TO LIGHT TO VIEW FOR ADDITIONAL SECURITY FEATURES SEE BACK

0000192 Office AU #	11-24 1210(8)	CASHIER'S CHECK 45039506	0019201259
Operator I.D.: cu000423	cu000423		
PAY TO THE ORDER OF ***CHICAGO TITLE***		August 22, 2012	
Two hundred ninety-five thousand dollars and no cents		**\$295,000.00**	
WELLS FARGO BANK, N.A. 1206 VAN NESS AVE FRESNO, CA 93721 FOR INQUIRIES CALL (480) 394-3122		VOID IF OVER US \$ 295,000.00	
AUTHORIZED SIGNATURE		AUTHORIZED SIGNATURE	

⑈0019201259⑈ ⑆121000248⑆4861 505303⑈

Details on Back. Security Features Included.

Chicago Title Company
CTI Fresno - Fresno Palm
RECEIPT FOR FUNDS

Cost Center 7710	Profit Center 4450	Escrow No. 0045039505	Title No. 0045039505	Date 8/23/2012	Instrument No. 5001037558
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Insert Name: Malaga County Water District

ORIGINAL

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Official Check ** CASH

Maker of Check: Malaga County Water	Check #: 0019201259	Date of Check: 8/22/2012
Bank Drawn on: WFB	ABA# 121000248	

to be applied in accordance with instructions of: BUYER/BORROWER SELLER LENDER

OTHER

RECEIPT

Received the above funds:

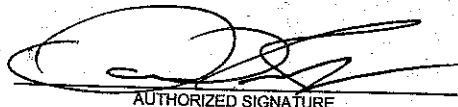
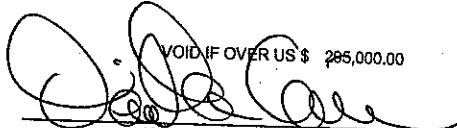
* CASH DEPOSIT VERIFIED

Date: _____ By: Charlene Friesen

Instrument No. 5001037558

The parties to this escrow acknowledge that the maintenance of escrow accounts with some depository institutions may result in Escrow

PRINTED ON LINEMARK PAPER. HOLD TO LIGHT TO VIEW FOR ADDITIONAL SECURITY FEATURES. SEE BACK.

0000192 Office AU #	11-24 1210(8)	CASHIER'S CHECK 45039506	0019201259
Operator I.D.: cu000423	cu000423		
PAY TO THE ORDER OF ***CHICAGO TITLE***		August 22, 2012	
Two hundred ninety-five thousand dollars and no cents		**\$295,000.00**	
WELLS FARGO BANK, N.A. 1206 VAN NESS AVE FRESNO, CA 93721 FOR INQUIRIES CALL (480) 394-3122		VOID IF OVER US \$ 285,000.00	
 AUTHORIZED SIGNATURE		 AUTHORIZED SIGNATURE	

⑈0019201259⑈ ⑆121000248⑆486⑆ 505303⑈

Security Features Included. Details on Back.

Property Address: 4335 S Maple Ave
Fresno CA, 93725
County: Fresno County
APN: 330-031-11
Current Owner: Marie Sargenti

Requestor: CHARLENE FRIESEN
Escrow Number: 45039505
Order Number: 1635092
Date of Issuance: 08/21/2012
Recipient: Chicago Title

The transferor and his or her agent(s) disclose the following information with the knowledge that even though this is not a warranty, prospective transferees may rely on this information in deciding whether and on what terms to purchase the subject property. Transferor hereby authorizes any agent(s) representing any principal(s) in this action to provide a copy of this statement to any person or entity in connection with any actual or anticipated sale of the property. The following are representations made by the transferor and his or her agent(s) based on their knowledge and maps drawn by the state and federal governments. This information is a disclosure and is not intended to be part of any contract between the transferee and transferor.

THIS REAL PROPERTY LIES WITHIN THE FOLLOWING HAZARDOUS AREA(S):

A SPECIAL FLOOD HAZARD AREA (Any type Zone "A" or "V") designated by the Federal Emergency Management Agency.

Yes ___ No X Do not know and information not available from local jurisdiction ___

AN AREA OF POTENTIAL FLOODING shown on a dam failure inundation map pursuant to Section 8589.5 of the Government Code.

Yes ___ No X Do not know and information not available from local jurisdiction ___

A VERY HIGH FIRE HAZARD SEVERITY ZONE pursuant to Section 51178 or 51179 of the Government Code. The owner of this property is subject to the maintenance requirements of Section 51182 of the Government Code.

Yes ___ No X

A WILDLAND AREA THAT MAY CONTAIN SUBSTANTIAL FOREST FIRE RISKS AND HAZARDS pursuant to Section 4125 of the Public Resources Code. The owner of this property is subject to the maintenance requirements of Section 4291 of the Public Resources Code. Additionally, it is not the state's responsibility to provide fire protection services to any building or structure located within the wildlands unless the Department of Forestry and Fire Protection has entered into a cooperative agreement with a local agency for those purposes pursuant to Section 4142 of the Public Resources Code.

Yes ___ No X

AN EARTHQUAKE FAULT ZONE pursuant to Section 2622 of the Public Resources Code.

Yes ___ No X

A SEISMIC HAZARD ZONE pursuant to Section 2696 of the Public Resources Code.

Yes (Landslide Zone) ___ Yes (Liquefaction Zone) ___ No ___ Map not yet released by state X

THESE HAZARDS MAY LIMIT YOUR ABILITY TO DEVELOP THE REAL PROPERTY, TO OBTAIN INSURANCE, OR TO RECEIVE ASSISTANCE AFTER A DISASTER. THE MAPS ON WHICH THESE DISCLOSURES ARE BASED ESTIMATE WHERE NATURAL HAZARDS EXIST. THEY ARE NOT DEFINITIVE INDICATORS OF WHETHER OR NOT A PROPERTY WILL BE AFFECTED BY A NATURAL DISASTER. TRANSFEREE(S) AND TRANSFEROR(S) MAY WISH TO OBTAIN PROFESSIONAL ADVICE REGARDING THOSE HAZARDS AND OTHER HAZARDS THAT MAY AFFECT THE PROPERTY.

SIGNATURE OF TRANSFEROR(S) _____

Date _____

SIGNATURE OF TRANSFEROR(S) _____

Date _____

SIGNATURE OF AGENT(S) Charles J. Sargenti _____

Date 8/23/12

SIGNATURE OF AGENT(S) Russell Holman _____

Date 8/23/12

Check only one of the following:

Transferor(s) and their agent(s) represent that the information herein is true and correct to the best of their knowledge as of the date signed by the transferor(s) and agent(s).

Transferor(s) and their agent(s) acknowledge that they have exercised good faith in the selection of a third-party report provider as required in Civil Code Section 1103.7, and that the representations made in this Natural Hazard Disclosure Statement are based on information provided by the independent third-party disclosure provider as a substituted disclosure pursuant to Civil Code Section 1103.4. Neither transferor(s) nor their agent(s) (1) has independently verified the information contained in this statement and report or (2) is personally aware of any errors or inaccuracies in the information contained on the statement. This statement was Prepared by the Provider Below:

Third-Party Disclosure Provider(s): DisclosureSave, LLC

Transferee represents that he or she has read and understands this document. Pursuant to Civil Code Section 1103.8, the representations made in this Natural Hazard Disclosure Statement do not constitute all of the transferor's or agent's disclosure obligations in the transaction.

I have received a copy of the booklet from the Broker(s) in this transaction: "Combined Hazards Book" a combination "Residential Environmental Hazards: A Guide for Homeowners, Homebuyers, Landlords and Tenants" including toxic mold, "Protect Your Family From Lead in Your Home" and "The Homeowner's Guide to Earthquake Safety"- includes Natural Gas Safety. I hereby acknowledge the receipt of all information identified on page 3 and 4 of this report.

SIGNATURE OF TRANSFEREE _____

Date _____

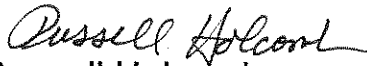
SIGNATURE OF TRANSFEREE _____

Date _____

Mr. Fred Raco, Raco-Smith Realty:

The proposed monthly rent for 4335 S. Maple Avenue, Fresno, CA will be no greater than \$500 per month for a term not to exceed two years from the close of escrow.

Thanks,



Russell Holcomb

559-213-7799 - Cell



Chicago Title Company

7330 N. Palm Avenue, Suite 101, Fresno, CA 93711
559 451-3700 • FAX : CALL FOR #

BUYER'S ESCROW INFORMATION SHEET

Escrow No.: 12-45039505-CRF
Locate No.: CACTI7710-7710-4450-0045039505
Title No.: 12-45039505-CU

PLEASE FILL OUT THIS FORM COMPLETELY AND RETURN TO OUR OFFICE AS SOON AS POSSIBLE AS IT WILL ASSIST US IN THE ADMINISTRATION OF YOUR TRANSACTION.

1. Buyer(s): Malaga County Water District
Home Phone Number: () _____ Work Phone Number: () _____
E-Mail Address: _____ Fax Number: () _____
Social Security #: _____ Social Security #: _____
Buyer(s) Current Mailing Address: 2580 E Frank St Fresno Ca 93725

2. Buyer(s) Mailing Address After Close Of Escrow: _____

3. Buyer(s) Vesting To Be Placed On Grant Deed, Please Print Your Name Exactly As You Wish It To Appear Of Record:
Malaga water water Malaga County Water District

- Please mark appropriate box:
- | | |
|--|---|
| <input type="checkbox"/> Husband and Wife | <input type="checkbox"/> A Married Man |
| <input type="checkbox"/> Wife and Husband | <input type="checkbox"/> A Married Woman |
| <input type="checkbox"/> A Married Couple | <input type="checkbox"/> A Married Person |
| <input type="checkbox"/> A Single Man (Never Married) | <input type="checkbox"/> An Unmarried Man |
| <input type="checkbox"/> A Single Woman (Never Married) | <input type="checkbox"/> An Unmarried Woman |
| <input type="checkbox"/> A Single Person (Never Married) | <input type="checkbox"/> An Unmarried Person |
| <input type="checkbox"/> A Widow | <input type="checkbox"/> Registered Domestic Partners |
| <input type="checkbox"/> A Widower | <input type="checkbox"/> Other _____ |

- As:
- Community Property
 - Community Property with Right of Survivorship
 - Joint Tenants
 - Tenants In Common (Please Give Interest Amounts)
 - Sole and Separate Property (If Married or Domestic Partnership, an Interspousal Grant Deed, A Quitclaim Deed, Statement Of Information and Appropriate Instructions Will Need To Be Submitted.)
 - Partnership (Limited Or General) _____
 - Corporation (California Or Other State) _____
 - A Trust (attach copy of Trust Agreement)
 - Other _____

4. New Loan(s) Buyer(s) Are Applying For:
Name Of Lender: _____
Address: _____
Agent's Name: _____ Phone Number: () _____
Name Of Lender: _____
Address: _____
Agent's Name: _____ Phone Number: () _____

5. New Insurance:
Agent's Name: _____ Phone Number: () _____
Agent's Address: _____
Insurance Company: _____

Please place any additional information that you feel we may require on the reverse side of this form.

Malaga County Water District
By: [Signature]
Charles E. Garabedian

By: [Signature]
Russell Holcomb

PLEASE COMPLETE, DATE, SIGN AND RETURN

Chicago Heritage Insurance Services can provide a free, no obligation homeowner insurance quote that meets all your mortgage requirements. Call today at toll-free (888) 333-2120 to avoid any delays in your property's closing.



Chicago Title Company

7330 N. Palm Avenue, Suite 101, Fresno, CA 93711
559 451-3700 • FAX : CALL FOR #

DATE: August 22, 2012
ESCROW NO.: 12-45039505-CRF
LOCATE NO.: CACTI7710-7710-4450-0045039505
ESCROW OFFICER: Charlene Friesen

TIME: 2:17 PM

CLOSING DATE: August 24, 2012

BUYER ESTIMATED CLOSING STATEMENT

SELLER: Marie Sargenti
BUYER: Malaga County Water District
PROPERTY: 4335 S. Maple Avenue, Fresno, CA 93725

	\$ DEBITS	\$ CREDITS
FINANCIAL:		
Total Consideration	300,000.00	
Deposit - Malaga County Water District		5,000.00
PRORATIONS/ADJUSTMENTS:		
Unpaid County Taxes at \$342.07 Semi-Annual from 7/1/2012 to 8/24/2012		100.72
TITLE CHARGES:		
Aggregate Recording Charge	80.00	
ESCROW CHARGES:		
Escrow Fee to Chicago Title	450.00	
MISCELLANEOUS:		
refundable for cushion for closing	200.00	
<hr/>		
ESTIMATED BALANCE DUE ESCROW		\$295,629.28
ESTIMATED TOTALS	\$300,730.00	\$300,730.00

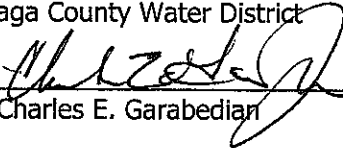
The Undersigned hereby instruct and authorize Escrow Holder to disburse proceeds/refund as follows:

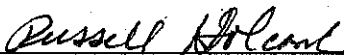
- TRANSFER All Net Proceeds/Refund, or \$ _____
- TO: _____
- ATTN: _____
- ESCROW NUMBER: _____
- HOLD check for PICK UP
- CALL when check is ready for PICK UP, PHONE NUMBER: _____
- WIRE funds to (Bank Name): _____
- Bank Address: _____
- Account Holder Name: _____
- Routing Number: _____
- Account Number: _____

For further credit to: _____
Account Number: _____

MAIL FEDERAL EXPRESS check to: _____

Date: _____

Malaga County Water District
By: 
Charles E. Garabedian

By: 
Russell Holcomb

Appendix E
Draft Study Evaluating Treatment and Disposal Facilities,
October 2013

MALAGA COUNTY WATER DISTRICT

DRAFT Study Evaluating Treatment And Disposal Facilities

July 2008
Updated October 2013

Prepared for:

Malaga County Water District

Prepared by:

Provost & Pritchard Consulting Group
Fresno, California

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1	MCWD Flowrates
2	Property within Sphere of Influence
3	MCWD Future Flowrates
4	Percolation Rate Estimates in 2012
5	0.8 MGD Water Balance, Average Year Rainfall
6	0.8 MGD Water Balance, 100 Year Rainfall
7	1.2 MGD Water Balance, Average Year Rainfall
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10	1.65 MGD Water Balance, 100 Year Rainfall
11	Pond Acres needed to offset 0.45 MGD Canal Discharge
12	Potential Disposal Sites

FIGURES

- 1 Zoning within the Sphere of Influence
- 2 Potential Disposal Sites
- 3 Preliminary Alignment of Transmission Main
- 4 Preliminary Profile of Transmission Main
- 5 Preliminary Typical Pond Configuration
- 6 Index of Potential Reclamation Sites
- 7 ADM and RockTenn Property
- 8 Community Park Property
- 9 Konkell School Property
- 10 PPG Property
- 11 Rio Bravo Property
- 12 Summary of Short Term Improvement Schedule

APPENDIX

- A Design Criteria Summary
- B Master Plan of Wastewater Treatment Facilities
- C Preliminary Opinion of Cost for Disposal Facilities

1 FLOWRATE AND CHARACTERISTICS

1.1 Existing Flowrate and Characteristics

- A. The present flowrate received at the wastewater facilities is summarized in Table 1. It is noted that the facilities periodically receive high flows. For example, the District received average monthly flows in excess of 0.9 mgd from July through September of 2005 and from June through September in 2007. The District had received high flows again in the summer of 2008. The source of those flows is not yet determined, although they may due in part to high source water electroconductivity and the resulting impact to boiler blowdown generation from the industrial connections.
- B. It is noted that the flowrates reported prior to 2010 included a recirculation flowrate estimated to be between 100,000 and 200,000 gpd from the grit wash tank. Existing influent characteristics are typically approximately 200 mg/l BOD₅ and approximately 200 mg/l TSS as reported to the RWQCB. It is noted that the influent characteristics are sampled when the grit wash recirculation is active. The impact of this recirculated flowrate to the characteristics is not known.
- C. The District has established a Moratorium on new connections until certain treatment and disposal improvements are completed and the District would be able to serve new connections while maintaining compliance with the Waste Discharge Requirements.

1.2 Future Flowrate and Characteristics

- A. The Waste Discharge Requirements for the Malaga County Water District treatment and disposal facilities (R5-2008-0033) have a flowrate limitation of 1.2 mgd. The existing average monthly flowrate received by the facilities has declined in recent years as shown in the graph of flowrate versus year. The average daily flowrate received at the wastewater facilities in 2012 was 0.618 mgd. The maximum month daily average flowrate was 0.69 mgd in April, 2012. Land use of property within the sphere of influence of the District, yet not connected to the sewer system is summarized in Table 2. Zoning within the sphere of Influence is shown in Figure 1.
- B. Based on an assumed growth rate of 2% per year, an anticipated increase of sewage received at the treatment facilities is summarized in Graph 1. The projected growth rate is significantly greater than the trend of wastewater flowrate in past years. The ultimate flowrate for the treatment plant is unknown due to the extreme range of flows that could be attributed to the industrial land uses in the District.

2 TREATMENT FACILITIES

2.1 Design Criteria

- A. Design criteria for the wastewater treatment and disposal facilities are summarized on Plan Sheet 15 of 62 (1999) in the Appendix A.
- B. Specific requirements that require compliance are as follows:
- Average monthly electroconductivity (Ec) 500 μ mhos/cm greater than source water, or 1,000 μ mhos/cm, whichever is more stringent.
 - Chloride of 175 mg/l
- C. Tertiary effluent
- BOD₅ of 10 mg/l
 - TSS of 10/mg/l
 - Ammonia Nitrogen of 0.4 mg/l (as N) after May 19, 2010
 - Boron of non-detect
 - Turbidity of 2 NTU
 - Total Coliform of 2.2 MPN/100 ml as a 7 day median

2.2 Evaluation of Treatment Components

2.3 Headworks

- A. The influent screw pumps have a capacity of 1,100 gpm each. The existing screw pumps have a capacity that is sufficient to meet existing and future demands. The existing screw pumps were replaced with new pumps in the summer of 2013.
- B. The existing headworks includes a grit removal facility. There is a continuous recirculation of a portion of the wastewater that is metered separately
- C. The headworks composite sampler has been modified to sample pursuant to flow paced parameters, as per the requirements of the Waste Discharge Requirements.

Long-Term measures: maintain a fund for the purpose of maintaining and replacing the screw pumps as needed.

2.4 Barminutor

The barminutor has been replaced with a self cleaning screen in late 2012.

2.5 Dissolved Air Floatation (DAF) Clarifier

- A. The existing DAF has been repaired in accordance with the recommendations identified in the Short Term Improvements Implementation Report dated July 2008 and updated April 2011.
- B. The capacity of the DAF is estimated to be 1.2 mgd. A long term plan for expansion of the primary sedimentation facilities is to construct a second DAF as shown in Appendix B.

Long term measures: Construct a second DAF with a capacity of 1.65 at such time that the average influent flowrate reaches 1.10 mgd.

2.6 Activated Sludge

A. The capacity of the activated sludge tanks is 1.20 mgd. The activated sludge system is dependent upon the three existing blowers that supply 1,500 of cfm to the fine bubble diffuser system. The existing tank volume, detention time, and oxygen supply are sufficient to meet the new discharge requirements for BOD and TSS until the flowrate of 1.2 mgd is reached. A summary of the design criteria for the activated sludge units is (need updated information from the District per recent projects implemented). Performance of the activated sludge facilities regarding ammonia and total nitrogen of the effluent is not yet verified. Monitoring of nitrogen forms within the effluent has recently been initiated. Enhancements that may be implemented at the activated sludge facilities may include:

1. Note that I would need to know more about what improvements have been implemented as designed by Gateway Engineering in order to speak to remaining needs.

2.

3.

A workplan to investigate the activated sludge units is as follows:

Task

Timeline

B. A long-term plan for expansion of the activated sludge units is to

1. Short-term measures:

2. Long-term measures: Expand the activated sludge basins and associated blowers to a capacity of 1.65 mgd at such time the average monthly flowrate is 1.1 mgd.

2.7 Secondary Clarifiers

A. All three (3) secondary clarifiers are now in operation.

Long-term measures: Initiate a Master Plan layout for an additional secondary clarifier.

2.8 Sludge Digestion

A. The existing sludge digesters have a capacity of 1.2 mgd. The operation of the sludge digesters is proceeding as required. No specific upgrades or improvements are needed at this time.

B. The sludge thickener in operation in accordance with previously identified Short Term Measures.

C. The third sludge drying bed has been lined in accordance with previously identified Short Term Measures.

Short-term measures: Construct a sludge holding pad. The construction contract for a sludge holding pad has been initiated. Construction work is anticipated to be complete before the end of February 2014.

Long-term measures: TBD

2.9 Tertiary Filter

A. The existing tertiary filter has a capacity of 0.45 mgd, which is equivalent to the existing permit for discharge. The Fresno Irrigation District (FID) has requested that the MCWD initiate actions to limit discharge to the canal to periods of water deliveries (typically between March 15 and October). Therefore, immediate expansion of the tertiary filter is not warranted. Previous evaluations

recommended an expansion of the tertiary filtration system to at least 0.7 mgd to alleviate pressure from the disposal ponds.

B. The MCWD has completed the improvements to convert to UV disinfection.

Short-term measures: Update tertiary filter controls and overall instrumentation protection for the tertiary facilities.

Long-term measures: TBD

3 DISPOSAL FACILITIES

3.1 Background

- A. The District contacted property owners to identify willingness of sellers for the purpose of constructing new disposal facilities. No property owners were identified as willing to sell property to the District.
- B. The District has drained pond No.s 3, 4, 5 in 2009 and 2010 and has subsequently performed scraping and ripping measures to enhance percolation of the ponds. The District drained Pond No. 1 for the purpose of scraping and ripping the bottom during the summer of 2011. Pond No. 6 has been drained and scaped in 2013. I am not sure if Pond 6 has been ripped. Please have Frank and Burt check to see if I have summarized the activities on the ponds correctly.
- C. The District conducted several discussions with the City of Fresno for the potential connection of the District to the City of Fresno system. The District Board of Directors has considered the potential of a sanitary sewer connection to the City of Fresno or the construction of additional disposal facilities.
- D. The wastewater treatment plant site has 23.24 acres of disposal ponds and no vacant property for additional ponds. Wastewater treatment plant data was studied in 2007, with a determination that percolation rates were approximately 0.6 inches per day. The data was reviewed again for 2012 conditions and it is estimated that the work performed with scraping and ripping pond bottoms has improved the percolation rate to approximately 0.8 inches per day. Calculations for the 2012 conditions are summarized in Table 4. The District authorized the evaluation of disposal pond expansion alternatives for wastewater treatment plant design flows of 1.2 MGD and 1.65 MGD (future), evaluate potential disposal sites and estimate capital costs associated with the additional disposal facilities. Additional disposal capacity is of critical need to address both present flow rates and design capacity flows for the wastewater treatment plant.

- E. The District also evaluated opportunities for reclamation of the treated effluent and reclamation of industrial effluent. No reclamation sites were determined to be viable in 2007.

3.2 Disposal Pond Requirements

- A. Water balances have been prepared to evaluate the disposal requirements for the current wastewater treatment flowrates, design capacity of 1.2 MGD and the ultimate wastewater treatment capacity of 1.65 MGD. Average year and 100 year rainfall scenarios were evaluated for each flowrate in Tables 5 through 10.

The total pond required disposal pond capacity required was found to be:

Existing Acres	23.24 ac
0.8 MGD ¹	33.10 ac
1.2 MGD ²	48.40 ac
1.65 MGD ³	65.70 ac

1. Present Flows (approximate)
2. Current WWTP Design Capacity
3. Ultimate WWTP Design Capacity

- B. To prepare conservative estimates of required disposal areas, it was assumed that at any given time 23.24 acres of ponds would have percolation rates of 0.8 inches per day (ponds requiring maintenance) and the remaining ponds would have percolation rates of up to 0.9 inches per day (ponds recently maintained).

Additional acres of disposal ponds needed:

0.8 MGD	
Total Required	33.10 ac
Existing Disposal Ponds	<u>23.24 ac</u>
Additional Ponds Required	12.86 ac

1.2 MGD – Design Capacity	
Total Required	48.40 ac
Existing Disposal Ponds	<u>23.24 ac</u>
Additional Ponds Required	25.16 ac

1.65 MGD – Ultimate Capacity	
Total Required	65.70 ac
Existing Disposal Ponds	<u>23.24 ac</u>
Additional Ponds Required	42.46 ac

- C. A water balance prepared to evaluate the pond acreage required to offset the 0.45 mgd discharge to the Central Canal, suggests that 16.3 acres of ponds would be required (See Table 11).

3.3 Disposal Alternatives

- A. Six (6) potential disposals sites have been identified for the purposes of this preliminary report. All of the sites are south of the wastewater treatment plant near the intersection of Malaga Avenue and Maple Avenue. The area is primarily agricultural with some single family residences on parcels that range in size from 1 to 18 acres. It is noted that the identified properties are also within the City of Fresno (an overlap with Malaga County Water District boundaries).
- B. Table 12 lists the parcel number, property owner, total parcel acreage and pond acreage that could be provided by each site.

The proposed disposal sites have been evaluated with consideration for the following factors:

1. Size and configuration of property
 2. Distance from WWTP
 3. Existing site conditions
 4. Williamson Act –non-agricultural preserve
- C. Additional factors considered when considering possible disposal sites are the relative locations of Highway 99, the Central Canal and the Southern Pacific Railroad tracks. Traffic volume at the intersection of Maple and Central and the location of existing utilities, irrigation structures, and ditches also must be considered in evaluating potential disposal sites. A pump station and a transmission main would be required to convey treated wastewater to any disposal site.
 - D. Figure 2 shows the vicinity of the WWTP and the APN numbers of parcels in the area being considered for potential disposal sites. Only one parcel, APN 330 031 45S, is large enough to provide all required disposal capacity for the ultimate treatment plant design capacity of 1.65 MGD. Portions of that parcel or smaller parcels could be combined to provide required disposal capacity as flowrates to the wastewater treatment plant increase.
 - E. If property in the vicinity of Maple and Malaga Avenues is acquired, the treated effluent would require a transmission main along Maple Avenue or along an easement parallel to the railroad approximately ¼ mile west of Maple Avenue. A preliminary alignment of the transmission main is included in Figures 4, 5A, and 5B. It is noted that if the transmission main is to follow Maple Avenue, an easement with Parneagian may be required due to the various existing and proposed utilities in Maple Avenue and the high volume of truck traffic at Maple and Central Avenue.
 - F. The configuration of ponds on any site will be dependent on site conditions, size and location. Figure 3 is an example of a typical pond configuration on one of the potential sites.

- G. A preliminary estimate of capital costs for disposal facilities located on APN 330 031 42S is included in Appendix C.

Short-term measures:

Communicate with the existing property owners to determine if any of the owners are willing to enter into an agreement for purchase or long-term lease of property for the purposes of disposal of treated effluent.

Initiate efforts to resolve the overlap of boundaries between the City of Fresno and Malaga County Water District.

Long-term measures:

Acquire approximately 30 acres of additional property for the construction of percolation/evaporation ponds.

3.4 Reclamation Alternatives

- A. In addition to reviewing alternatives of additional property for the purpose of percolation/evaporation ponds, several options were identified in 2007 for potential reclamation within the District. Alternatives included:
1. Reclamation of treated effluent to Caltrans landscaping
 2. Reclamation of treated effluent for agricultural purposes
- B. The MCWD contacted Caltrans regarding a) the willingness of Caltrans to receive treated effluent, b) the potential volume of water that may be reclaimed, and c) the cost of the reclamation.
- C. Discussions with Caltrans in November of 2007 indicated a willingness to receive the treated effluent in concept. Concerns expressed by Caltrans included the suitability of existing landscapes to the effluent, the need to construct a dual feed system in the event reclaimed water was not available, the ability of Caltrans to maintain the inspection system and landscaping, training of Caltrans personnel in handling treated effluent. Malaga CWD presently provides Caltrans with water for landscaping. Unfortunately, the total water used during the peak month of 2007 was only 7,230 gal/d. The alternative to irrigate Caltrans landscaping, therefore, is not viable to alleviate disposal restrictions.
- D. Agricultural property in the vicinity of the wastewater treatment plant is presently irrigated by private wells and supplemented by FID. The present discharge by MCWD to the FID Central Canal provides approximately 1.3 acre-feet of water per day to the canal. Agricultural properties in the vicinity of the treatment plant

are not willing to modify irrigation practices for the relatively small amount of irrigation water.

- E. Potential reclamation sources or disposal sites are shown on Figures 6-11. The sites are listed as follows:

<u>Figure</u>	<u>Site</u>
6	Index of Potential Reclamation Sites
7	ADM and RockTenn
8	Community Park Property
9	Konkel School Property
10	PPG Property
11	Rio Bravo Property

- F. The reclamation sites may have offered the opportunity to reduce the influent flowrate to the treatment facilities by capturing the boiler blowdown water. If necessary, water from the District wells could have been used to reduce the Ec of the reclaimed water to levels acceptable for landscape irrigation.
- G. Each acre of lawn that could be irrigated may reduce the amount of sewage received at the treatment facilities by approximately 250 gal/d in an average rainfall year.
- H. As identified in the previous report, the District contacted PPG and Calpine to determine the willingness of selling property to the District for the purposes of reclamation. Neither company was interested in selling property to the District.
- I. No company located in the District was willing to enter into an agreement for the purposes of reclamation of treated effluent.

Short-term measures:

Long-term measures:

Continue to look for reclamation opportunities, especially associated with boiler blowdown water.

4 SUMMARY

4.1 Short Term

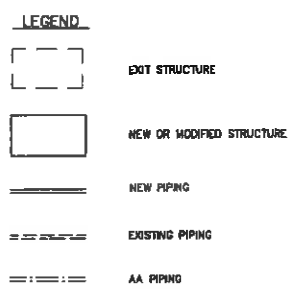
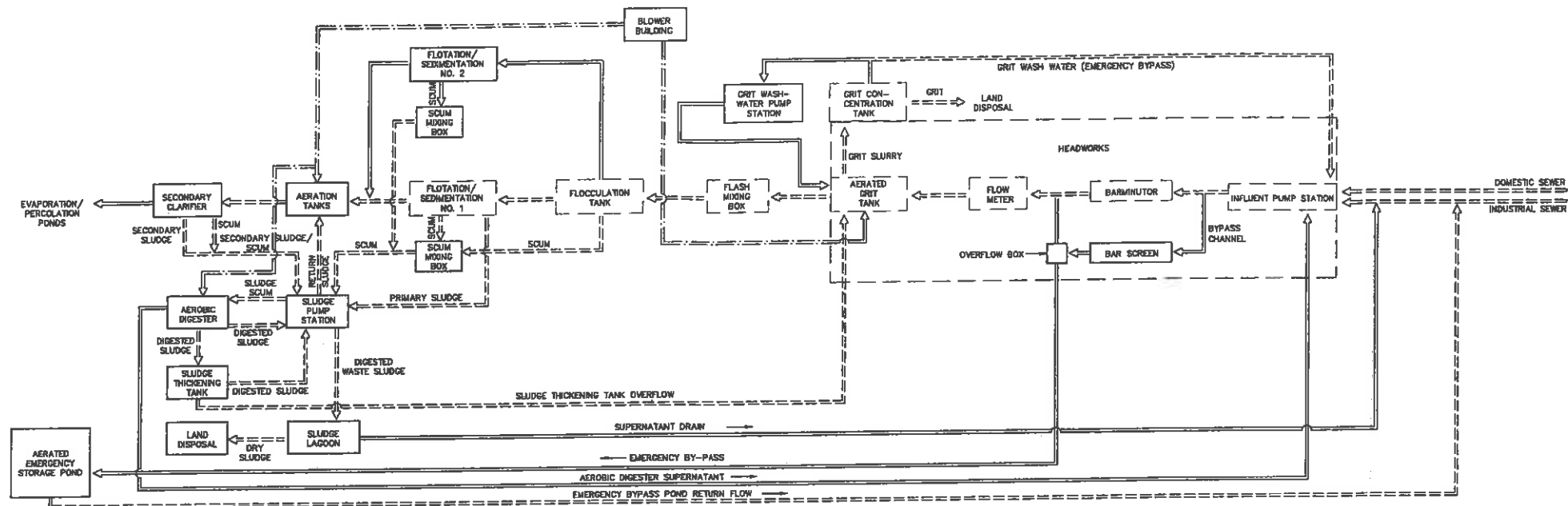
- A. Immediate deficiencies at the treatment facilities are:
 - 1. Sludge storage pad (presently in construction)
 - 2. Secondary effluent flowmeters (presently in construction)
 - 3. Replacement of the grit auger (presently in construction)
 - 4. Tertiary filter turbidimeters (presently in construction)
 - 5. Reliability of the SCADA system
 - 6. Effluent total Nitrogen reduction
- B. The MCWD continues to pursue means to reduce electroconductivity within the influent flowrate through pretreatment requirements.
- C. The facilities presently meet ammonia requirements however additional monitoring information is required prior to recommending additional improvements.
- D. Disposal facilities are in critical need of expansion. Additional property acquisition and pond construction is critical.

4.2 Long Term

- A. Master plan expansion of DAF, Secondary Clarifier, and Activated Sludge Facilities are identified.
- B. Future disposal alternatives are dependent upon the viability of the acquisition of property for additional disposal ponds.

APPENDIX

APPENDIX A
Design Criteria Summary



DESIGN CRITERIA

INFLUENT	EFFLUENT
FLOWRATE 1.85 MGD AVERAGE FLOW	BIOCHEMICAL OXYGEN DEMAND: 40 MG/L
3.00 MGD PEAK FLOW	SUSPENDED SOLIDS: 40 MG/L
BIOCHEMICAL OXYGEN DEMAND: 850 MG/L	
SUSPENDED SOLIDS: 408 MG/L	
TOTAL SOLIDS: 925 MG/L	
OILS AND GREASE: 140 MG/L	

	1.2 MGD PROPOSED FLOW
HEADWORKS	
PUMP LIFT STATION	3
30 INCH SCREW PUMPS, NUMBER	1100 X 84
CAPACITY EACH, GPM X RPM	10
HORSEPOWER, EACH	
BARMINUTOR	1
18 INCH BARMINUTOR, NUMBER	2
HORSEPOWER	
FLOWMETER	1
8" THROAT PARSHALL FLUME, NUMBER	.06 - 3.6
CAPACITY, RANGE, MGD	
GRIT REMOVAL	
AERATED GRIT TANK, NUMBER	1
INDUSTRIAL GRIT TANK VOLUME, GALLONS	300
DOMESTIC GRIT TANK VOLUME, GALLONS * (NS)	
DETENTION TIME AT PEAK FLOW, MINUTES	12
GRIT CONCENTRATION TANK, NUMBER	970
VOLUME OF TANK, GALLONS	
12 INCH GRIT SCREW CONVEYOR, NUMBER	1
HORSEPOWER	1
PRIMARY SEDIMENTATION AND FLOTATION FACILITIES	
FLOCCULATION TANK	
FLOCCULATION MIXER, NUMBER	2
HORSEPOWER, EACH	1.25
FLOCCULATION PADDLE MIXER	1
HORSEPOWER, EACH	1.0
FLOCCULATION TANK VOLUME, GALLONS	13,800
AVERAGE DETENTION TIME, HOURS	0.33
FLOTATION/SEDIMENTATION	
FLOCCULATION/SEDIMENTATION TANK, NUMBER	2
DIAMETER X SIDEWATER DEPTH, FT X FT	42 X 9.25
SLUDGE COLLECTOR & SCUM SKIMMER DRIVE	
NUMBER X HORSEPOWER	2 X 2/4
VOLUME OF TANK, GALLONS, EACH	95,800
SURFACE AREA, SQ. FT., EACH	1,384
AVERAGE DETENTION TIME, HOURS	3.0
SURFACE OVERFLOW RATE, GPD/SQ. FT.	855
WEIR OVERFLOW RATE, GPD/FT.	4,000
8 INCH DIA. SCUM SCREW CONVEYOR, NUMBER	1
HORSEPOWER, EACH	2
SCUM MOORING TANK, NUMBER	1
VOLUME OF TANK, GALLONS, TOTAL	4,000
GREASE AND SCUM PUMP, NUMBER	2
CAPACITY, GPM X DISCHARGE HEAD, PSI	35 X 25
HORSEPOWER, EACH	3
DISSOLVED AIR FLOTATION EQUIPMENT	
RECYCLE PUMP, NUMBER	2
CAPACITY, GPM X TOTAL HEAD IN PSI	450 X 75
HORSEPOWER, EACH	30
AIR COMPRESSOR, NUMBER	2
CAPACITY, SCFM X DISCHARGE PRESSURE, PSI	7 X 100
HORSEPOWER, EACH	3
SATURATION TANK, NUMBER	2
VOLUME OF TANK, GALLONS, EACH	750

SECONDARY TREATMENT FACILITIES

	1.2 MGD PROPOSED FLOW
AERATION TANK	
AERATION TANK, NUMBER	3
VOLUME OF TANK, TOTAL GALLONS	882,000
AVERAGE DETENTION TIME, HOURS	17.0
AERATION BLOWERS, NUMBER	
HORSEPOWER, EACH X NUMBER	4
100 X 4	
CAPACITY, SCFM X DISCHARGE PRESSURE PSI, EACH	1500 X 8
SECONDARY CLARIFIER	
NUMBER	2
LENGTH X WIDTH, FT. X FT., EACH	54 X 20.5
SIDEWATER DEPTH, FT., EACH	12.75
VOLUME OF CLARIFIER, EACH GALLON	105,800
SURFACE AREA, EACH, SQ. FT.	1,100
OVERFLOW RATE, GPD/SQ. FT.	1,090
HYDRAULIC DETENTION TIME, HOURS	4.2
RECTANGULAR CLARIFIER DIMENSIONS (1988)	
12 FT. X 54 FT. LONG X 11.25 FT. SIDEWATER DEPTH, NUMBER	1
VOLUME OF CLARIFIER, GALLONS	54,830
SURFACE AREA, SQ. FT.	702
OVERFLOW RATE, GPD/SQ. FT.	* (NS)
HYDRAULIC DETENTION TIME, HOURS	* (NS)
RECTANGULAR CLARIFIER DIMENSIONS (1958)	
12 FT. X 54 FT. X 8.08 FT. SIDEWATER DEPTH, NUMBER	1
VOLUME OF CLARIFIER, GALLON	38,160
SURFACE AREA, SQ. FT.	702
OVERFLOW RATE, GPD/SQ. FT.	* (NS)
HYDRAULIC DETENTION TIME, HOURS	* (NS)
SLUDGE PUMP PIT	
RETURN ACTIVATED SLUDGE PUMP, NUMBER	3
CAPACITY, EACH, GPM X TOTAL HEAD	400 X 50
HORSEPOWER, EACH	10
PRIMARY SLUDGE PUMP, NUMBER	1
CAPACITY GPM X TOTAL HEAD, FT. HORSEPOWER	400 X 50
SLUDGE DRAFFOFF PUMP, NUMBER	1
CAPACITY, GPM X TOTAL HEAD, FT. HORSEPOWER	400 X 50
	10

* (NS) - NOT IN SERVICE

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 ENGINEERING GROUP
 285 WEST CHANDEL AVENUE
 FRESNO, CALIFORNIA 93711-4182
 209/448-2700 FAX 209/448-2715
 Job No. 9510101-812
 Date Revised
 Approval

EDA AWARD No. 07-01-04039

MALAGA COUNTY WATER DISTRICT
 3580 SOUTH FRANK STREET, FRESNO, CALIFORNIA 93725
 PHONE (209) 485-7853 FAX (209) 485-7319

CONSTRUCTION OF WATER & SEWER IMPROVEMENTS
 PROCESS SHEET AND DESIGN CRITERIA

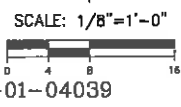
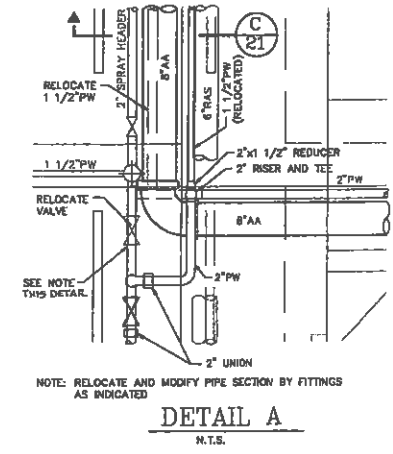
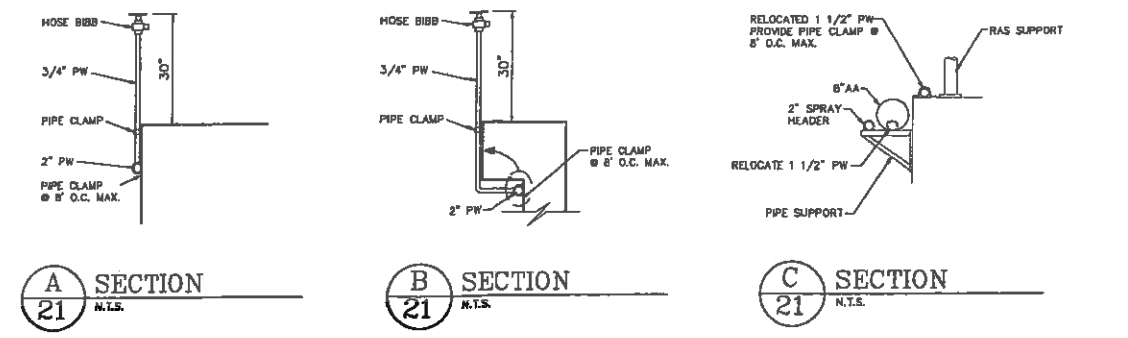
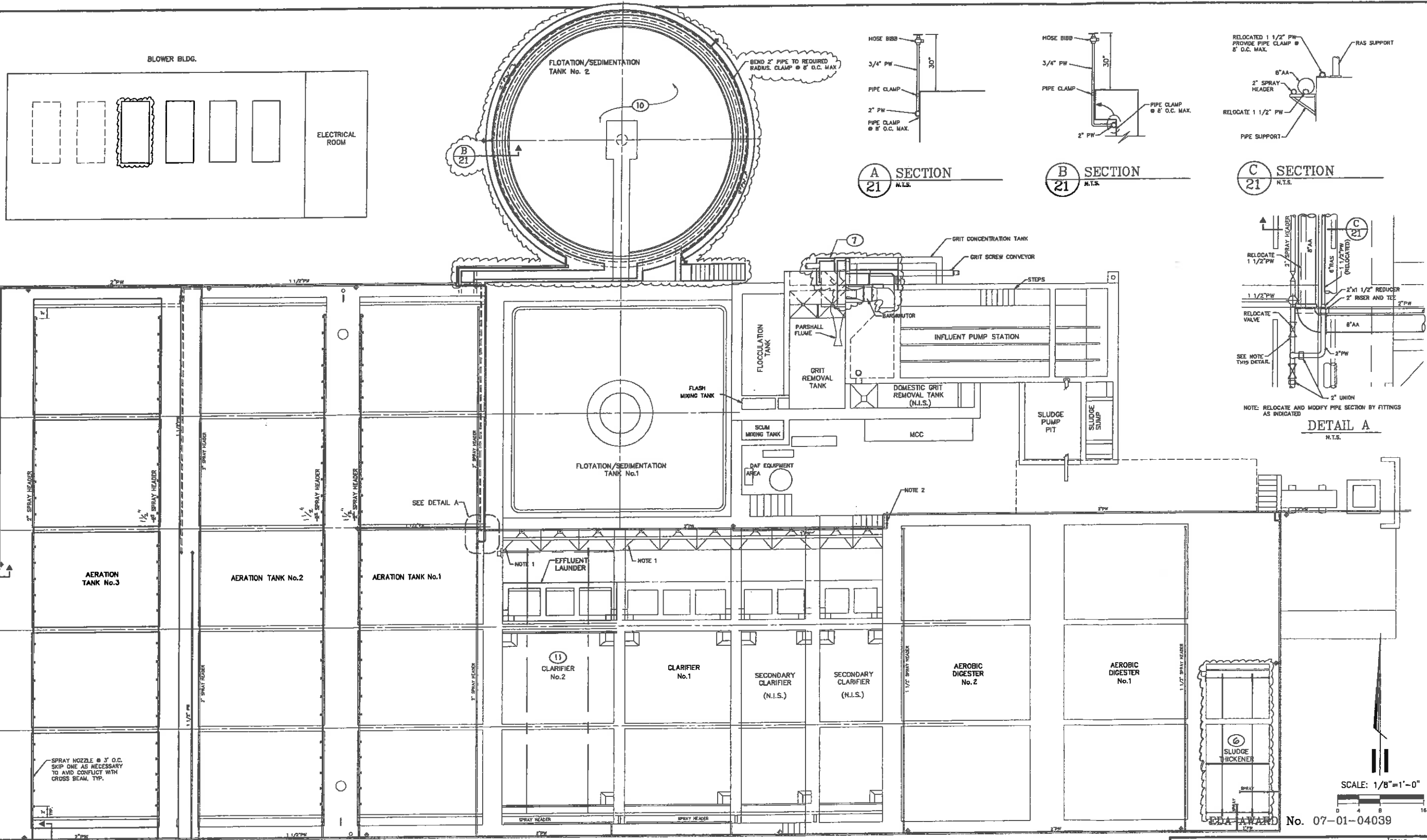
DESIGN ENGINEER: C.E. WILSON
 DATE: 4-6-99
 C.E. LICENSE NO. 39961

SCALE: AS SHOWN
 DRAWN BY: D. WILSON
 REVISIONS:
 08-12-94
 01-03-95
 01-06-95
 01-10-95

SHEET 15 OF 62 SHEETS

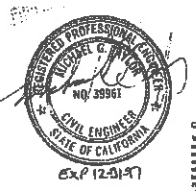
APPENDIX B

Master Plan of Wastewater Treatment Facilities



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- LEGEND**
- | | EXISTING | NEW |
|--------------|----------|-----|
| WATER LINES | — | — |
| HOSE BIBB | ⊕ | ⊕ |
| GATE VALVES | ⊕ | ⊕ |
| SPRAY NOZZLE | ⊕ | ⊕ |
- NOTES:
 1. MODIFY AND REROUT ELECT CONDUIT TO CLARIFIER DRIVES TO CROSS ABOVE 8" AA PIPING.
 2. MODIFY AND REROUT 1" PW AS REQUIRED TO CLEAR WAY FOR NEW 8" AA UNDER CONC. STEPS.

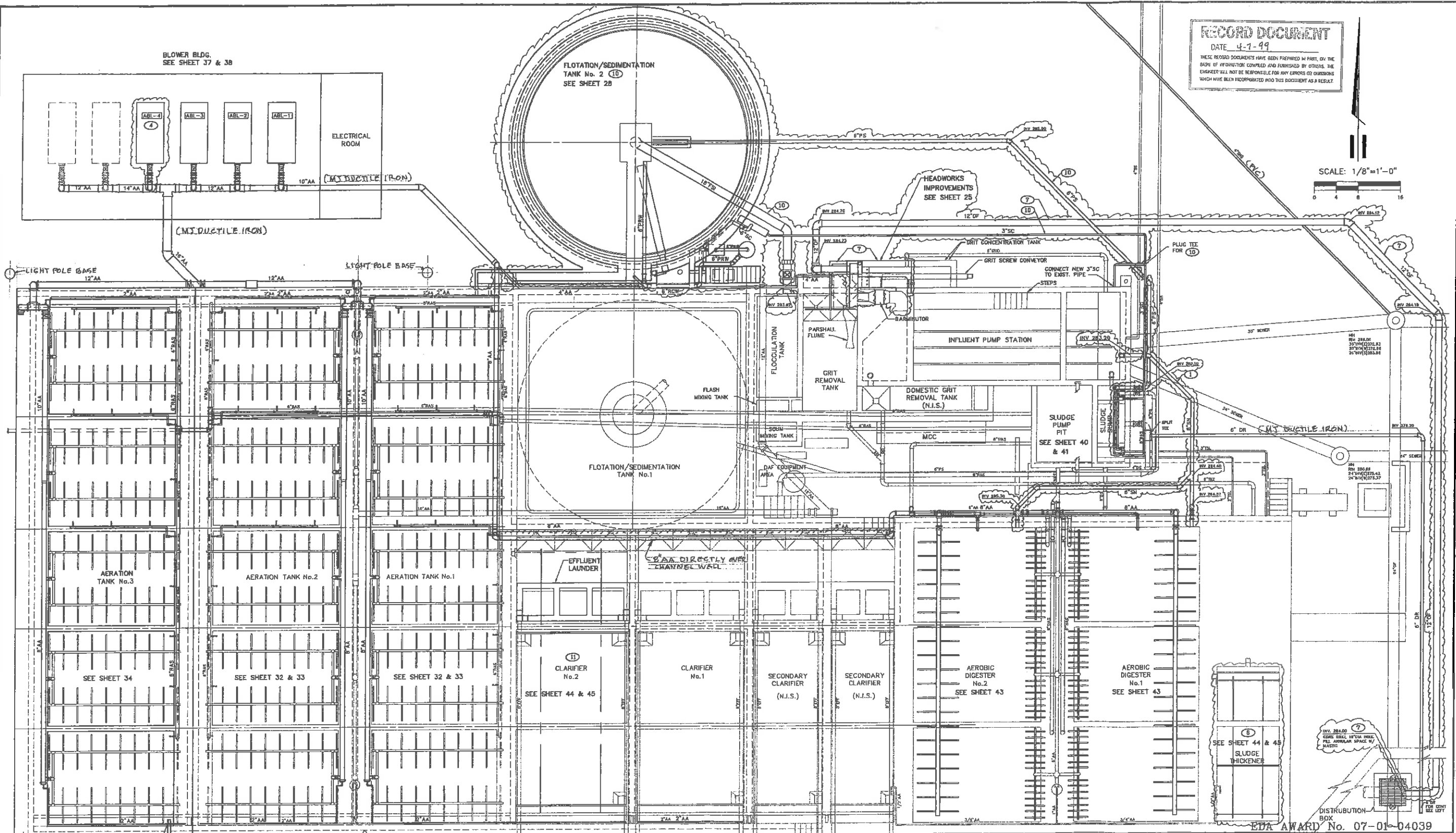
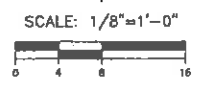


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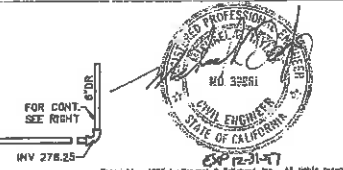
PROVOST & PRITCHARD
 ENGINEERING GROUP
 300 WEST CROWLEY AVENUE
 FRESNO, CALIFORNIA 93711-3442
 202/468-2300 FAX 202/443-2742
 Job No. 9510101
 Date Revised
 Design No. 95-0161

MALAGA COUNTY WATER DISTRICT		SCALE AS SHOWN
3580 SOUTH FRANK STREET, FRESNO, CALIFORNIA 93725 PHONE (209) 465-7333 FAX (209) 465-7318		DRAWN BY CZF
CONSTRUCTION OF WATER & SEWER IMPROVEMENTS		REVISED 11-20-98
PLANT WATER PIPING, SECTIONS & DETAILS		SHEET 21 OF 62
DESIGN ENGINEER	C.E. LICENSE NO.	Approval
DATE	Date Revised	Approval

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EDA AWARD No. 07-01-04039



MALAGA COUNTY WATER DISTRICT 3580 SOUTH FRANK STREET, FRESNO, CALIFORNIA 93725 PHONE (208) 485-7353 FAX (208) 485-7310		SCALE AS SHOWN
PROVOST & PRITCHARD ENGINEERING GROUP 288 WEST GROUND AVENUE FRESNO, CALIFORNIA 93711-4822 208/448-2700 FAX 208/448-2715		DRAWN BY CJP
CONSTRUCTION OF WATER & SEWER IMPROVEMENTS PIPING PLAN		REVISED 11-20-95
DESIGN ENGINEER DATE C.E. LICENSE NO.	Date Revised Approval	SHEET 22 OF 62 SHEETS
Job No. 9510101 Dwg. No. 95-0161		

(NOTE ALIGNMENT TO BE SOUTH OF EFFLUENT LINES)

APPENDIX C

Preliminary Opinion of Cost for Disposal Facilities

Malaga County Water District

PRELIMINARY Estimate for Disposal Pond Expansion
Nov-13

	Property APN 330 031 42S	\$ 70,000 per Ac	12.8 Ac	\$ 896,000	Located in Maple Avenue	12.8 Ac	\$ 896,000	Located in Easements East of Maple	12.8 Ac	\$ 896,000	Located in Easements Adjacent to Railroad Tracks	12.8 Ac	\$ 896,000
Easements													
Permanent		\$ 30,000 per Ac	0.1 Ac	\$ 4,132		0.6 Ac	\$ 18,000		0.6 Ac	\$ 18,000	0.5 Ac	\$ 15,000	
Construction		\$ 10,000 per Ac	0 Ac	\$ -		0.6 Ac	\$ 6,000		0.6 Ac	\$ 6,000	1.0 Ac	\$ 10,000	
Fencing		\$ 25 LF	3000 LF	\$ 75,000		3000 LF	\$ 75,000		3000 LF	\$ 75,000	3000 LF	\$ 75,000	
Pond Construction (Earthwork) (15100 CY Off Haul)		\$ 20 CY	42000 CY	\$ 840,000		42000 CY	\$ 840,000		42000 CY	\$ 840,000	42000 CY	\$ 840,000	
Piping to Property (Gravity Main) On WWTP Site Off WWTP Site		\$ 120 LF	3150 LF	\$ 378,000		3150 LF	\$ 378,000		3150 LF	\$ 378,000	3535 LF	\$ 424,200	
			600			600			600		1400		
			2550			2550			2550		2135		
Jack & Bore		\$ 500 LF	150 LF	\$ 75,000		150 LF	\$ 75,000		150 LF	\$ 75,000	75 LF	\$ 37,500	
Lift Station			LS	\$ 175,000		LS	\$ 175,000		LS	\$ 175,000	LS	\$ 175,000	
Gravel Surfacing			LS	\$ 150,000		LS	\$ 150,000		LS	\$ 150,000	LS	\$ 150,000	
Trench Resurfacing		\$ 60 LF	2400 LF	\$ 144,000		300 LF	\$ 18,000		300 LF	\$ 18,000	50 LF	\$ 3,000	
Electrical and Controls			LS	\$ 250,000		LS	\$ 250,000		LS	\$ 250,000	LS	\$ 250,000	
Traffic Control			LS	\$ 150,000		LS	\$ 100,000		LS	\$ 100,000	LS	\$ 50,000	
Environmental			LS	\$ 50,000		LS	\$ 50,000		LS	\$ 50,000	LS	\$ 50,000	
Planning			LS	\$ 50,000		LS	\$ 50,000		LS	\$ 50,000	LS	\$ 50,000	
Permitting			LS	\$ 50,000		LS	\$ 50,000		LS	\$ 50,000	LS	\$ 50,000	
Design and Construction Review			LS	\$ 300,000		LS	\$ 300,000		LS	\$ 300,000	LS	\$ 300,000	
Subtotal				\$ 3,587,132			\$ 3,431,000			\$ 3,431,000		\$ 3,375,700	
Contingencies (30%)				\$ 1,076,140			\$ 1,029,300			\$ 1,029,300		\$ 1,012,710	
Total				\$ 4,663,272			\$ 4,460,300			\$ 4,460,300		\$ 4,388,410	

Note: This preliminary estimate is applicable only for APN 330 031 42S and does not include APN 330-031-60S, APN 330-031-45S, APN 330-031-46S, APN 330-211-20, or APN 330-211-18, and is dependent on the property owners willingness to move forward. APN 330-031-42S could provide 10.5 acres of additional pond disposal, about 25% of the additional disposal area required for the ultimate 1.65 MGD capacity of the WWTP.

TABLES

TABLE 1

TABLE 1

**MALAGA COUNTY WATER DISTRICT
WASTEWATER TREATMENT PLANT
MONITORING AND REPORTING PROGRAM NO. 2008-0033
NPDES NO. CA 0084239**

YEAR	Permit Flow	0.8 of Permit Flow	AVERAGE FLOWRATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1990			0.677	0.660	0.667	0.694	0.610	0.688	0.709	0.652	0.664	0.679	0.726	0.741	0.632
1991			0.694	0.642	0.651	0.694	0.687	0.684	0.697	0.682	0.703	0.728	0.712	0.713	0.731
1992			0.735	0.727	0.741	0.735	0.681	0.679	0.740	0.753	0.768	0.743	0.768	0.756	0.729
1993			0.716	0.727	0.720	0.724	0.721	0.715	0.703	0.705	0.712	0.714	0.703	0.709	0.734
1994			0.724	0.748	0.739	0.743	0.743	0.745	0.740	0.739	0.737	0.731	0.722	0.669	0.636
1995			0.660	0.638	0.635	0.621	0.614	0.626	0.636	0.641	0.695	0.699	0.705	0.709	0.699
1996			0.688	0.671	0.680	0.676	0.690	0.690	0.689	0.692	0.691	0.686	0.694	0.696	0.705
1997	1.2	0.96	0.714	0.686	0.681	0.681	0.690	0.704	0.715	0.711	0.740	0.756	0.722	0.734	0.749
1998	1.2	0.96	0.745	0.744	0.743	0.737	0.772	0.755	0.756	0.738	0.775	0.740	0.739	0.706	0.738
1999	1.2	0.96	0.760	0.753	0.753	0.735	0.746	0.765	0.762	0.778	0.780	0.770	0.761	0.760	0.751
2000	1.2	0.96	0.772	0.723	0.744	0.738	0.754	0.783	0.767	0.772	0.808	0.770	0.795	0.797	0.810
2001	1.2	0.96	0.763	0.776	0.771	0.701	0.810	0.755	0.780	0.750	0.770	0.773	0.759	0.760	0.756
2002	1.2	0.96	0.748	0.742	0.750	0.737	0.748	0.745	0.737	0.746	0.740	0.755	0.754	0.753	0.763
2003	1.2	0.96	0.747	0.752	0.752	0.737	0.750	0.740	0.746	0.758	0.742	0.740	0.750	0.747	0.745
2004	1.2	0.96	0.746	0.760	0.737	0.722	0.717	0.734	0.760	0.750	0.750	0.770	0.740	0.778	0.750
2005	1.2	0.96	0.823	0.860	0.780	0.760	0.770	0.763	0.870	0.960	0.935	0.964	0.820	0.778	0.700
2006	1.2	0.96	0.788	0.740	0.740	0.760	0.744	0.757	0.806	0.849	0.882	0.803	0.823	0.746	0.752
2007	1.2	0.96	0.860	0.785	0.820	0.805	0.867	0.770	0.964	1.001	0.960	1.020	0.823	0.746	0.763
2008	1.2	0.96	0.887	0.990	0.840	0.760	0.760	0.909	0.970	0.955	0.949	0.909	0.829	0.900	0.870
2009	1.2	0.96	0.778	0.830	0.800	0.820	0.740	0.800	0.900	0.830	0.750	0.800	0.720	0.670	0.680
2010	1.2	0.96	0.658	0.512	0.431	0.650	0.580	0.640	0.720	0.740	0.750	0.740	0.710	0.710	0.710
2011	1.2	0.96	0.683	0.670	0.640	0.690	0.690	0.630	0.740	0.710	0.730	0.730	0.700	0.640	0.620
2012	1.2	0.96	0.618	0.630	0.600	0.630	0.690	0.620	0.680	0.660	0.640	0.610	0.590	0.520	0.540
2013	1.2	0.96	0.526	0.450	0.520	0.570	0.560	0.530	0.600	0.450	0.600	0.610	0.590	0.520	0.540

TABLE 2

Property within Sphere of Influence
Not Yet Connected to Community System (2007)

Land Use Zoning	Acres	Estimated Sewage Generation (gal/ac-d)	Future Sewage Contribution (gal/d)
AE-5	95.1	1,000	95,100
AL-20	738.4	1,000	738,400
C6	1.7	4,000	6,800
CM	0.8	4,000	3,200
M1	6.4	5,000	32,000
M3	405.4	5,000	2,027,000
O	14.3	100	1,430
RA	2.3	2,000	4,600
Total	1,264.4		2,908,530

TABLE 3

Future Flowrates

Year	Previous Projection Flowrate (mgd)	Actual Flowrate (mgd)	Updated Projected Flowrate (mgd)
2007	0.862	0.861	
2008	0.871	0.887	
2013	0.926	0.526	
2018	0.981		0.580
2023	1.036		0.641
2028	1.091		0.708
ultimate	To be determined		

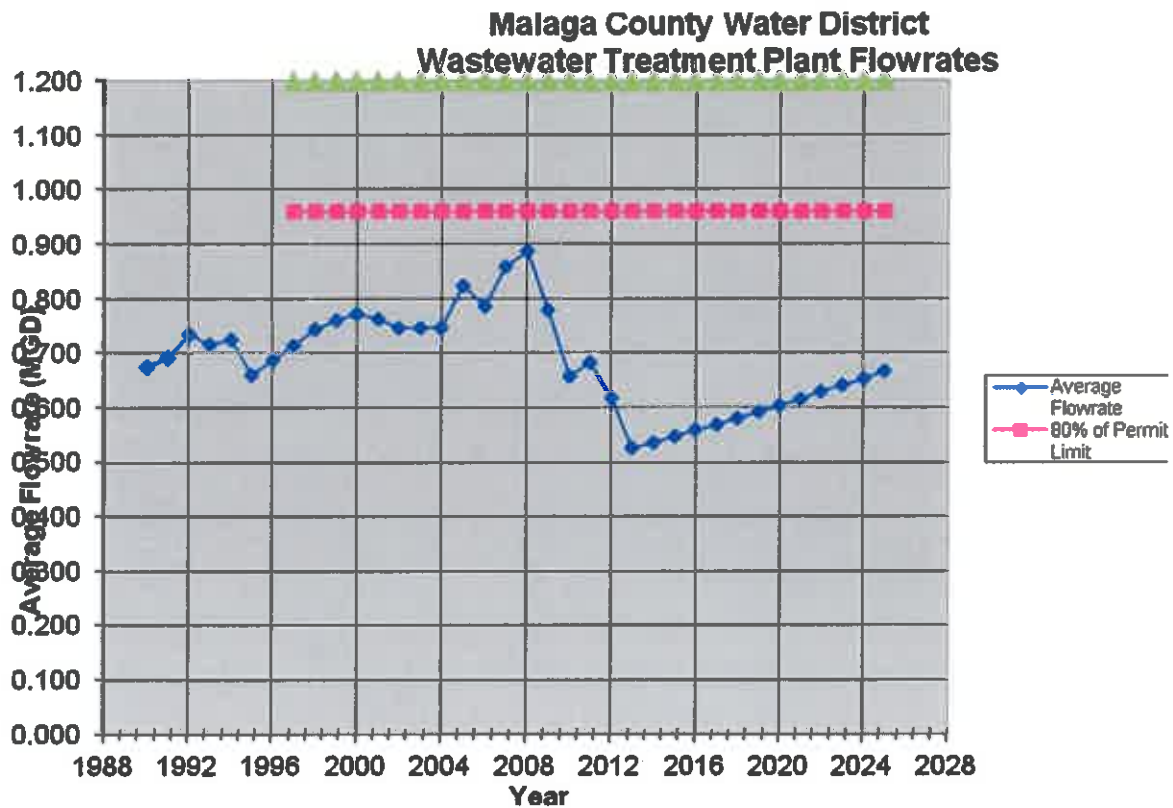


TABLE 4

**Malaga County Water District
2012 Percolation Rate Estimates**

Percolation Pond	Pond 1	Pond 2	Pond 3	Pond 4	Pond 5	Pond 6	Pond 7	Pond 8
Beginning Depth	2	3.8	3.75	3.75	0	3.80	3.8	3.8
Secondary Inflow Inflow ¹ (ft/yr)	29.11	29.11	29.11	29.11	29.11	29.11	29.11	29.11
Rainfall Inflow ² (ft/yr)	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Evaporation ³ (ft/yr)	4.16	4.16	4.16	4.16	4.16	4.16	4.16	4.16
Ending Depth	4.50	4.00	4.00	3.40	3.50	4.00	4.00	4.00
Percolation ⁴ (ft/yr)	23.28	25.58	25.53	26.13	22.28	25.58	25.58	25.58
Percolation Rate (ft/day)	0.06	0.07	0.07	0.07	0.06	0.07	0.07	0.07
Percolation Rate (in/day)	0.77	0.84	0.84	0.86	0.73	0.84	0.84	0.84

Note:

1. Secondary inflow distributed evenly in all ponds.
2. Rainfall inflow based on 2012 rainfall data.
3. Evaporation based on 2010 year pan evaporation x 0.75
4. Percolation = Beginning depth + inflows - Evaporation - Ending Depth

Table 5
Malaga County Water District
Wastewater Treatment & Disposal Facilities
0.8 MGD Capacity Wastewater Disposal - Average Year Rainfall Water Balance, Discharge and Storage

DATA:				Discharge to canal		0	MGD
Month	Number of Days per Month	Average Yr. Rainfall ^{1/} (in/month)	Average Yr. Evaporation ^{3/} (in/month)				
January	31	2.11	0.98	Daily Effluent Production ^{5/} =	800,000	gpd	
February	28	1.91	1.58	Pond Wet Area =	23.24	acres	8 ft deep
March	31	1.89	3.15	Pond Storage =	185.9	ac-ft	
April	30	1.00	4.73	Pond Percolation Rate =	0.80	in/day	
May	31	0.37	6.98	Additional Pond Wet Area =	7.90	acres	6 ft deep
June	30	0.15	8.55	Additional Pond Storage =	47.4	ac-ft	
July	31	0.01	9.30	Estimated Pond Percolation Rate =	0.90	in/day	
August	31	0.01	8.03	Total Storage =	233.3	ac-ft	
September	30	0.17	5.93	Total Storage =	76,027,661	gal	
October	31	0.53	3.75				
November	30	1.19	1.73				
December	31	1.58	0.90				
Total	365	10.92	55.61				

WWTF POND CALCULATIONS:

Effluent Produced (gal/month)	Effluent To Canal (gal/month)	Effluent to Ponds ^{16/} (gal/month)	Surface Rainfall ^{19/} (gal/month)	Surface Evaporation ^{20/} (gal/month)	Pond Percolation ^{21/} (gal/month)	Monthly Change in Storage ^{22/} (gal/month)	Required Storage Capacity ^{23/} (gal)	
24,800,000	0	24,800,000	1,784,183	828,673	21,635,505	4,120,005	10,907,011	
22,400,000	0	22,400,000	1,615,066	1,336,024	19,541,746	3,137,296	14,044,307	
24,800,000	0	24,800,000	1,598,155	2,663,591	21,635,505	2,099,059	16,143,366	
24,000,000	0	24,000,000	845,585	3,999,615	20,937,585	(91,615)	16,051,751	
24,800,000	0	24,800,000	312,866	5,902,180	21,635,505	(2,424,819)	13,626,932	
24,000,000	0	24,000,000	126,838	7,229,748	20,937,585	(4,040,495)	9,586,437	
24,800,000	0	24,800,000	8,456	7,863,936	21,635,505	(4,690,985)	4,895,452	
24,800,000	0	24,800,000	8,456	6,790,044	21,635,505	(3,617,093)	1,278,359	
24,000,000	0	24,000,000	143,749	5,014,316	20,937,585	(1,808,152)	0*	
24,800,000	0	24,800,000	448,160	3,170,942	21,635,505	441,713	441,713	
24,000,000	0	24,000,000	1,006,246	1,462,861	20,937,585	2,605,800	3,047,513	
24,800,000	0	24,800,000	1,336,024	761,026	21,635,505	3,739,493	6,787,006	
Total (gal)			9,233,784	47,022,956	254,740,621	-529,793	* Start at 0 Stored	
			896.1	0.0	896.1	28.3	144.3	781.8
								-529,793

1/ Rainfall Data per the Western Regional Climate Center.
3/ Evaporation data per WRCC X 0.75
5/ Average Daily Effluent Production
7/ Total wet area of the existing lagoons.
19/ Surface Rainfall = Volume of Average-Year rainfall on the existing WWTF treatment and storage ponds and proposed storage ponds.
20/ Surface Evaporation = Volume of effluent and rain water evaporating from the existing WWTF treatment and disposal ponds.
21/ Pond Percolation = Volume of effluent and rain water percolating into the ground for existing ponds 1 through 8 plus additional proposed ponds.
23/ Required Storage = Theoretical starting point Sept. 1st where pond storage starts at zero with monthly contributions.
36/ Maximum Storage Needed = Peak end of month pond storage volume needed (gallons & ac-ft).
37/ Storage Available from all ponds = Total volume of available storage.
39/ Check Balance = Comparison of this value with 16/.

Maximum Required storage	16,143,366
Total Storage Available ^{37/} :	76,027,661 gal
Extra Storage ^{38/} :	59,884,295 gal
	184 ac-ft
Total Effluent Production ^{16/} :	292,000,000 gal
Total Effluent Exported ^{17/} :	0 gal
Total Surface Rainfall ^{19/} :	9,233,784 gal
Total Evaporation ^{20/} :	47,022,956 gal
Total Percolation ^{21/} :	254,740,621 gal
Effluent Applied to Crop ^{28/} :	0 gal
Check Balance ^{39/} :	292,529,793 gal

Updated: 10/25/13
Print Date: 10/25/13



Table 6
Malaga County Water District
Wastewater Treatment & Disposal Facilities
0.8 MGD Capacity Wastewater Disposal - 100 Year Rainfall Water Balance, Discharge and Storage

WWTF POND CALCULATIONS:

DATA:

Month	Number of Days per Month	100 Yr. Rainfall ^{1/} (in/month)	100 Yr. Evaporation ^{2/} (in/month)	Discharge to canal	0 MGD
				Daily Effluent Production ^{5/} =	800,000 gpd
				Pond Wet Area ^{7/} =	23.24 acres
				Pond Storage =	185.9 ac-ft
				Pond Percolation Rate =	0.80 in/day
				Additional Pond Wet Area =	9.90 acres
				Additional Pond Storage =	59.4 ac-ft
				Estimated Pond Percolation Rate =	0.90 in/day
				Total Storage =	245.3 ac-ft
				Total Storage =	79,937,878 gal
Total	365	23.88	46.17	Total Area =	33.1 acres

Effluent Produced (gal/month)	Effluent To Canal (gal/month)	Effluent to Ponds ^{18/} (gal/month)	Surface Rainfall ^{19/} (gal/month)	Surface Evaporation ^{20/} (gal/month)	Pond Percolation ^{21/} (gal/month)	Monthly Change in Storage ^{22/} (gal/month)	Required Storage Capacity ^{23/} (gal)
24,800,000	0	24,800,000	4,625,450	809,904	23,150,714	5,464,832	11,430,360
22,400,000	0	22,400,000	3,329,604	1,313,844	20,910,322	3,505,438	14,935,798
24,800,000	0	24,800,000	4,076,516	1,880,777	23,150,714	3,845,025	18,780,823
24,000,000	0	24,000,000	2,483,705	3,338,603	22,403,916	741,186	19,522,009
24,800,000	0	24,800,000	8,999	5,588,336	23,150,714	(3,930,051)	15,591,958
24,000,000	0	24,000,000	278,967	6,164,268	22,403,916	(4,289,217)	11,302,741
24,800,000	0	24,800,000	0	7,325,130	23,150,714	(5,675,844)	5,626,897
24,800,000	0	24,800,000	0	6,290,253	23,150,714	(4,640,967)	985,930
24,000,000	0	24,000,000	989,882	4,211,500	22,403,916	(1,625,534)	0*
24,800,000	0	24,800,000	1,421,831	2,780,670	23,150,714	290,447	290,447
24,000,000	0	24,000,000	2,843,662	1,079,872	22,403,916	3,359,874	3,650,321
24,800,000	0	24,800,000	1,430,830	764,909	23,150,714	2,315,207	5,965,528
Total (gal)	292,000,000	0	292,000,000	21,489,446	41,548,066	272,580,984	-639,604
							-2.0
							-639,604

1/ Rainfall Data per the Western Regional Climate Center.
 3/ Evaporation data per WRCC X 0.75
 5/ Design Capacity Effluent Production
 7/ Total existing wet area of the existing lagoons.
 19/ Surface Rainfall = Volume of 100 Year rainfall on the existing WWTF treatment and storage ponds and proposed storage ponds.
 20/ Surface Evaporation = Volume of effluent and rain water evaporating from the existing WWTF treatment and disposal ponds.
 21/ Pond Percolation = Volume of effluent and rain water percolating into the ground for existing ponds 1 through 8 plus proposed additional ponds.
 23/ Required Storage = Theoretical starting point Sept. 1st where pond storage starts at zero with monthly contributions.
 36/ Maximum Storage Needed = Peak end of month pond storage volume needed (gallons & ac-ft).
 37/ Storage Available from all ponds = Total volume of available storage.
 39/ Check Balance = Comparison of this value with 16/.

Maximum Required storage	19,522,009
Total Storage Available ^{37/} :	79,937,878 gal
Extra Storage ^{38/} :	60,415,869 gal
	185 ac-ft
Total Effluent Production ^{16/} :	292,000,000 gal
Total Effluent Exported ^{17/} :	0 gal
Total Surface Rainfall ^{19/} :	21,489,446 gal
Total Evaporation ^{20/} :	41,548,066 gal
Total Percolation ^{21/} :	272,580,984 gal
Effluent Applied to Crop ^{28/} :	0 gal
Check Balance ^{39/} :	292,639,604 gal

Updated: 10/25/13
 Print Date: 10/25/13



Table 7
Malaga County Water District
Wastewater Treatment & Disposal Facilities
1.2 MGD Capacity Wastewater Disposal - Average Year Rainfall Water Balance, Discharge and Storage

DATA:				Discharge to canal		0 MGD		WWTF POND CALCULATIONS:						
Month	Number of Days per Month	Average Yr. Rainfall ^{1/} (in/month)	Average Yr. Evaporation ^{3/} (in/month)			Effluent Produced (gal/month)	Effluent To Canal (gal/month)	Effluent to Ponds ^{18/} (gal/month)	Surface Rainfall ^{19/} (gal/month)	Surface Evaporation ^{20/} (gal/month)	Pond Percolation ^{21/} (gal/month)	Monthly Change In Storage ^{22/} (gal/month)	Required Storage Capacity ^{23/} (gal)	
				Daily Effluent Production ^{5/} =	1,200,000	gpd								
January	31	2.11	0.98	Pond Wet Area =	23.24	acres	37,200,000	0	37,200,000	2,609,239	1,211,874	32,545,011	6,052,354	16,058,412
February	28	1.91	1.58	Pond Storage =	185.9	ac-ft	33,600,000	0	33,600,000	2,361,918	1,953,838	29,395,493	4,612,587	20,670,999
March	31	1.89	3.15	Pond Percolation Rate =	0.80	in/day	37,200,000	0	37,200,000	2,337,186	3,895,310	32,545,011	3,096,865	23,767,864
April	30	1.00	4.73				36,000,000	0	36,000,000	1,236,606	5,849,148	31,495,172	(107,714)	23,660,150
May	31	0.37	6.98	Additional Pond Wet Area =	22.30	acres	37,200,000	0	37,200,000	457,544	8,631,512	32,545,011	(3,518,979)	20,141,171
June	30	0.15	8.55	Additional Pond Storage =	133.8	ac-ft	36,000,000	0	36,000,000	185,491	10,572,983	31,495,172	(5,882,664)	14,258,507
July	31	0.01	9.30	Estimated Pond Percolation Rate =	0.90	in/day	37,200,000	0	37,200,000	12,366	11,500,438	32,545,011	(6,833,083)	7,425,424
August	31	0.01	8.03	Total Storage =	319.7	ac-ft	37,200,000	0	37,200,000	12,366	9,929,948	32,545,011	(5,262,593)	2,162,831
September	30	0.17	5.93	Total Storage =	104,181,226	gal	36,000,000	0	36,000,000	210,223	7,333,075	31,495,172	(2,618,024)	0*
October	31	0.53	3.75				37,200,000	0	37,200,000	655,401	4,837,273	32,545,011	673,117	673,117
November	30	1.19	1.73				36,000,000	0	36,000,000	1,471,561	2,139,329	31,495,172	3,837,060	4,510,177
December	31	1.58	0.90				37,200,000	0	37,200,000	1,953,838	1,112,946	32,545,011	5,495,881	10,006,058
Total	365	10.92	55.61	Total (gal)			438,000,000	0	438,000,000	13,503,739	68,767,674	383,191,258	-455,193	* Start at 0 Stored September 1st
				Total Area =	45.5 acres		Total (ac-ft)						-455,193	

1/ Rainfall Data per the Western Regional Climate Center.
3/ Evaporation data per WRCC X 0.75
5/ Average Daily Effluent Production
7/ Total wet area of the existing lagoons.
19/ Surface Rainfall = Volume of Average-Year rainfall on the existing WWTF treatment and storage ponds and proposed storage ponds.
20/ Surface Evaporation = Volume of effluent and rain water evaporating from the existing WWTF treatment and disposal ponds.
21/ Pond Percolation = Volume of effluent and rain water percolating into the ground for existing ponds 1 through 8 plus additional proposed ponds.
23/ Required Storage = Theoretical starting point Sept. 1st where pond storage starts at zero with monthly contributions.
36/ Maximum Storage Needed = Peak end of month pond storage volume needed (gallons & ac-ft).
37/ Storage Available from all ponds = Total volume of available storage.
39/ Check Balance = Comparison of this value with 16/.

Maximum Required storage	23,767,864
Total Storage Available ^{37/}	104,181,226 gal
Extra Storage ^{38/}	80,413,362 gal
	247 ac-ft
Total Effluent Production ^{16/}	438,000,000 gal
Total Effluent Exported ^{17/}	0 gal
Total Surface Rainfall ^{19/}	13,503,739 gal
Total Evaporation ^{20/}	68,767,674 gal
Total Percolation ^{21/}	383,191,258 gal
Effluent Applied to Crop ^{28/}	0 gal
Check Balance ^{39/}	438,455,193 gal

Updated: 10/25/13
Print Date: 10/25/13



Table 8
Malaga County Water District
Wastewater Treatment & Disposal Facilities
1.2 MGD Capacity Wastewater Disposal - 100 Year Rainfall Water Balance, Discharge and Storage

DATA:

Month	Number of Days per Month	100 Yr. Rainfall ^{1/} (in/month)	100 Yr. Evaporation ^{2/} (in/month)
January	31	5.14	0.90
February	28	3.70	1.46
March	31	4.53	2.09
April	30	2.76	3.71
May	31	0.01	6.21
June	30	0.31	6.85
July	31	0.00	8.14
August	31	0.00	6.99
September	30	1.10	4.68
October	31	1.58	3.09
November	30	3.16	1.20
December	31	1.59	0.85
Total	365	23.88	46.17

Discharge to canal 0 MGD

Daily Effluent Production ^{5/}	=	1,200,000	gpd
Pond Wet Area ^{7/}	=	23.24	acres
Pond Storage	=	185.9	ac-ft
Pond Percolation Rate	=	0.80	in/day
Additional Pond Wet Area	=	25.20	acres
Additional Pond Storage	=	151.2	ac-ft
Estimated Pond Percolation Rate	=	0.90	in/day
Total Storage	=	337.1	ac-ft
Total Storage	=	109,851,041	gal

8 ft deep
6 ft deep

Total Area = 48.4 acres

WWTF POND CALCULATIONS:

Effluent Produced (gal/month)	Effluent To Canal (gal/month)	Effluent to Ponds ^{18/} (gal/month)	Surface Rainfall ^{19/} (gal/month)	Surface Evaporation ^{20/} (gal/month)	Pond Percolation ^{21/} (gal/month)	Monthly Change in Storage ^{22/} (gal/month)	Required Storage Capacity ^{23/} (gal)
37,200,000	0	37,200,000	6,760,918	1,183,818	34,742,065	8,035,035	16,894,824
33,600,000	0	33,600,000	4,866,809	1,920,416	31,379,929	5,166,464	22,061,288
37,200,000	0	37,200,000	5,958,552	2,749,089	34,742,065	5,667,398	27,728,686
36,000,000	0	36,000,000	3,630,376	4,879,962	33,621,352	1,129,062	28,857,748
37,200,000	0	37,200,000	13,154	8,168,346	34,742,065	(5,697,257)	23,160,491
36,000,000	0	36,000,000	407,760	9,010,173	33,621,352	(6,223,765)	16,936,726
37,200,000	0	37,200,000	0	10,706,979	34,742,065	(8,249,044)	8,687,682
37,200,000	0	37,200,000	0	9,194,322	34,742,065	(6,736,387)	1,951,295
36,000,000	0	36,000,000	1,446,889	6,155,855	33,621,352	(2,330,318)	0*
37,200,000	0	37,200,000	2,078,259	4,064,443	34,742,065	471,751	471,751
36,000,000	0	36,000,000	4,156,518	1,578,424	33,621,352	4,956,742	5,428,493
37,200,000	0	37,200,000	2,091,412	1,118,051	34,742,065	3,431,296	8,859,789
Total (gal)	438,000,000	0	438,000,000	31,410,647	60,729,878	409,059,792	-379,023
Total (ac-ft)	1,344.2	0.0	1,344.2	96.4	186.4	1,255.4	-1.2

* Start at 0 Stored September 1st

- 1/ Rainfall Data per the Western Regional Climate Center.
- 3/ Evaporation data per WRCC X 0.75
- 5/ Design Capacity Effluent Production
- 7/ Total existing wet area of the existing lagoons.
- 19/ Surface Rainfall = Volume of 100 Year rainfall on the existing WWTF treatment and storage ponds and proposed storage ponds.
- 20/ Surface Evaporation = Volume of effluent and rain water evaporating from the existing WWTF treatment and disposal ponds.
- 21/ Pond Percolation = Volume of effluent and rain water percolating into the ground for existing ponds 1 through 8 plus proposed additional ponds.
- 23/ Required Storage = Theoretical starting point Sept. 1st where pond storage starts at zero with monthly contributions.
- 36/ Maximum Storage Needed = Peak end of month pond storage volume needed (gallons & ac-ft).
- 37/ Storage Available from all ponds = Total volume of available storage.
- 39/ Check Balance = Comparison of this value with 16/.

Maximum Required storage	28,857,748
Total Storage Available ^{37/}	109,851,041 gal
Extra Storage ^{38/}	80,993,293 gal
	249 ac-ft
Total Effluent Production ^{16/}	438,000,000 gal
Total Effluent Exported ^{17/}	0 gal
Total Surface Rainfall ^{19/}	31,410,647 gal
Total Evaporation ^{20/}	60,729,878 gal
Total Percolation ^{21/}	409,059,792 gal
Effluent Applied to Crop ^{28/}	0 gal
Check Balance ^{39/}	438,379,023 gal

Updated: 10/25/13
 Print Date: 10/28/13



Table 9
Malaga County Water District
Wastewater Treatment & Disposal Facilities
1.65 MGD Capacity Wastewater Disposal - Average Year Rainfall Water Balance, Discharge and Storage

DATA:				Discharge to canal		0 MGD		WWTF POND CALCULATIONS:							
Month	Number of Days per Month	Average Yr. Rainfall ^{1/} (in/month)	Average Yr. Evaporation ^{3/} (in/month)	Daily Effluent Production ^{5/}	Pond Wet Area	Pond Storage	Pond Percolation Rate	Effluent Produced (gal/month)	Effluent To Canal (gal/month)	Effluent to Ponds ^{18/} (gal/month)	Surface Rainfall ^{19/} (gal/month)	Surface Evaporation ^{20/} (gal/month)	Pond Percolation ^{21/} (gal/month)	Monthly Change in Storage ^{22/} (gal/month)	Required Storage Capacity ^{23/} (gal)
January	31	2.11	0.98	1,650,000 gpd	23.24 acres	185.9 ac-ft	0.80 in/day	51,150,000	0	51,150,000	3,537,427	1,642,976	44,818,206	8,226,245	21,853,739
February	28	1.91	1.58					46,200,000	0	46,200,000	3,202,126	2,648,879	40,480,960	6,272,287	28,126,026
March	31	1.89	3.15					51,150,000	0	51,150,000	3,168,596	5,280,993	44,818,206	4,219,397	32,345,423
April	30	1.00	4.73					49,500,000	0	49,500,000	1,676,506	7,929,872	43,372,457	(125,823)	32,219,600
May	31	0.37	6.98	Additional Pond Wet Area = 38.50 acres				51,150,000	0	51,150,000	620,307	11,702,010	44,818,206	(4,749,909)	27,469,691
June	30	0.15	8.55	Additional Pond Storage = 231.0 ac-ft				49,500,000	0	49,500,000	251,476	14,334,124	43,372,457	(7,955,105)	19,514,586
July	31	0.01	9.30	Estimated Pond Percolation Rate = 0.90 in/day				51,150,000	0	51,150,000	16,765	15,591,503	44,818,206	(9,242,944)	10,271,642
August	31	0.01	8.03	Total Storage = 416.9 ac-ft				51,150,000	0	51,150,000	16,765	13,462,341	44,818,206	(7,113,782)	3,157,860
September	30	0.17	5.93	Total Storage = 135,853,987 gal				49,500,000	0	49,500,000	285,006	9,941,679	43,372,457	(3,529,130)	0*
October	31	0.53	3.75					51,150,000	0	51,150,000	888,548	6,286,896	44,818,206	933,446	933,446
November	30	1.19	1.73					49,500,000	0	49,500,000	1,995,042	2,900,355	43,372,457	5,222,230	6,155,676
December	31	1.58	0.90					51,150,000	0	51,150,000	2,648,879	1,508,855	44,818,206	7,471,818	13,627,494
Total	365	10.92	55.61		Total Area = 61.7 acres			Total (gal) 602,250,000	0.0	602,250,000	18,307,443	93,230,483	527,698,230	-371,270	* Start at 0 Stored September 1st

1/ Rainfall Data per the Western Regional Climate Center.
3/ Evaporation data per WRCC X 0.75
5/ Average Daily Effluent Production
7/ Total wet area of the existing lagoons.
19/ Surface Rainfall = Volume of Average-Year rainfall on the existing WWTF treatment and storage ponds and proposed storage ponds.
20/ Surface Evaporation = Volume of effluent and rain water evaporating from the existing WWTF treatment and disposal ponds.
21/ Pond Percolation = Volume of effluent and rain water percolating into the ground for existing ponds 1 through 8 plus additional proposed ponds.
23/ Required Storage = Theoretical starting point Sept. 1st where pond storage starts at zero with monthly contributions.
36/ Maximum Storage Needed = Peak end of month pond storage volume needed (gallons & ac-ft).
37/ Storage Available from all ponds = Total volume of available storage.
39/ Check Balance = Comparison of this value with 16/.

Maximum Required storage	32,345,423
Total Storage Available ^{37/}	135,853,987 gal
Extra Storage ^{38/}	103,508,564 gal
	318 ac-ft
Total Effluent Production ^{16/}	602,250,000 gal
Total Effluent Exported ^{17/}	0 gal
Total Surface Rainfall ^{19/}	18,307,443 gal
Total Evaporation ^{20/}	93,230,483 gal
Total Percolation ^{21/}	527,698,230 gal
Effluent Applied to Crop ^{28/}	0 gal
Check Balance ^{39/}	602,621,270 gal

Updated: 10/25/13
Print Date: 10/25/13



Table 10
Malaga County Water District
Wastewater Treatment & Disposal Facilities
1.65 MGD Capacity Wastewater Disposal - 100 Year Rainfall Water Balance, Discharge and Storage

WWTF POND CALCULATIONS:

DATA:

Month	Number of Days per Month	100 Yr. Rainfall ^{1/} (in/month)	100 Yr. Evaporation ^{2/} (In/month)	Discharge to canal	0 MGD
				Daily Effluent Production ^{5/} =	1,650,000 gpd
January	31	5.14	0.90	Pond Wet Area ^{7/} =	23.24 acres
February	28	3.70	1.46	Pond Storage =	185.9 ac-ft
March	31	4.53	2.09	Pond Percolation Rate =	0.80 in/day
April	30	2.76	3.71		
May	31	0.01	6.21	Additional Pond Wet Area =	42.50 acres
June	30	0.31	6.85	Additional Pond Storage =	255.0 ac-ft
July	31	0.00	8.14	Estimated Pond Percolation Rate =	0.90 in/day
August	31	0.00	6.99	Total Storage =	440.9 ac-ft
September	30	1.10	4.68	Total Storage =	143,674,422 gal
October	31	1.58	3.09		
November	30	3.16	1.20		
December	31	1.59	0.85		
Total	365	23.88	46.17		

Effluent Produced (gal/month)	Effluent To Canal (gal/month)	Effluent to Ponds ^{18/} (gal/month)	Surface Rainfall ^{19/} (gal/month)	Surface Evaporation ^{20/} (gal/month)	Pond Percolation ^{21/} (gal/month)	Monthly Change in Storage ^{22/} (gal/month)	Required Storage Capacity ^{23/} (gal)	
51,150,000	0	51,150,000	9,175,532	1,606,611	47,848,625	10,870,296	22,792,222	
46,200,000	0	46,200,000	6,804,955	2,606,279	43,218,112	6,980,564	29,772,786	
51,150,000	0	51,150,000	8,086,607	3,730,907	47,848,625	7,657,075	37,429,861	
49,500,000	0	49,500,000	4,926,939	6,622,806	46,305,120	1,499,013	38,928,874	
51,150,000	0	51,150,000	17,851	11,085,613	47,848,625	(7,766,387)	31,162,487	
49,500,000	0	49,500,000	553,388	12,228,092	46,305,120	(8,479,824)	22,682,663	
51,150,000	0	51,150,000	0	14,530,900	47,848,625	(11,229,525)	11,453,138	
51,150,000	0	51,150,000	0	12,478,009	47,848,625	(9,176,634)	2,276,504	
49,500,000	0	49,500,000	1,963,635	8,354,375	46,305,120	(3,195,860)	0	
51,150,000	0	51,150,000	2,820,494	5,516,030	47,848,625	605,839	605,839	
49,500,000	0	49,500,000	5,640,988	2,142,147	46,305,120	6,693,721	7,299,560	
51,150,000	0	51,150,000	2,838,345	1,517,354	47,848,625	4,622,366	11,921,926	
Total (gal)	602,250,000	0	602,250,000	42,628,734	82,419,123	563,378,967	-919,356	
			1,848.2	0.0	1,848.2	130.8	252.9	1,728.9

Total Area = 65.7 acres

Total (ac-ft)

* Start at 0 Stored September 1st
 -919,356

1/ Rainfall Data per the Western Regional Climate Center.
 3/ Evaporation data per WRCC X 0.75
 5/ Design Capacity Effluent Production
 7/ Total existing wet area of the existing lagoons.
 19/ Surface Rainfall = Volume of 100 Year rainfall on the existing WWTF treatment and storage ponds and proposed storage ponds.
 20/ Surface Evaporation = Volume of effluent and rain water evaporating from the existing WWTF treatment and disposal ponds.
 21/ Pond Percolation = Volume of effluent and rain water percolating into the ground for existing ponds 1 through 8 plus proposed additional ponds.
 23/ Required Storage = Theoretical starting point Sept. 1st where pond storage starts at zero with monthly contributions.
 36/ Maximum Storage Needed = Peak end of month pond storage volume needed (gallons & ac-ft).
 37/ Storage Available from all ponds = Total volume of available storage.
 39/ Check Balance = Comparison of this value with 16/.

Maximum Required storage	38,928,874
Total Storage Available ^{37/} :	143,674,422 gal
Extra Storage ^{38/} :	104,745,548 gal
	321 ac-ft
Total Effluent Production ^{16/} :	602,250,000 gal
Total Effluent Exported ^{17/} :	0 gal
Total Surface Rainfall ^{19/} :	42,628,734 gal
Total Evaporation ^{20/} :	82,419,123 gal
Total Percolation ^{21/} :	563,378,967 gal
Effluent Applied to Crop ^{28/} :	0 gal
Check Balance ^{39/} :	603,169,356 gal

Updated: 10/25/13
 Print Date: 10/25/13



Table 11
Malaga County Water District
Wastewater Treatment & Disposal Facilities
Disposal Pond Acreage Required to Replace 0.45 MGD Discharge to Central Canal

DATA:				WWTF POND CALCULATIONS:																		
Month	Number of Days per Month	Average Yr. Rainfall ^{1/} (in/month)	Average Yr. Evaporation ^{3/} (in/month)	Daily Effluent Production ^{5/} = 450,000 gpd	Pond Wet Area = 0.00 acres	Pond Storage = 0.0 ac-ft	Pond Percolation Rate = 0.80 in/day	Additional Pond Wet Area = 16.30 acres	Additional Pond Storage = 97.8 ac-ft	Estimated Pond Percolation Rate = 0.90 in/day	Total Storage = 97.8 ac-ft	Total Storage = 31,868,272 gal	Total (gal)	Effluent Produced (gal/month)	Effluent To Canal (gal/month)	Effluent to Ponds ^{18/} (gal/month)	Surface Rainfall ^{19/} (gal/month)	Surface Evaporation ^{20/} (gal/month)	Pond Percolation ^{21/} (gal/month)	Monthly Change in Storage ^{22/} (gal/month)	Required Storage Capacity ^{23/} (gal)	
January	31	2.11	0.98											13,950,000	0	13,950,000	933,917	433,763	12,348,955	2,101,199	5,489,434	
February	28	1.91	1.58											12,600,000	0	12,600,000	845,394	699,332	11,153,895	1,592,167	7,081,601	
March	31	1.89	3.15											13,950,000	0	13,950,000	836,542	1,394,237	12,348,955	1,043,350	8,124,951	
April	30	1.00	4.73											13,500,000	0	13,500,000	442,615	2,093,568	11,950,602	(101,555)	8,023,396	
May	31	0.37	6.98											13,950,000	0	13,950,000	163,768	3,089,452	12,348,955	(1,324,639)	6,698,757	
June	30	0.15	8.55											13,500,000	0	13,500,000	66,392	3,784,357	11,950,602	(2,168,567)	4,530,190	
July	31	0.01	9.30											13,950,000	0	13,950,000	4,426	4,116,318	12,348,955	(2,510,847)	2,019,343	
August	31	0.01	8.03											13,950,000	0	13,950,000	4,426	3,554,198	12,348,955	(1,948,727)	70,616	
September	30	0.17	5.93											13,500,000	0	13,500,000	75,245	2,624,706	11,950,602	(1,000,063)	0*	
October	31	0.53	3.75											13,950,000	0	13,950,000	234,586	1,659,806	12,348,955	175,825	175,825	
November	30	1.19	1.73											13,500,000	0	13,500,000	526,712	765,724	11,950,602	1,310,386	1,486,211	
December	31	1.58	0.90											13,950,000	0	13,950,000	699,332	398,353	12,348,955	1,902,024	3,388,235	
Total	365	10.92	55.61										164,250,000	0	0	164,250,000	4,833,355	24,613,814	145,398,988	-929,447	-2.9	September 1st
				Total Area = 16.3 acres	Total (ac-ft)	504.1	0.0	504.1	14.8	75.5	446.2	-929,447										

1/ Rainfall Data per the Western Regional Climate Center.
3/ Evaporation data per WRCC X 0.75
5/ Average Daily Effluent Production
7/ Total wet area of the existing lagoons.
19/ Surface Rainfall = Volume of Average-Year rainfall on the existing WWTF treatment and storage ponds and proposed storage ponds.
20/ Surface Evaporation = Volume of effluent and rain water evaporating from the existing WWTF treatment and disposal ponds.
21/ Pond Percolation = Volume of effluent and rain water percolating into the ground for existing ponds 1 through 8 plus additional proposed ponds.
23/ Required Storage = Theoretical starting point Sept. 1st where pond storage starts at zero with monthly contributions.
36/ Maximum Storage Needed = Peak end of month pond storage volume needed (gallons & ac-ft).
37/ Storage Available from all ponds = Total volume of available storage.
39/ Check Balance = Comparison of this value with 16/.

Maximum Required storage	8,124,951
Total Storage Available ^{37/} :	31,868,272 gal
Extra Storage ^{38/} :	23,743,321 gal
	73 ac-ft
Total Effluent Production ^{18/} :	164,250,000 gal
Total Effluent Exported ^{17/} :	0 gal
Total Surface Rainfall ^{19/} :	4,833,355 gal
Total Evaporation ^{20/} :	24,613,814 gal
Total Percolation ^{21/} :	145,398,988 gal
Effluent Applied to Crop ^{28/} :	0 gal
Check Balance ^{39/} :	165,179,447 gal

Updated: 10/25/13
Print Date: 10/25/13



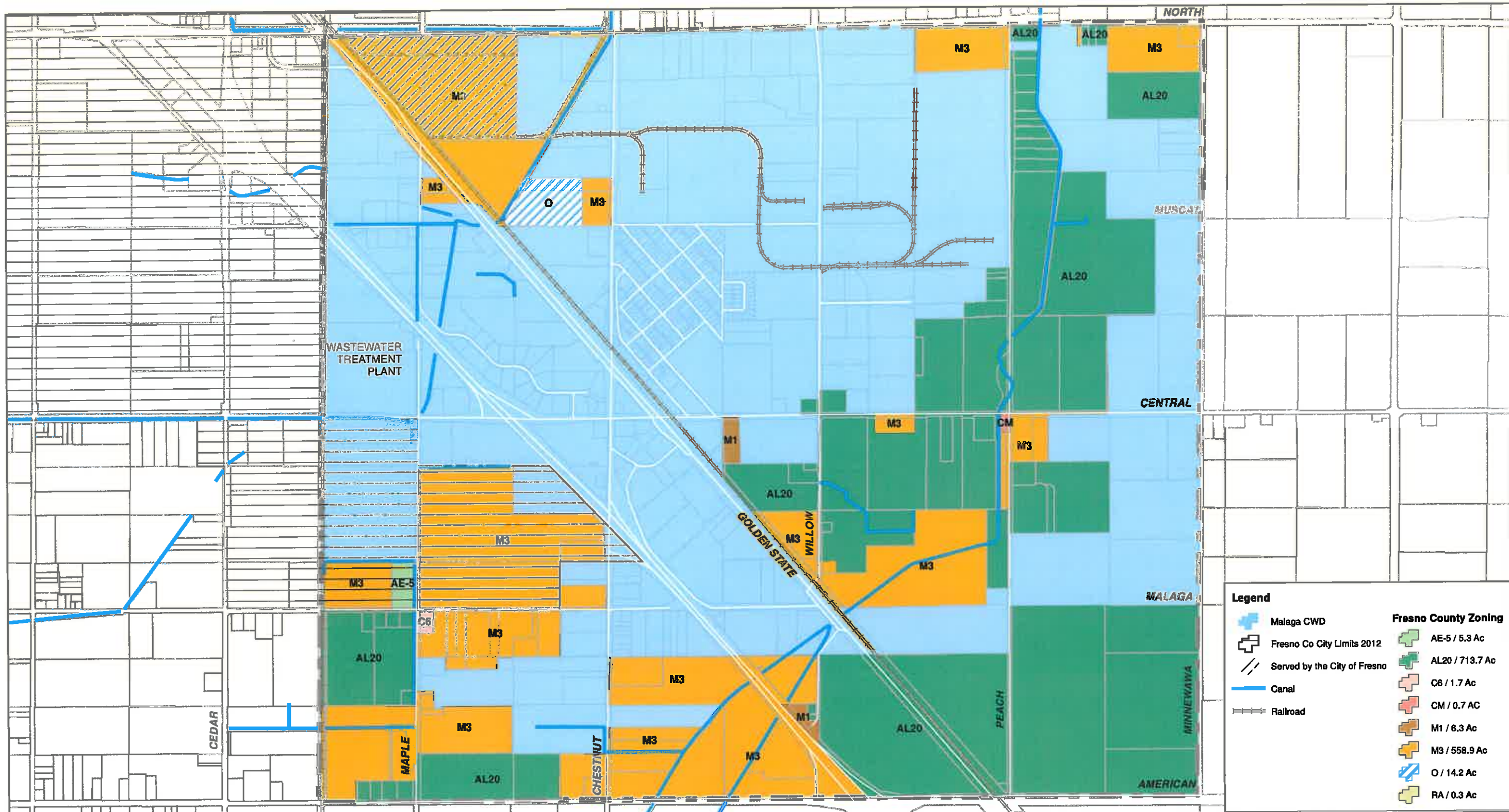
TABLE 12

**Malaga County Water District
Potential Disposal Sites**

APN	Owner	Total Acreage	Pond Acreage	Status
330 031 60S	Southern Pacific Pipe	13.8	10.9	
330 031 42S	Southern Pacific Pipe	12.8	10.4	
330 031 11	Sargenti	4.34	3.7	Acquired
330 031 46S	Parnagian	53.7	33.0	
330 031 45	Parnagian	27.9	24.0	
330 021 20	Raco	18.4	13.5	
330 021 18	TRICOZ	13.3	11.0	

Treatment Plant Capacity	0.8 MGD	1.2 MGD	1.65 MGD
Additional Disposal Pond Acreage	12.86	25.16	42.46

FIGURES



Legend	
	Malaga CWD
	Fresno Co City Limits 2012
	Served by the City of Fresno
	Canal
	Railroad
Fresno County Zoning	
	AE-5 / 5.3 Ac
	AL20 / 713.7 Ac
	C6 / 1.7 Ac
	CM / 0.7 AC
	M1 / 6.3 Ac
	M3 / 558.9 Ac
	O / 14.2 Ac
	RA / 0.3 Ac

0 0.125 0.25 Miles



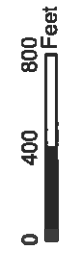
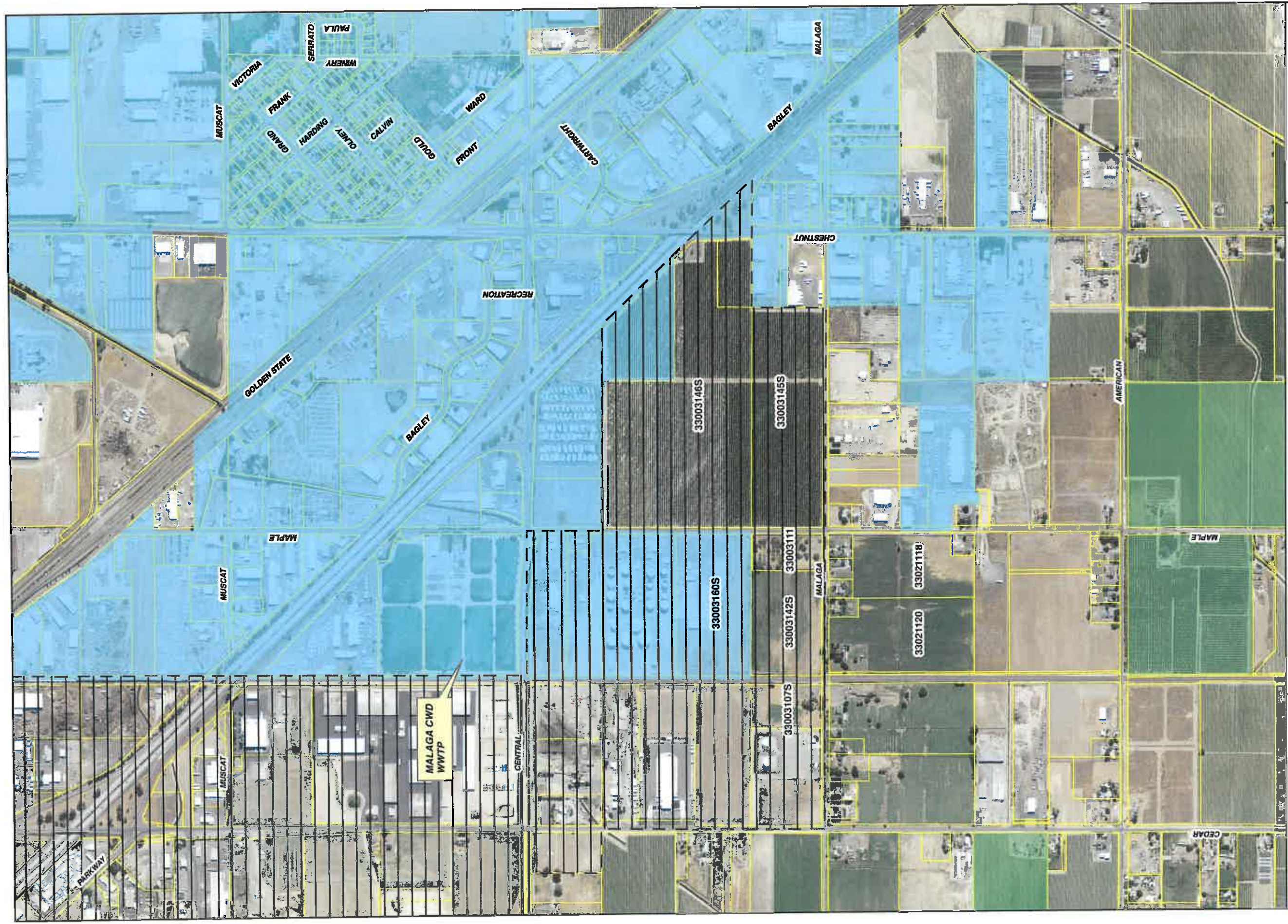
EST. 1900
PROVOST & PRITCHARD
 CONSULTING GROUP
 An Employee Owned Company
 286 W. Cromwell Ave.
 Fresno, CA 93711-6162
 (559) 449-2700

MALAGA COUNTY WATER DISTRICT

**EXISTING ZONING
 FEBRUARY 2013**

Figure 1

Zoning
 Malaga CWD

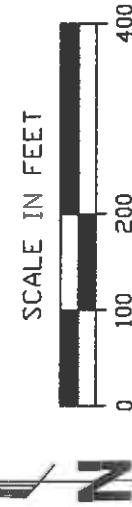
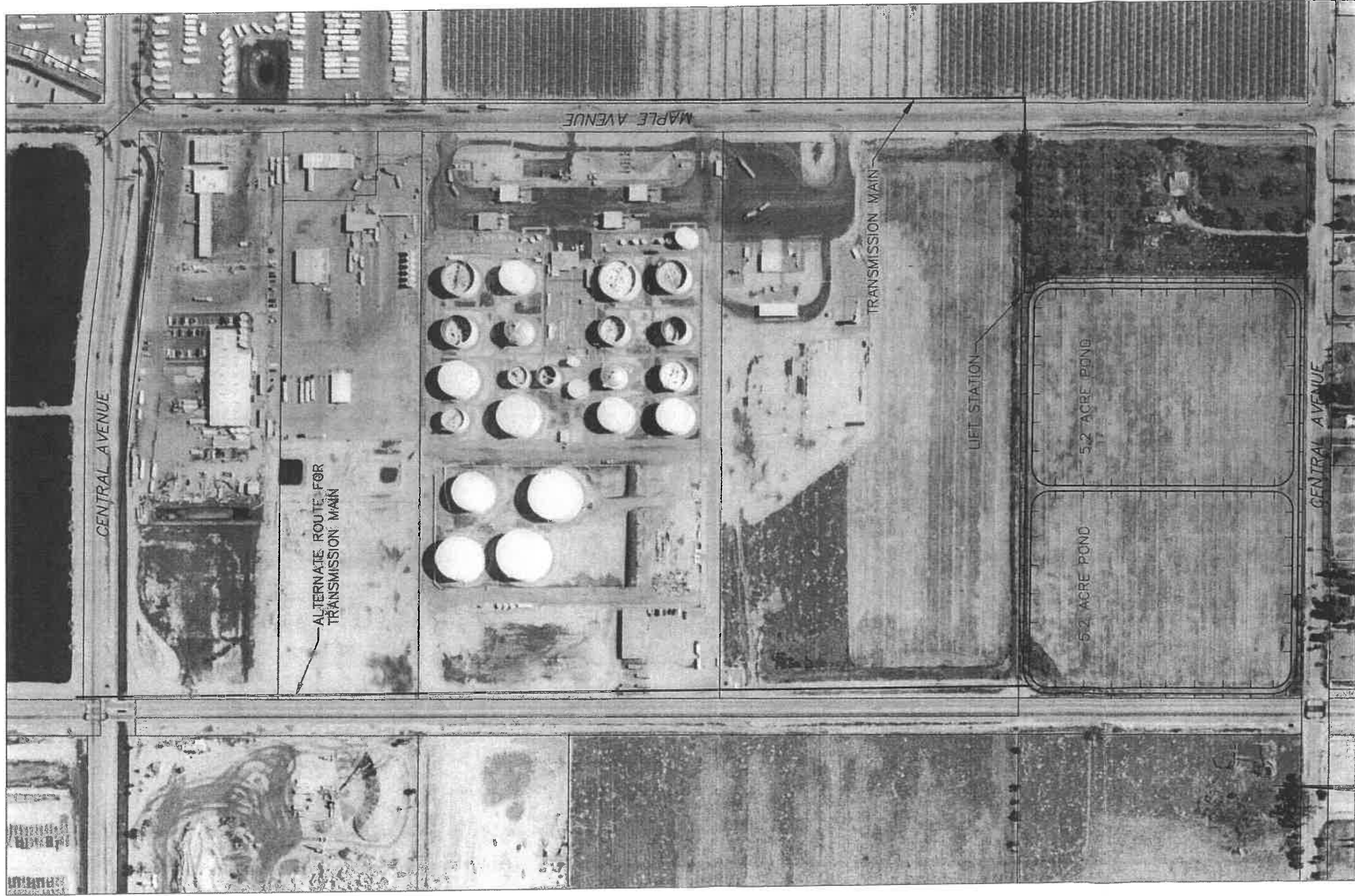


- Legend**
- Fresno Co City Limits 2012
 - Williamson Act Parcel
 - Malaga CWD Boundary
 - Fresno Co. Parcel

PROVOST & PRITCHARD
CONSULTANTS
 An Employee Owned Company

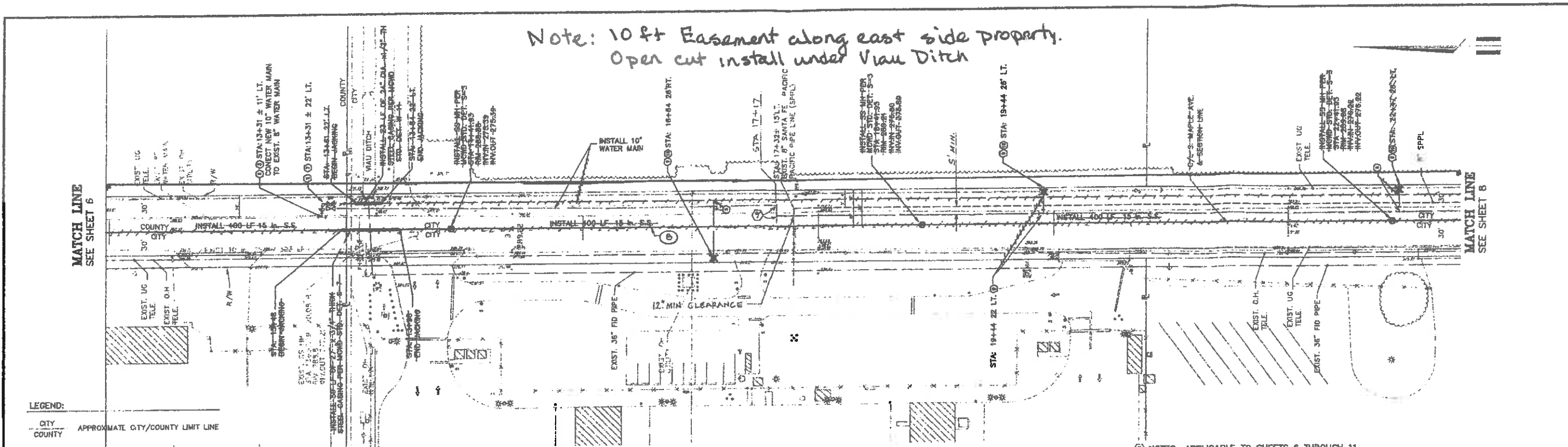
286 W. Cromwell Ave.
 Fresno, CA 93711-6162
 (559) 449-2700

Figure 2
 Disposal Capacity Study
 Malaga CWD



APN 330 031 42S
 OWNER: SP PIPE
 MALAGA COUNTY WATER DISTRICT
 FRESNO COUNTY, CA
 DESIGN ENGINEER: MICHAEL TAYLOR
 DRAFTER: TRM
 SCALE: 1"=200'
 DATE: 5/16/2008
 JOB NO. 10570801.410
 SHEET DF
 DISPOSAL SITE LAYOUT
 FIGURE 3

Note: 10 ft Easement along east side property.
Open cut install under Vau Ditch



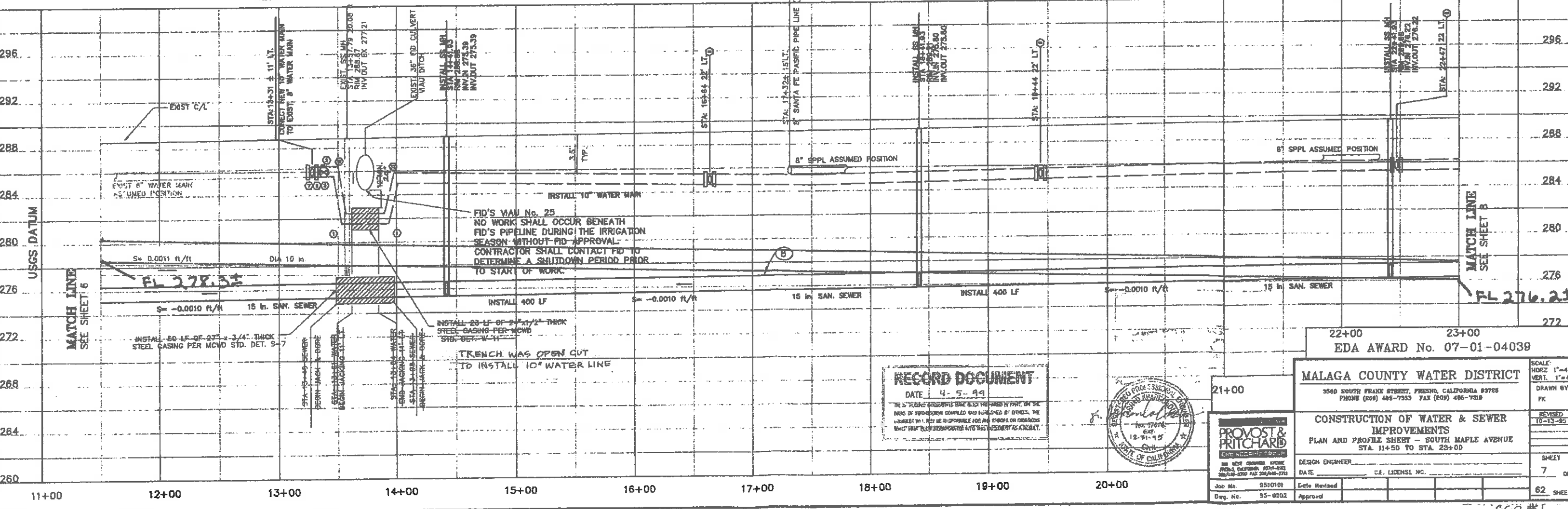
LEGEND:
CITY
COUNTY
APPROXIMATE CITY/COUNTY LIMIT LINE

48 HOURS
BEFORE EXCAVATING
CALL "U.S.A." TOLL FREE
800 642-2444
UNDERGROUND SERVICE
ALERT

EFFECTIVE JAN. 1, 1996
NEW "U.S.A." TOLL FREE
TEL. NO. 800 227-2600

SOUTH MAPLE AVENUE

- NOTES: APPLICABLE TO SHEETS 6 THROUGH 11
- ① INSTALL 45° BEND 10"x10" W/ THRUST BLOCK PER MCWD STD. DET. W-6
 - ② INSTALL 10" WATER VALVE AND BOX W/ TRAFFIC LID PER MCWD STD. DET. W-1
 - ③ INSTALL 10"x8" REDUCER
 - ④ INSTALL 10" PLUG
 - ⑤ INSTALL 10"x10"x6" TEE W/ THRUST BLOCK PER MCWD STD. DET. W-6
 - ⑥ INSTALL 10" CROSS
 - ⑦ INSTALL 90° BEND 10"x10" W/ THRUST BLOCK PER MCWD STD. DET. W-6
 - ⑧ INSTALL 8"x8"x8" TEE W/ THRUST BLOCK PER MCWD STD. DET. W-6
 - ⑨ INSTALL F.H. ASSEMBLY PER MCWD STD. DET. W-2
 - ⑩ INSTALL F.H. PROTECTION POSTS PER MCWD STD. DET. W-3
 - ⑪ INSTALL BLOW OFF ASSEMBLY PER STD. DET. W-7
 - ⑫ INSTALL THE ROD PER DETAIL ON SHEET 50



RECORD DOCUMENT
DATE 4-5-99
IN THE RECORD DOCUMENTS FILED BY YOU UNDER THIS PROJECT ON THE BASIS OF INFORMATION COMPILED AND FURNISHED BY OTHERS, THE ENGINEER WILL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH MAY BE DISCOVERED AND WHICH WOULD BE NECESSARY TO CORRECT.



PROVOST & PRITCHARD
ENGINEERING GROUP
300 WEST CHERRY AVENUE
PERRIS, CALIFORNIA 92570-3000
951-230-7000 FAX 951-230-7710

MALAGA COUNTY WATER DISTRICT
3500 SOUTH FRANK STREET, PERRIS, CALIFORNIA 92578
PHONE (909) 486-7553 FAX (909) 486-7310

CONSTRUCTION OF WATER & SEWER IMPROVEMENTS
PLAN AND PROFILE SHEET - SOUTH MAPLE AVENUE
STA 11+50 TO STA. 23+00

DESIGN ENGINEER: _____ DATE: _____
C.E. LICENSE NO. _____

Job No. 9510101 Date Revised _____
Dwg. No. 95-0202 Approval _____

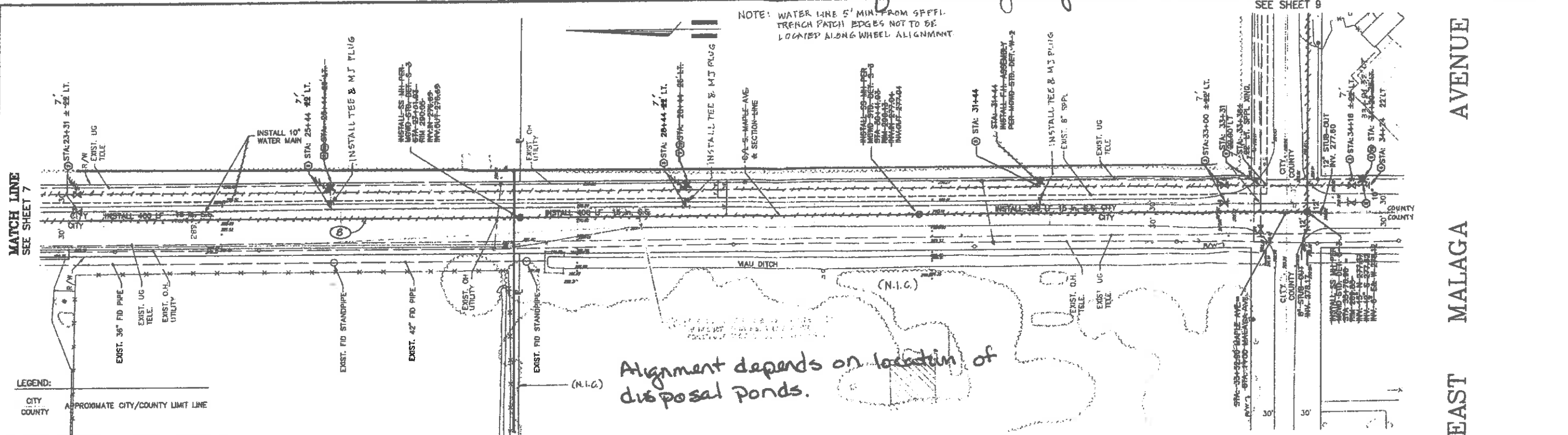
SCALE: HORIZ 1"=40'
VERT. 1"=4'
DRAWN BY: FK
REVISION: 10-13-95
SHEET 7 OF 62 SHEETS

FIGURE 4

Note: 10 ft easement will be require along alignment

NOTE: WATER LINE 5' MIN. FROM SPFFL. TRENCH PATCH EDGES NOT TO BE LOCATED ALONG WHEEL ALIGNMENT

SEE SHEET 9



Alignment depends on location of disposal ponds.

LEGEND:
CITY COUNTY APPROXIMATE CITY/COUNTY LIMIT LINE

NOTES: APPLICABLE TO SHEETS 6 THROUGH 11

- ① INSTALL 45° BEND 10"x10" W/ THRUST BLOCK PER MCWD STD. DET. W-6
- ② INSTALL 10" W/V W/ BOX & TRAFFIC LD PER MCWD STD. DET. W-1
- ③ INSTALL 10"x8" REDUCER
- ④ INSTALL 10" PLUG
- ⑤ INSTALL 10"x10" TEE W/ THRUST BLOCK PER MCWD STD. DET. W-6
- ⑥ INSTALL 10" CROSS
- ⑦ INSTALL 90° BEND 10"x10" W/ THRUST BLOCK PER MCWD STD. DET. W-6
- ⑧ INSTALL 6"x8"x8" TEE W/ THRUST BLOCK PER MCWD STD. DET. W-6
- ⑨ INSTALL F.H. ASSEMBLY PER MCWD STD. DET. W-2
- ⑩ INSTALL F.H. PROTECTION POSTS PER MCWD STD. DET. W-3
- ⑪ INSTALL BLOW OFF ASSEMBLY PER MCWD STD. DET. W-7
- ⑫ INSTALL TIC ROD PER DETAIL ON SHEET 50

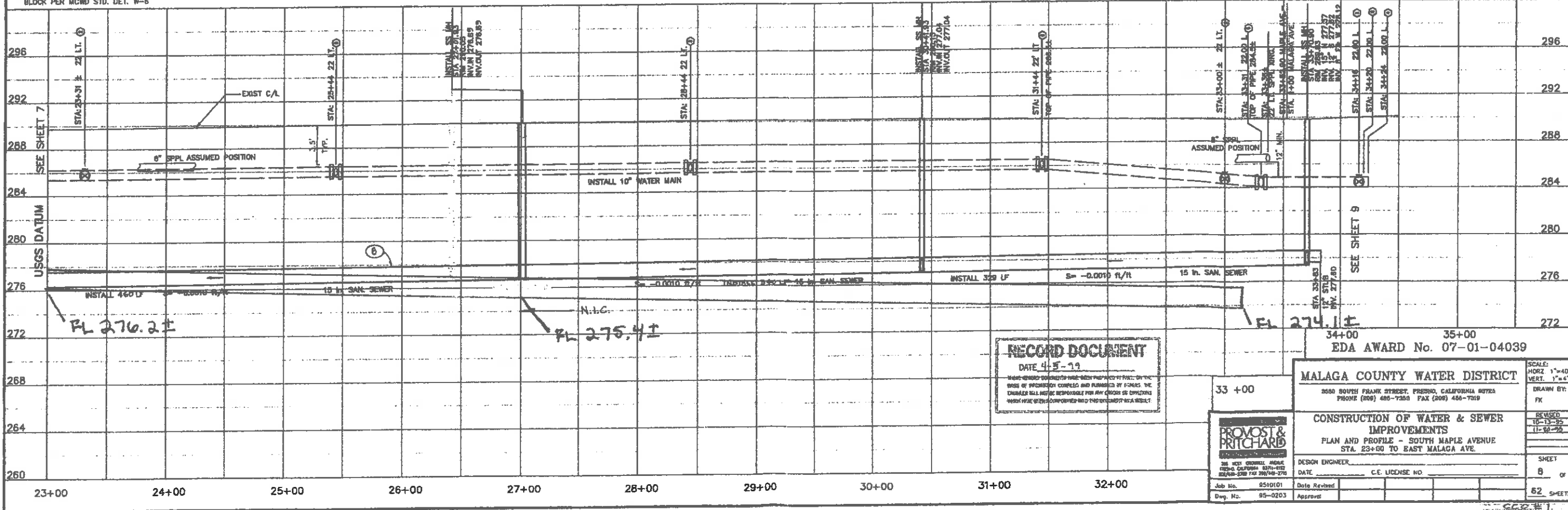
SOUTH MAPLE AVENUE

EFFECTIVE JAN. 1, 1996
NEW "U.S.A." TOLL FREE
TEL. NO. 800 227-2600

48 HOURS
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CALL "U.S.A." TOLL FREE
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RECORD DOCUMENT
DATE 4-5-99
THIS RECORD DOCUMENT HAS BEEN PREPARED BY THE ENGINEER RESPONSIBLE FOR ANY ERRORS OR OMISSIONS THAT MAY BE CORRECTED AND THIS DOCUMENT IS A RESULT.

PROMOST & PRITCHARD
388 WEST ORANGE AVENUE
PESCO, CALIFORNIA 93751-4102
TEL: (805) 738-2700 FAX: (805) 738-2700

MALAGA COUNTY WATER DISTRICT
2050 SOUTH FRANK STREET, PESCO, CALIFORNIA 93754
PHONE (805) 486-7350 FAX (805) 486-7319

CONSTRUCTION OF WATER & SEWER IMPROVEMENTS
PLAN AND PROFILE - SOUTH MAPLE AVENUE STA. 23+00 TO EAST MALAGA AVE.

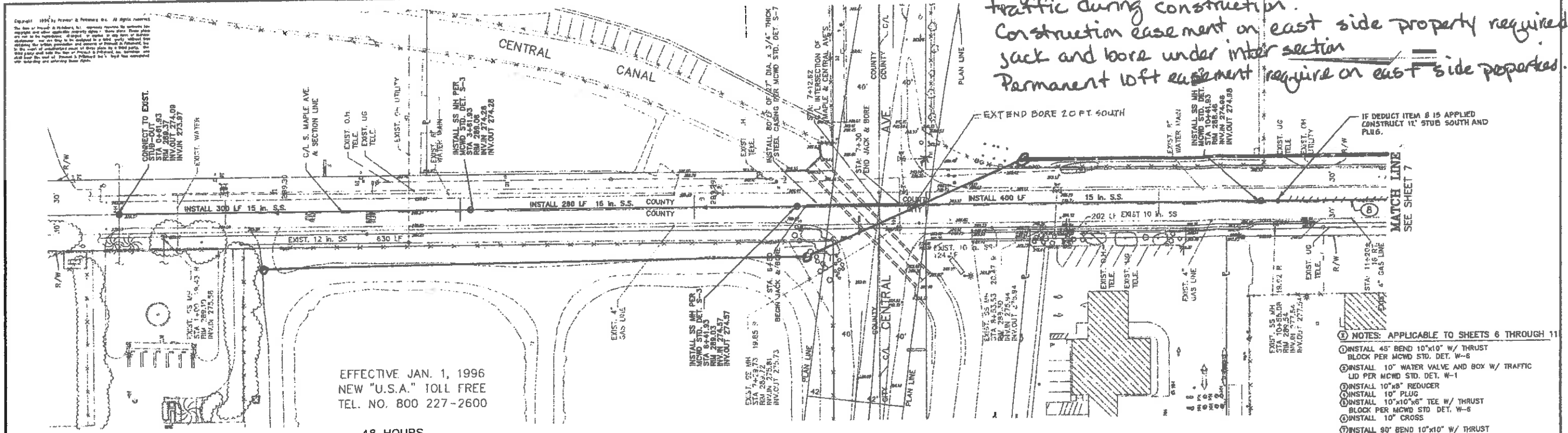
DESIGN ENGINEER: _____
DATE: _____ C.E. LICENSE NO. _____
JOB NO. 9510101 Date Revised: _____
Dwg. No. 95-0203 Approved: _____

SCALE: HORZ 1"=40' VERT. 1"=4'
DRAWN BY: PK
REVISED: 10-13-95 (1-60-96)
SHEET 8 OF 62 SHEETS

FIGURES

Note: Alignment reflects need to keep intersection open for traffic during construction.
 Construction easement on east side property required for jack and bore under intersection
 Permanent left easement require on east side property.

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 The firm of Provost & Pritchard, Inc. represents the engineering and design services for the project. It is the responsibility of the contractor to verify the location of all utility lines and other improvements and protect them from damage.



EFFECTIVE JAN. 1, 1996
 NEW "U.S.A." TOLL FREE
 TEL. NO. 800 227-2600

48 HOURS
 BEFORE EXCAVATING
 CALL "U.S.A." TOLL FREE
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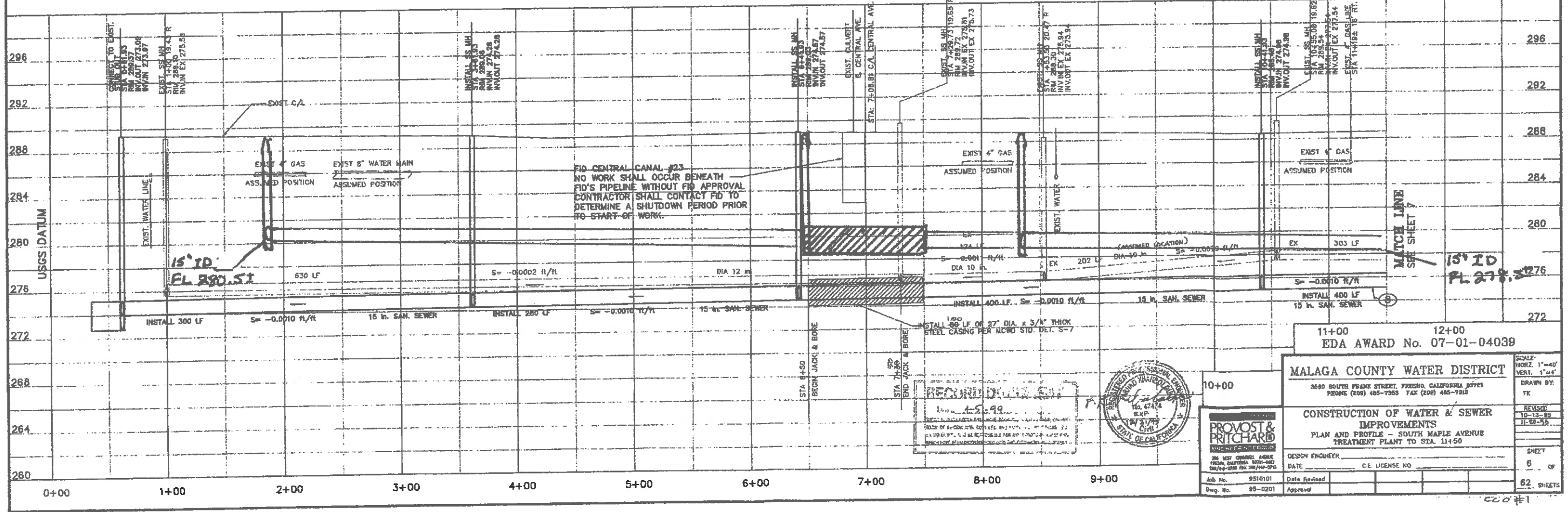
SOUTH MAPLE AVENUE

NOTE: CONTRACTOR SHALL VERIFY IN FIELD THE LOCATION OF ALL UTILITY LINES AND OTHER IMPROVEMENTS AND PROTECT THEM FROM DAMAGE.

LEGEND:

— CITY — APPROXIMATE CITY/COUNTY LIMIT LINE
 — COUNTY —

- NOTES: APPLICABLE TO SHEETS 6 THROUGH 11
- 1. INSTALL 45° BEND 10"x10" W/ THRUST BLOCK PER MCWD STD. DET. W-6
 - 2. INSTALL 10" WATER VALVE AND BOX W/ TRAFFIC LID PER MCWD STD. DET. W-1
 - 3. INSTALL 10" W/8" REDUCER
 - 4. INSTALL 10" PLUG
 - 5. INSTALL 10"x10"x6" TEE W/ THRUST BLOCK PER MCWD STD. DET. W-6
 - 6. INSTALL 10" CROSS
 - 7. INSTALL 90° BEND 10"x10" W/ THRUST BLOCK PER MCWD STD. DET. W-6
 - 8. INSTALL 8"x8"x6" TEE W/ THRUST BLOCK PER MCWD STD. DET. W-6
 - 9. INSTALL F.H. ASSEMBLY PER MCWD STD. DET. W-2
 - 10. INSTALL F.H. PROTECTION POSTS PER MCWD STD. DET. W-3
 - 11. INSTALL BLOW OFF ASSEMBLY PER STD. DET. W-7
 - 12. INSTALL THE ROD PER DETAIL ON SHEET 50



FID CENTRAL CANAL #23
 NO WORK SHALL OCCUR BENEATH FID'S PIPELINE WITHOUT FID APPROVAL
 CONTRACTOR SHALL CONTACT FID TO DETERMINE A SHUTDOWN PERIOD PRIOR TO START OF WORK.

11+00 12+00
 EDA AWARD No. 07-01-04039

MALAGA COUNTY WATER DISTRICT
 2650 SOUTH FRANK STREET, FRESNO, CALIFORNIA 93705
 PHONE (209) 485-7355 FAX (209) 485-7818

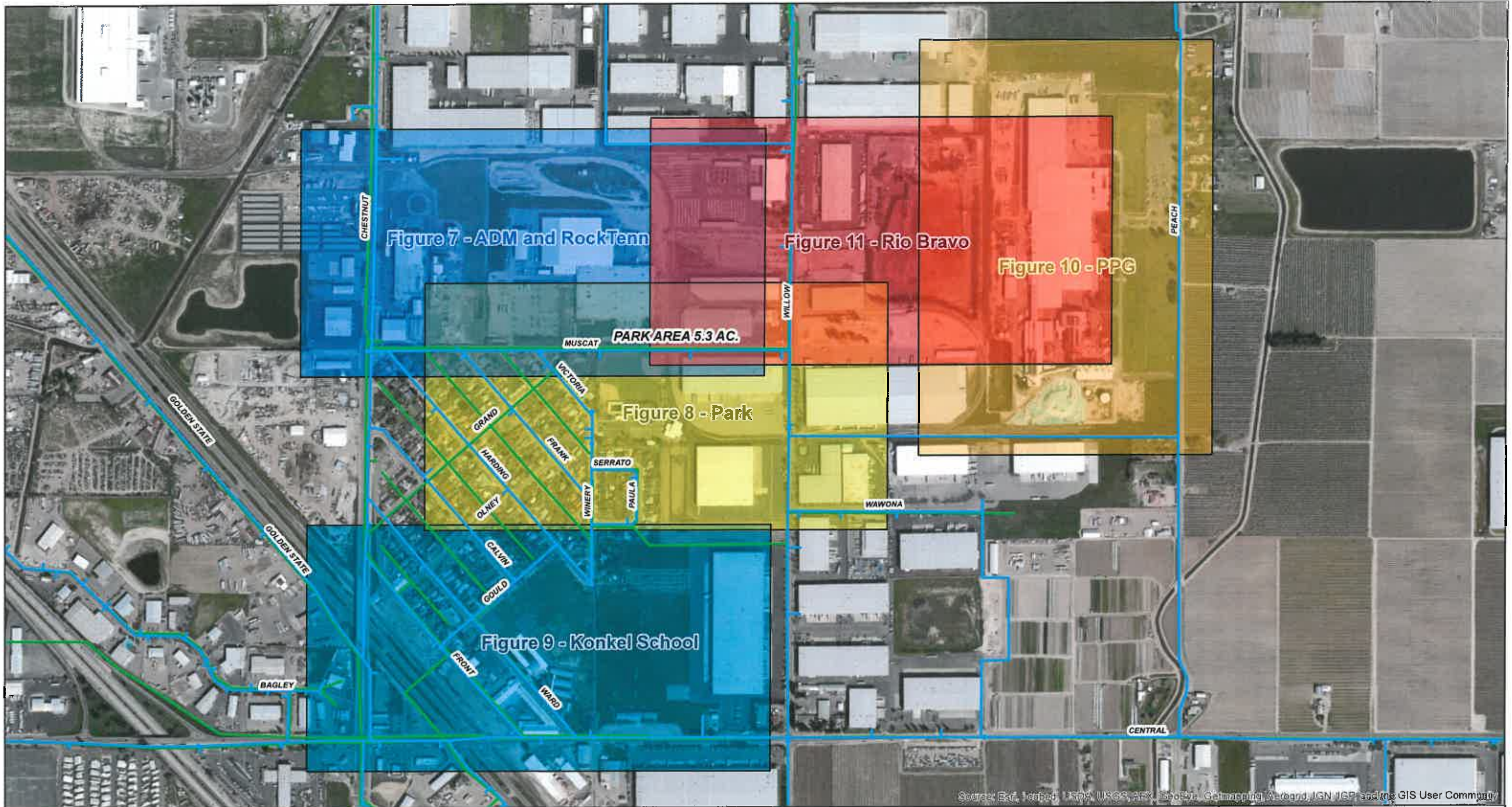
CONSTRUCTION OF WATER & SEWER IMPROVEMENTS
 PLAN AND PROFILE - SOUTH MAPLE AVENUE
 TREATMENT PLANT TO STA. 11+50

DESIGN ENGINEER: C.E. LICENSE NO. _____
 DATE: _____
 SHEET 6 OF 62 SHEETS



PROVOST & PRITCHARD
 200 WEST CORNELL AVENUE
 FRESNO, CALIFORNIA 93705
 TEL (209) 485-7355 FAX (209) 485-7818

FIGURE 5A



0 300 600 Feet



EST. 1968
PROVOST & PRITCHARD
 CONSULTING GROUP
 An Employee Owned Company

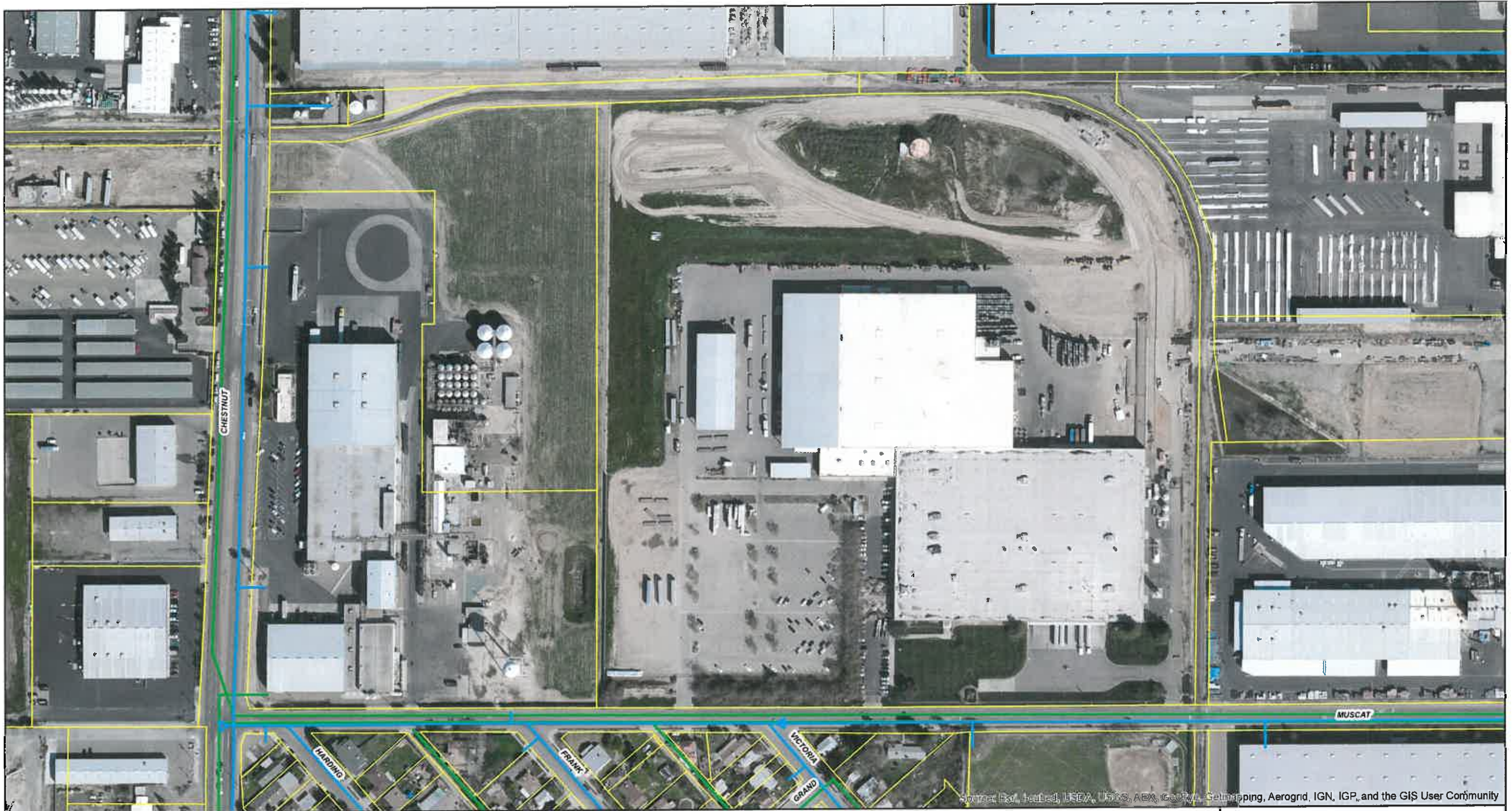
286 W. Cromwell Ave.
 Fresno, CA 93711-6162
 (559) 449-2700

Legend

- Existing Water Main
- Existing Sewer Main
- Figure 7 - ADM and RockTenn
- Figure 8 - Park
- Figure 9 - Konkel School
- Figure 10 - PPG
- Figure 11 - Rio Bravo

Figure 6

Potential Reclamation Sites
 Sheet Index
 Malaga CWD



0 100 200 Feet



EST. 1968
PROVOST & PRITCHARD
 CONSULTING GROUP
 An Employee Owned Company

286 W. Cromwell Ave.
 Fresno, CA 93711-6162
 (559) 449-2700

Legend

-  Existing Water Main
-  Existing Sewer Main
-  Fresno County Parcel

Figure 7

Reclamation Alternatives
 ADM and RockTenn
 Malaga CWD

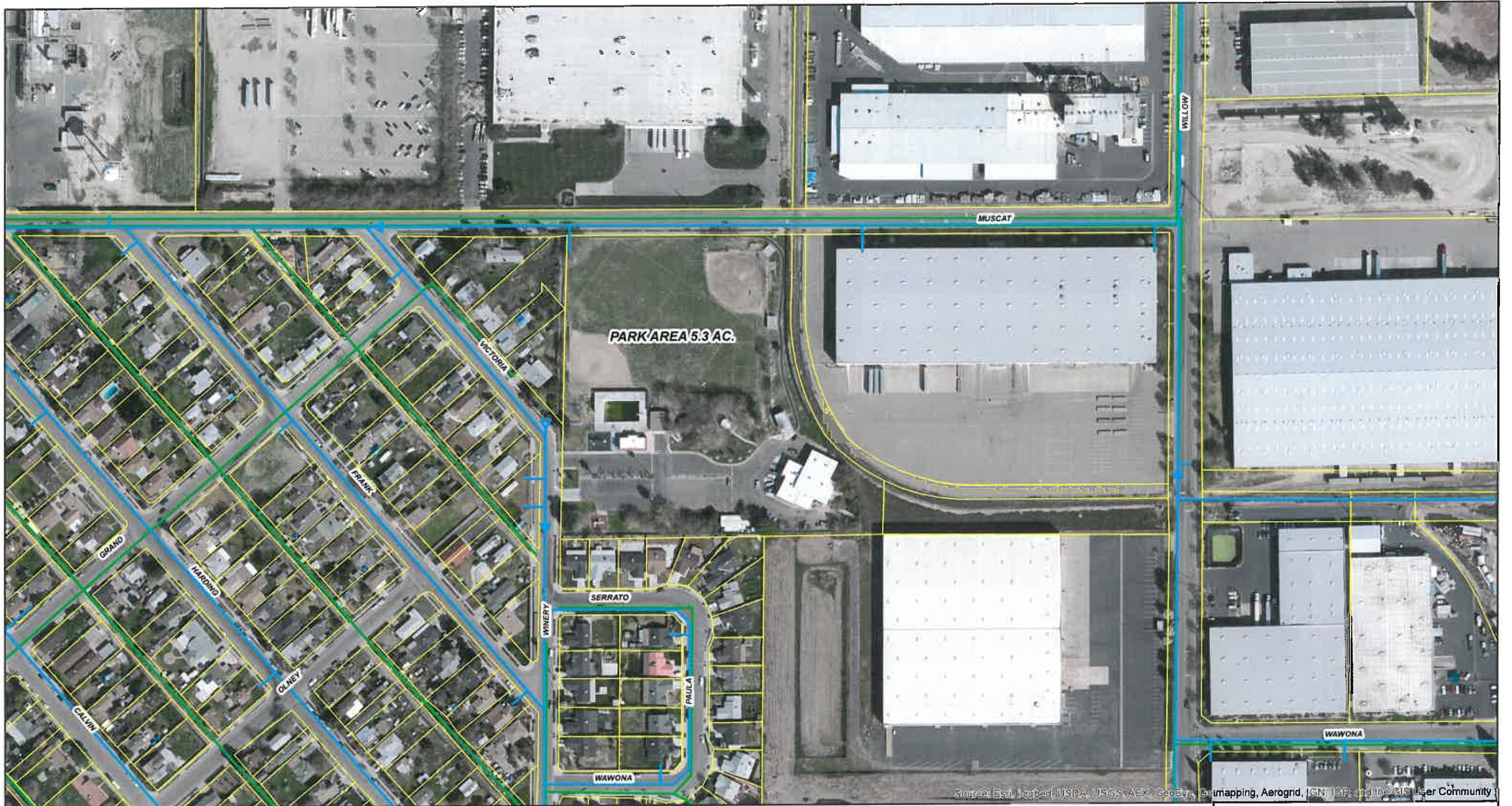


Figure 8

Reclamation Alternatives
Community Park Property
Malaga CWD

0 100 200 Feet



EST. 1968
PROVOST & PRITCHARD
CONSULTING GROUP
An Employee Owned Company

286 W. Cromwell Ave.
Fresno, CA 93711-6162
(559) 449-2700

Legend

- Existing Water Main
- Existing Sewer Main
- Fresno County Parcel



0 100 200 Feet

PROVOST & PRITCHARD
CONSULTING GROUP
An Employee Owned Company

286 W. Cromwell Ave.
Fresno, CA 93711-6162
(559) 449-2700

Legend

- Existing Water Main
- Existing Sewer Main
- ▭ Fresno County Parcel

Figure 9
Disposal Alternatives
Konkel School Property
Malaga CWD



PROVOST & PRITCHARD
CONSULTING ENGINEERS
An Employee Owned Company

286 W. Cromwell Ave.
Fresno, CA 93711-6162
(559) 449-2700

Legend

- Existing Water Main
- Existing Sewer Main
- Fresno County Parcel

Source Esri, Intellicast, USDA, USDA, Alza, GeoEye, AeroGRID, IGN, Inc, The US User Community

Figure 10

Reclamation Alternatives
PPG Property
Malaga CWD



Source: Esri, -cubed, USDA, USGS, Aero, GeoEye, Germany, AeroGrid, IGN, IGT, and the GIS User Community

0 100 200 Feet

PROVOST & PRITCHARD
EST. 1988
CONSULTING GROUP
An Employee Owned Company

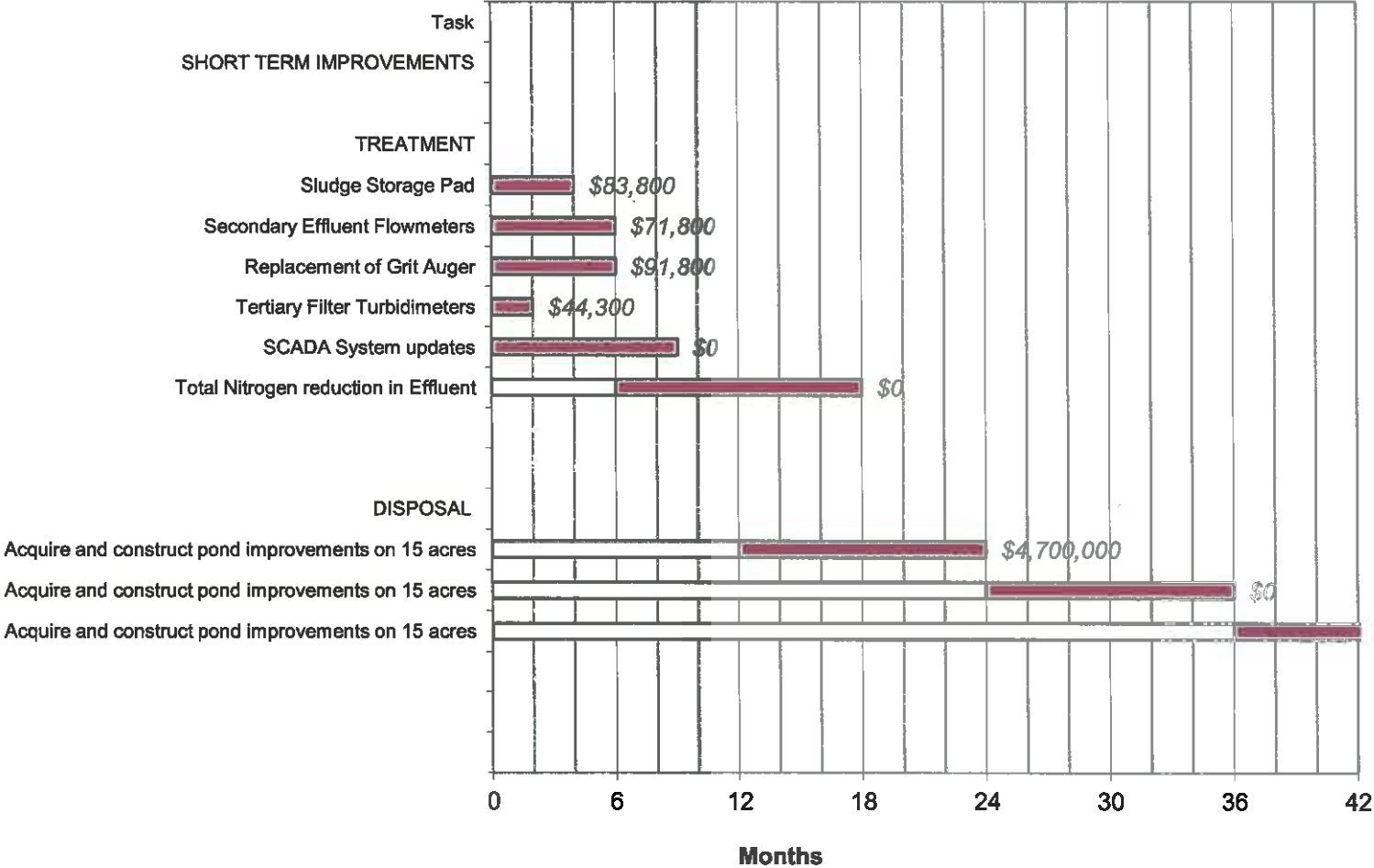
286 W. Cromwell Ave.
Fresno, CA 93711-6162
(559) 449-2700

- Legend**
- Existing Water Main
 - Existing Sewer Main
 - Fresno County Parcel

Figure 11
Reclamation Alternatives
Rio Bravo Property
Malaga CWD

FIGURE 12

**Malaga County Water District
Short term Treatment and Disposal Facilities Improvement Schedule**



Appendix F
Resolution 812-2014A (Rescind Moratorium)

RESOLUTION 812-2014A

**A RESOLUTION OF THE BOARD OF DIRECTORS OF THE
MALAGA COUNTY WATER DISTRICT REPEALING RESOLUTION
NO. 10-13-2009 RELATING TO THE IMPOSITION OF A MORATORIUM
ON NEW CONNECTIONS FOR WATER AND SEWER SERVICE**

WHEREAS, on October 13, 2009, the Board of Directors of the Malaga County Water District adopted a resolution imposing a moratorium on the establishment of new connections for water and sewer service within the boundaries of the Malaga County Water District; and

WHEREAS, the Board of Directors of the Malaga County Water District desires to and hereby does repeal said ordinance, Ordinance No. 10-13-2009.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE MALAGA COUNTY WATER DISTRICT THAT:

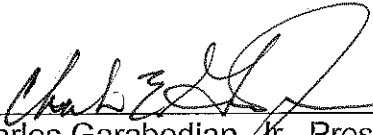
1. The foregoing recitals are true and correct.
2. That Resolution No. 10-13-2009, adopted by this Board on October 13, 2009, is hereby repealed.

Passed and adopted by the Board of Directors of the Malaga County Water District at their meeting held on this 12th day of Aug 2014, by the following vote:

AYES: F.CERRILLO, S.CERRILLO, C.GARABEDIAN JR. , I CASTANEDA, C. TOVAR JR.

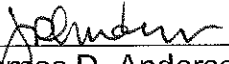
NOES: NONE

ABSENT: NONE



Charles Garabedian, Jr., President
Malaga County Water District

ATTEST: NONE



James D. Anderson, General Manager-
Secretary of the Board of Directors
Malaga County Water District



**SUMMARY ACTION MINUTES
BOARD OF DIRECTORS MEETING
MALAGA COUNTY WATER DISTRICT
3580 SOUTH FRANK STREET
FRESNO, CALIFORNIA 93725
TUESDAY AUGUST 12, 2014, 7:00PM**

1. **Call to order:** President Charles Garabedian Jr. Called the Meeting to Order at 7:00PM.
2. **Roll call:**
- 2A. **Directors present:** President Charles Garabedian, Jr., Vice President Salvador Cerrillo, Director Irma Castaneda, and Director Carlos Tovar Jr. Absent: Frank Cerrillo Jr.
- 2B. **Others present:** Legal Counsel Neal Costanzo, James Anderson, Laurie Cortez, & Farah Lepe-Pelayo,
3. **Certification:** Certification was made that the Board Meeting Agenda was posted 72 hours before the meeting.
4. **Regular Business:**
- 4A. **Minutes:** Enclosed are the minutes of the Regular Board Meeting of 07/22/2014, & the minutes of the Special Board Meeting of 08/05/2014 for review & approval
(Recommend action: Approve the minutes of the Regular Board Meeting of 07/22/2014, & the Special Meeting Minutes of 08/05/2014 as submitted or modified)
CCGCT MOTION BY VICE PRESIDENT CERRILLO, SECONDED BY DIRECTOR CERRILLO, AND BY A 5-0 VOTE, APPROVED THE MINUTES OF THE REGULAR BOARD MEETING OF 07/22/2014, & THE SPECIAL MEETING MINUTES OF 08/05/2014, AS SUBMITTED
- 4B. **Accounts Payable & Financial Statement for the period 07/01/2014-07/31/2014:** The above listed reports are included for review & approval. (Will be presented at the Board Meeting)
(Recommended Action: Review & approve the accounts payable & financial statements for the period: 07/01/2014 – 07/31/2014, as submitted or modified)
CCGCT MOTION BY VICE PRESIDENT CERRILLO, SECONDED BY DIRECTOR CASTANEDA, AND BY A 5-0 VOTE, APPROVED ACCOUNTS PAYABLE & FINANCIAL STATEMENT FOR THE PERIOD 07/01/2014-07/31/2014 AS SUBMITTED
5. **New Business:**
- 5A. **Computer Technology Solutions (CTS):** Report from CTS for completion of the server network installation and requirements for enhanced internet capability to support it.
PRESENTATION WAS DONE BY CTS
- 5B. **Resolution No. 08-12-2014:** Consideration and necessary action on Resolution No. 08-12-2014 implementing additional emergency water restrictions.
(Recommend Action: Approve Resolution No. 08-12-2014, implementing additional emergency water restrictions)
CCGCT MOTION BY VICE PRESIDENT CERRILLO, SECONDED BY DIRECTOR CASTANEDA, AND BY A 5-0 VOTE, APPROVED RESOLUTION NO. 08-12-2014, IMPLEMENTING ADDITIONAL EMERGENCY WATER RESTRICTIONS, AS SUBMITTED

5. **New Business – Continued:**
- 5C. **Consideration and necessary action on a Resolution No. 08-12-2014A rescinding Resolution No. 10-13-09:** Resolution 10-13-09 was passed by the Board on October 13, 2009, imposing moratorium on the establishment of new connections for water and sewer service within the boundaries of the Malaga County Water District
(Recommend Action: Approve Resolution No. 08-12-14A)
CCGCT MOTION BY VICE PRESIDENT CERRILLO, SECONDED BY DIRECTOR CERRILLO, AND BY A 5-0 VOTE, APPROVED RESOLUTION NO. 08-12-2014A, AS SUBMITTED
- 5D. **Bid from Bruno's Salvage:** Bruno's Salvage gave MCWD a bid for scrap equipment at the WWTF. \$180/ton for the road grater, flusher truck, dump truck, forklift and trailer. \$140/ton for the utility truck. \$210/ton for assorted scrap parts for valves, motors and pumps that cannot be reused.
(Recommend Action: Accept bid received from Bruno's Salvage)
CONSISTENCE OF THE BOARD TO SELL EVERYTHING BUT THE TRAILER
- 5E. **Discussion of changes to the Master Fee Schedule Chapter 3, item 14:**
(Recommend Action: Approve the new wording of the use of the multipurpose room or other facilities for memorial services.)
ITEM WAS TABLED
6. **Old Business:**
2013 Wastewater Treatment Facility Improvements Payment Request: On Tuesday, May 13, 2014 a progress payment request for \$65,547.63 was submitted to the Board but was withheld until receipt of the signed pay request from Michael Taylor. The signed pay request has now been received.
(Recommend Action: Proceed with payment of \$65,547.63 to Hobbs Construction for work done at the WWTF)
CCGCT MOTION BY DIRECTOR CASTANEDA, SECONDED BY DIRECTOR CERRILLO, AND BY A 5-0 VOTE, APPROVED TO PROCEED WITH THE PAYMENT OF \$65,547.63 TO HOBBS CONSTRUCTION FOR WORK DONE AT THE WWTF, AS SUBMITTED
7. **Engineer's Report(s):**
- 7A. **District Engineer's Report:**
2013 Wastewater Treatment Facility Improvements: The work is approximately 96% complete, a final punch list is being prepared.
 A progress payment request is attached for \$109,164.97, total retention to date is \$14,060.28.
(Recommend Action: Authorize payment of \$109,164.97 to Hobbs Construction.)
CCGCT MOTION BY VICE PRESIDENT CERRILLO , SECONDED BY DIRECTOR CASTANEDA, AND BY A 5-0 VOTE, AUTHORIZED PAYMENT OF \$109,164.97 TO HOBBS CONSTRUCTION, AS SUBMITTED
- 7B. **CDBG Engineer's Report:** no reports for this meeting
8. **Recreation Reports:** Please see attachments
- (a) **Events Coordinator's Report:**
- (b) **Sports Coordinator's Report:**

9. **General Manager's Report:**

- 9A1. Office report
- 9A2. WWTF report
- 9A3. Water report
- 9A4. Recreation center report
- 9A5. Pretreatment program update
- 9A6. Other

Discussions were held, no reportable action was taken.

10. **President's Report:**

No reports for this meeting.

11. **Vice President's Report:**

No reports for this meeting.

12. **Director' Report:**

Frank Cerrillo: Commented about a picnic shelter rental and there being no reserved sign. Discussions were held no reportable actions were taken.

13. **Legal Counsel Report:**

14 **Communications:**

14A. **Written Communications – Correspondence:**

14A1. **Letter from Fresno Irrigation District (FID):** letter from FID to State Water Board concerning discharge from MCWD WWTF into the Central Canal.

14B. **Verbal Communications – Public Comments:** The Public may address the Malaga County Water District Board on item(s) of interest within the jurisdiction of the Board, not appearing on the agenda. The Board will listen to comments presented; however, in compliance with the Brown Act, the Board cannot take action on items that are not on the agenda. The public should address the Board on agenda items at the time they are addressed by the Board. All speakers are requested to wait until recognized by the Board President.

Public Comment Limitations: All Comments will be limited to three **(3)** minutes or less per individual/group per item per meeting, with a fifteen **(15)** minutes maximum.

15. **Closed Session:**

15A. **Personnel (Government Code Section 54957(b).):**

15B. **Pending Litigation (Government Code Section 54956.9.):**

Board went into Closed Session at: 9:03pm


Board returned from Closed Session at: 9:50pm

President Garabedian announced that discussions were held; but, no reportable action was taken by the Board in Closed Session.

16. **Adjournment:** Meeting adjourned at 9:51pm

Appendix G
Memorandum to MCWD dated October 24, 2014

MEMORANDUM

To: Malaga County Water District, Jim Anderson
From: Michael Taylor 
Subject: WWTP Water Balance
Date: October 24, 2014



Based on the recent monitoring of actual water level changes in Ponds 5, 6, and 7, which were isolated during portions of the months of July through October, 2014, the estimated percolation rate in the wastewater disposal ponds is 1.66 inches per day. It is noted that the previous estimated percolation rate (from 2008) was 0.60 inches per day. This updated percolation rate demonstrates a significant improvement in pond percolation rates. This improvement is a direct result of Malaga County Water District commitment during the previous six (6) years to scrape and rip the disposal ponds at the WWTP.

When the percolation rate of 1.66 inches per day is applied to a 100 Year Rainfall Water Balance, the existing ponds at the WWTP may be able to dispose of approximately 1.085 mgd (see attached water balance).

It is noted that the percolation rate of the ponds will decrease with use as dust and other particulates will settle on the pond bottom. When a factor of 75 percent is applied to the measured percolation rate, a resulting conservative value is 1.24 inches per day. When the percolation rate of 1.24 inches per day is applied to the 100 Year Rainfall Water Balance, the existing ponds at the WWTP may be able to dispose of approximately 0.821 mgd (see attached water balance).

It is recommended that this information is reviewed and forwarded to the RWQCB for consideration in establishing discharge limits for the new Waste Discharge Requirements to be adopted for the facilities. The efforts taken by the District over the past six (6) years has had significant impact in improving the on-site disposal capacity at the site, as evidenced by the recent pond percolation tests.

Also attached with this memorandum is a spreadsheet that allows the District to readily check that the necessary Available Capacity in the disposal ponds is available prior to each winter. For example, information regarding freeboard in the disposal ponds as of October 22, 2014 have been entered into the table. The ponds presently have approximately 34,825,885 gallons of capacity available. The 100 Year Rainfall Water

Balance indicates that the District must have at least 13,700,000 gallons of available capacity. The actual available capacity greatly exceeds the minimum requirement.

In addition, please refer to the attached Table 1 that includes monthly influent flowrates. Based on the current influent flowrates, and an estimated annual growth rate of 2 percent, the Malaga County Water District would not rely upon discharge to the Central Canal for approximately 23 years. It is recommended that the flowrate projection is updated each calendar year.

It is recommended that the District continue the annual rotation of scraping and ripping the existing ponds. In addition, it is recommended that the District isolate a pond every two years and monitor the actual change of water level so as to be able to update the estimated pond percolation rate.

Based on the information associated with current pond percolation rates, it is recommended that the present discharge flowrate limitation of 0.85 mgd to the disposal ponds is still viable for the Malaga County Water District.

Please contact me if you need additional information or if you have any questions.

Thank you.

Malaga County Water District
Wastewater Treatment & Disposal Facilities
Estimated Capacity Wastewater Disposal - 100 Year Rainfall Water Balance, Discharge and Storage

DATA:

Month	Number of Days per Month	100 Yr. Rainfall ^{1/} (in/month)	100 Yr. Evaporation ^{3/} (in/month)
January	31	5.14	0.90
February	28	3.70	1.46
March	31	4.53	2.09
April	30	2.76	3.71
May	31	0.01	6.21
June	30	0.31	6.85
July	31	0.00	8.14
August	31	0.00	6.99
September	30	1.10	4.68
October	31	1.58	3.09
November	30	3.16	1.20
December	31	1.59	0.85
Total	365	23.88	46.17

Discharge to canal 0 MGD

Daily Effluent Production^{5/} = 1,085,000 gpd

Pond Wet Area^{7/} = 23.24 acres

Pond Storage = 185.9 ac-ft

Pond Percolation Rate = 1.66 in/day

Additional Pond Wet Area = 6.21 acres

Additional Pond Storage = 0.0 ac-ft

Estimated Pond Percolation Rate = 1.00 in/day

Total Storage = 185.9 ac-ft

Total Storage = 60,682,302 gal

Total Area = 23.2 acres

8 ft deep

6 ft deep

Total (gal)

WWTF POND CALCULATIONS:

Effluent Produced (gal/month)	Effluent To Canal (gal/month)	Effluent to Ponds (gal/month)	Surface Rainfall ^{19/} (gal/month)	Surface Evaporation ^{20/} (gal/month)	Pond Percolation ^{21/} (gal/month)	Monthly Change in Storage (gal/month)	Required Storage Capacity ^{23/} (gal)
33,635,000	0	33,635,000	3,243,677	567,959	32,474,638	3,836,080	8,030,702
30,380,000	0	30,380,000	2,334,943	921,356	29,331,931	2,481,658	10,492,358
33,635,000	0	33,635,000	2,858,727	1,318,927	32,474,638	2,700,162	13,192,520
32,550,000	0	32,550,000	1,741,741	2,341,254	31,427,089	523,418	13,715,938
33,635,000	0	33,635,000	6,311	3,918,918	32,474,638	(2,752,245)	10,963,693
32,550,000	0	32,550,000	195,630	4,322,800	31,427,089	(3,004,239)	7,959,454
33,635,000	0	33,635,000	0	5,138,874	32,474,638	(3,976,512)	3,982,942
33,635,000	0	33,635,000	0	4,411,149	32,474,638	(3,250,787)	732,155
32,550,000	0	32,550,000	694,172	2,953,387	31,427,089	(1,136,284)	0
33,635,000	0	33,635,000	997,084	1,949,993	32,474,638	207,453	207,453
32,550,000	0	32,550,000	1,994,167	757,279	31,427,089	2,359,819	2,567,272
33,635,000	0	33,635,000	1,003,394	536,406	32,474,638	1,627,350	4,194,622
Total (gal)	0	398,625,000	15,089,846	29,136,302	382,362,673	-404,129	* Start at 0 Stored September 1st

-404,129

1/ Rainfall Data per the Western Regional Climate Center.

3/ Evaporation data per WRCC X 0.75

5/ Design Capacity Effluent Production

7/ Total existing wet area of the existing lagoons.

19/ Surface Rainfall = Volume of 100 Year rainfall on the existing WWTF treatment and storage ponds and proposed storage ponds.

20/ Surface Evaporation = Volume of effluent and rain water evaporating from the existing WWTF treatment and disposal ponds.

21/ Pond Percolation = Volume of effluent and rain water percolating into the ground for existing ponds 1 through 8.

23/ Required Storage = Theoretical starting point Sept. 1st where pond storage starts at zero with monthly contributions.

36/ Maximum Storage Needed = Peak end of month pond storage volume needed (gallons & ac-ft).

37/ Storage Available from all ponds = Total volume of available storage.

39/ Check Balance = Comparison of this value with total wastewater processed.

Maximum Required storage	13,715,938
Total Storage Available ^{37/}	60,582,302 gal
Extra Storage:	46,866,364 gal
	144 ac-ft
Total Effluent Production:	396,025,000 gal
Total Effluent Exported:	0 gal
Total Surface Rainfall ^{19/} :	15,069,846 gal
Total Evaporation ^{20/} :	29,136,302 gal
Total Percolation ^{21/} :	382,362,673 gal
Effluent Applied to Crop:	0 gal
Check Balance^{39/}	396,429,129 gal

Updated: 10/24/14

Print Date: 10/24/14



Malaga County Water District
Wastewater Treatment & Disposal Facilities
Estimated Capacity Wastewater Disposal - 100 Year Rainfall Water Balance, Discharge and Storage

DATA:

Month	Number of Days per Month	100 Yr. Rainfall ^{1/} (in/month)	100 Yr. Evaporation ^{3/} (in/month)
January	31	5.14	0.90
February	28	3.70	1.46
March	31	4.53	2.09
April	30	2.76	3.71
May	31	0.01	6.21
June	30	0.31	6.85
July	31	0.00	8.14
August	31	0.00	6.99
September	30	1.10	4.68
October	31	1.58	3.09
November	30	3.16	1.20
December	31	1.59	0.85
Total	385	23.88	46.17

Discharge to canal 0 MGD

Daily Effluent Production ^{5/} = 821,000 gpd

Pond Wet Area ^{7/} = 23.24 acres

Pond Storage = 185.9 ac-ft

Pond Percolation Rate = 1.24 in/day

Additional Pond Wet Area = 6.21 acres

Additional Pond Storage = 0.0 ac-ft

Estimated Pond Percolation Rate = 1.00 in/day

Total Storage = 185.9 ac-ft

Total Storage = 60,582,302 gal

Total Area = 23.2 acres

WWTF POND CALCULATIONS:

Effluent Produced (gal/month)	Effluent To Canal (gal/month)	Effluent to Ponds (gal/month)	Surface Rainfall ^{19/} (gal/month)	Surface Evaporation ^{20/} (gal/month)	Pond Percolation ^{21/} (gal/month)	Monthly Change in Storage (gal/month)	Required Storage Capacity ^{23/} (gal)
25,451,000	0	25,451,000	3,243,677	567,959	24,258,163	3,868,555	8,159,554
22,988,000	0	22,988,000	2,334,943	921,356	21,910,599	2,490,988	10,850,542
25,451,000	0	25,451,000	2,858,727	1,318,927	24,258,163	2,732,637	13,383,179
24,630,000	0	24,630,000	1,741,741	2,341,254	23,475,642	554,845	13,938,024
25,451,000	0	25,451,000	6,311	3,918,918	24,258,163	(2,719,770)	11,218,254
24,630,000	0	24,630,000	195,630	4,322,800	23,475,642	(2,872,812)	8,245,442
25,451,000	0	25,451,000	0	5,136,874	24,258,163	(3,944,937)	4,301,405
25,451,000	0	25,451,000	0	4,411,149	24,258,163	(3,218,312)	1,083,093
24,630,000	0	24,630,000	694,172	2,953,387	23,475,642	(1,104,857)	0
25,451,000	0	25,451,000	997,084	1,949,993	24,258,163	239,928	239,928
24,630,000	0	24,630,000	1,994,167	757,279	23,475,642	2,391,246	2,831,174
25,451,000	0	25,451,000	1,003,394	536,406	24,258,163	1,659,825	4,290,999
Total (gal)	0	299,685,000	15,099,846	29,136,302	285,620,308	-21,764	Start at 0 Stored September 1st
		919.6	0.0	919.6	46.2	89.4	876.5

-21,764

Maximum Required storage	13,938,024
Total Storage Available ^{37/}	60,582,302 gal
Extra Storage:	46,644,278 gal
	143 ac-ft
Total Effluent Production:	299,685,000 gal
Total Effluent Exported:	0 gal
Total Surface Rainfall ^{19/} :	15,099,846 gal
Total Evaporation ^{20/} :	29,136,302 gal
Total Percolation ^{21/} :	285,620,308 gal
Effluent Applied to Crop:	0 gal
Check Balance ^{38/}:	299,686,764 gal

1/ Rainfall Data per the Western Regional Climate Center.

3/ Evaporation data per WRCC X 0.75

5/ Design Capacity Effluent Production

7/ Total existing wet area of the existing lagoons.

19/ Surface Rainfall = Volume of 100 Year rainfall on the existing WWTF treatment and storage ponds and proposed storage ponds.

20/ Surface Evaporation = Volume of effluent and rain water evaporating from the existing WWTF treatment and disposal ponds.

21/ Pond Percolation = Volume of effluent and rain water percolating into the ground for existing ponds 1 through 8.

23/ Required Storage = Theoretical starting point Sept. 1st where pond storage starts at zero with monthly contributions.

36/ Maximum Storage Needed = Peak end of month pond storage volume needed (gallons & ac-ft).

37/ Storage Available from all ponds = Total volume of available storage.

38/ Check Balance = Comparison of this value with total wastewater processed.

Updated: 10/24/14

Print Date: 10/24/14



Malaga County Water District

Available Disposal Pond Capacity as of October 22, 2014

Pond	Freeboard (ft)	Available Depth (ft)	Acreage (acres)	Available Capacity (acre-ft)	Available Capacity (gal)	Total Depth (ft)
1	2.5	0.5	1.29	0.645	210,160	8
2	8	6	0.76	4.56	1,485,779	8
3	8	6	2.59	15.54	5,063,380	8
4	8	6	2.5	15	4,887,432	8
5	3.2	1.2	3.07	3.684	1,200,353	8
6	5.5	3.5	4.29	15.015	4,892,319	8
7	8	6	4.79	28.74	9,364,320	8
8	8	6	3.95	23.7	7,722,143	8
Total			23.24	106.884	34,825,885	

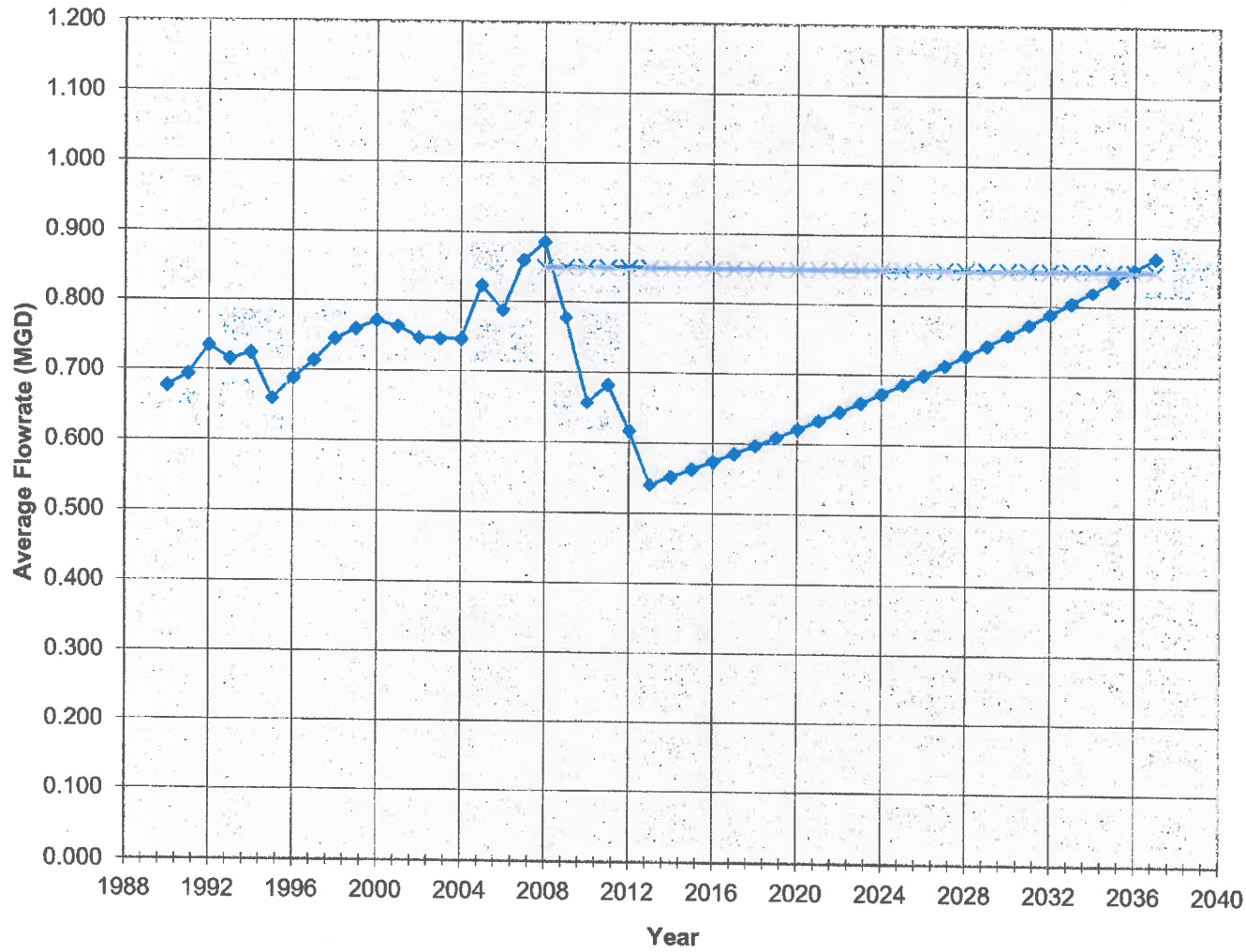
Note: A minimum of 2 ft. of freeboard is required. 2 ft. freeboard equates to 0 AF available capacity.

TABLE 1

MALAGA COUNTY WATER DISTRICT
 WASTEWATER TREATMENT PLANT
 MONITORING AND REPORTING PROGRAM NO. 2008-0033
 NPDES NO. CA 0084239

YEAR	AVERAGE FLOWRATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
		31 31	28 29	31 31	30 30	31 31	30 30	31 31	31 31	30 30	31 31	30 30	31 31
1990	0.677	0.660	0.667	0.694	0.610	0.688	0.709	0.652	0.664	0.679	0.726	0.741	0.632
1991	0.694	0.642	0.651	0.694	0.687	0.684	0.697	0.682	0.703	0.728	0.712	0.713	0.731
1992	0.735	0.727	0.741	0.735	0.681	0.679	0.740	0.753	0.768	0.743	0.768	0.756	0.729
1993	0.716	0.727	0.720	0.724	0.721	0.715	0.703	0.705	0.712	0.714	0.703	0.709	0.734
1994	0.724	0.748	0.739	0.743	0.743	0.745	0.740	0.739	0.737	0.731	0.722	0.669	0.636
1995	0.660	0.638	0.635	0.621	0.614	0.626	0.636	0.641	0.695	0.699	0.705	0.709	0.699
1996	0.688	0.671	0.680	0.676	0.690	0.690	0.689	0.692	0.691	0.686	0.694	0.696	0.705
1997	0.714	0.686	0.681	0.681	0.690	0.704	0.715	0.711	0.740	0.756	0.722	0.734	0.749
1998	0.745	0.744	0.743	0.737	0.772	0.755	0.756	0.738	0.775	0.740	0.739	0.706	0.738
1999	0.760	0.753	0.753	0.735	0.746	0.765	0.762	0.778	0.780	0.770	0.761	0.760	0.751
2000	0.772	0.723	0.744	0.738	0.754	0.783	0.767	0.772	0.808	0.770	0.795	0.797	0.810
2001	0.763	0.776	0.771	0.701	0.810	0.755	0.780	0.750	0.770	0.773	0.759	0.760	0.756
2002	0.748	0.742	0.750	0.737	0.748	0.745	0.737	0.746	0.740	0.755	0.754	0.753	0.763
2003	0.747	0.752	0.752	0.737	0.750	0.740	0.746	0.758	0.742	0.740	0.750	0.747	0.745
2004	0.746	0.760	0.737	0.722	0.717	0.734	0.760	0.750	0.750	0.770	0.750	0.750	0.750
2005	0.823	0.860	0.780	0.760	0.770	0.763	0.870	0.960	0.935	0.964	0.740	0.778	0.700
2006	0.788	0.740	0.740	0.760	0.744	0.757	0.806	0.849	0.882	0.803	0.820	0.798	0.752
2007	0.860	0.785	0.820	0.805	0.867	0.770	0.964	1.001	0.960	1.020	0.823	0.746	0.763
2008	0.887	0.990	0.840	0.760	0.760	0.909	0.970	0.955	0.949	0.909	0.829	0.900	0.870
2009	0.778	0.830	0.800	0.820	0.740	0.800	0.900	0.830	0.750	0.800	0.720	0.670	0.680
2010	0.658	0.512	0.431	0.650	0.580	0.640	0.720	0.740	0.750	0.740	0.710	0.710	0.710
2011	0.683	0.670	0.640	0.690	0.690	0.630	0.740	0.710	0.730	0.730	0.700	0.640	0.620
2012	0.618	0.630	0.600	0.630	0.690	0.620	0.680	0.660	0.640	0.610	0.590	0.520	0.540
2013	0.541	0.560	0.450	0.520	0.570	0.560	0.530	0.600	0.610	0.550	0.560	0.510	0.490
2014	0.552												
2015	0.563												
2016	0.574												
2017	0.585												
2018	0.597												
2019	0.609												
2020	0.621												
2021	0.634												
2022	0.646												
2023	0.659												
2024	0.673												
2025	0.686												
2026	0.700												
2027	0.714												
2028	0.728												
2029	0.743												
2030	0.757												
2031	0.773												
2032	0.788												
2033	0.804												
2034	0.820												
2035	0.836												
2036	0.853												
2037	0.870												

Malaga County Water District Wastewater Treatment Plant Flowrates



Appendix H
Memorandum to MCWD dated December 29, 2014

MEMORANDUM

To: Malaga County Water District, Jim Anderson
From: Michael Taylor
Subject: WWTP Water Balance
Date: December 29, 2014



This memorandum serves as an update to the memorandum dated October 24, 2014. Pursuant to questions presented by the RWQCB on December 19, 2014, this memorandum clarifies and supplements information presented previously.

Percolation Rates:

The District performed monitoring of actual water level changes in Ponds 5, 6, and 7, which were isolated during portions of the months of July through October, 2014. Individual ponds were isolated and the actual decline of water level was monitored until the ponds had no standing water. Information documenting the actual water level changes is included as Attachment 1. The estimated percolation rate in the wastewater disposal ponds is 1.66 inches per day. It is noted that the previous estimated percolation rate (from 2008) was 0.60 inches per day. This updated percolation rate demonstrates a significant improvement in pond percolation rates. This improvement is a direct result of Malaga County Water District commitment during the previous six (6) years to scrape and rip the disposal ponds at the WWTP.

The percolation rates for each pond tested were determined by identifying the total water level change in the pond, determining the pan evaporation rate over the same period of time, converting the pan evaporation rate to the evaporation rate from the pond, and then determining the resulting percolation rate from the pond.

When the percolation rate of 1.66 inches per day is applied to a 100 Year Rainfall Water Balance, the existing ponds at the WWTP may be able to dispose of approximately 1.085 mgd (Attachment 2). When the percolation rate is 1.29 inches per day during a 100 Year Rainfall Water Year, the Water Balance indicates that the disposal capacity is 0.85 mgd (Attachment 3).

The memorandum of October 24, 2014 discussed the gradual decline of percolation rate that is expected in all disposal ponds. However, since the preparation of the October 24, 2014 memorandum, the District has prepared a Standard Operating Procedure (SOP) for Pond Maintenance and Monitoring (Attachment 4). The SOP

states that when the percolation rate of a pond drops to 1.5 inches/day, it would be taken out of service and disked to bring the percolation rate back up. The District has therefore established a procedure to prevent the percolation rate from declining so much as to compromise overall disposal capacity. The water balance provided in October 2014 that was based on the percolation rate declining to 1.24 inches per day (disposal capacity of 0.821 mgd) is therefore mute.

It is recommended that this information is reviewed and forwarded to the RWQCB for consideration in establishing discharge limits for the new Waste Discharge Requirements to be adopted for the facilities. The efforts taken by the District over the past six (6) years has had significant impact in improving the on-site disposal capacity at the site, as evidenced by the recent pond percolation tests.

Also attached with this memorandum is a spreadsheet that allows the District to readily check that the necessary Available Capacity in the disposal ponds is available prior to each winter (Attachment 5). For example, information regarding freeboard in the disposal ponds as of October, 2014 has been entered into the table. The ponds had approximately 34,828,258 gallons of capacity available. The 100 Year Rainfall Water Balance for 0.85 mgd indicates that the District must have at least 5,107,194 gallons of available capacity. The actual available capacity greatly exceeds the minimum requirement. A water balance must balance each year. The water balance uses a theoretical actual utilized capacity of 0 gallons in September to confirm that a balance is established. The value of required available capacity is determined by measuring the actual utilized capacity in the disposal ponds during the month of September and then adding the required capacity established by the water balance. The information may be shown graphically as each month of the water year progresses (Attachment 6).

Based on the information associated with current pond percolation rates, it is recommended that the present discharge flowrate limitation of 0.85 mgd to the disposal ponds is still viable for the Malaga County Water District.

A question was raised as to whether the operating procedure of operating one pond at a time affects the water balance assumptions. It is noted that the water balance is used to determine the maximum disposal capacity of the site in the 100 year condition. During those environmental circumstances, all ponds are likely utilized throughout the year as a means to provide the overall maximum disposal capacity of the site. If the District can keep the number of ponds used to a minimum, the District will actually realize an ability to retain the percolation capacity of the unused ponds since the solids in the effluent, algae, bird droppings, etc. would not contribute to a decline in pond percolation capacity. The District also realizes the benefit of reduced maintenance of weeds, mosquitoes, and erosion. The District retains the ability to put additional ponds to use at any time to take advantage of unused percolation surface area. The use of one pond at a time, when rainfall and wastewater flows are less than the maximum, does not adversely impact the assumptions of the water balance for the worst case scenario.

The RWQCB recommended that the District prepare a pond maintenance log. It is understood that the District has prepared a pond maintenance log that could be routed to the RWQCB for review.

Attachment 1	Actual Water Level changes in Ponds 5, 6, and 7
Attachment 2	Water Balance with percolation rate of 1.66 inches/d
Attachment 3	Water Balance with percolation rate of 1.29 inches/d
Attachment 4	SOP for Pond Maintenance and Monitoring
Attachment 5	Available Capacity Spreadsheet
Attachment 6	Graphical Representation of Available Capacity

Please contact me if you need additional information or if you have any questions.

Thank you.

ATTACHMENT 1

MCWD

Percolation/Evaporation Pond #5

<u>Date</u>	<u>P&E</u>
10/14/2014	Start
10/22/2014	15 inches

Total:	15 inches
	8 days
Average evaporation rate from 10/14 to 10/22	
8 days in October	1.141
Total Pan Evaporation	1.14 in
Adjustment for Open Water Surface	0.80
Total Evaporation	0.91
Total Percolation	14.09 in
Average Percolation Rate	1.761 in/day

MCWD

Percolation/Evaporation Pond #6

<u>Date</u>	<u>P&E</u>
10/1/2014	Start
10/22/2014	34 inches

Total: 34 inches
21 days

Average evaporation rate from 10/1 to 10/22
21 days in October 2.994

Total Pan Evaporation	2.99 in
Adjustment for Open Water Surface	0.80
Total Evaporation	2.40
Total Percolation	31.60 in
Average Percolation Rate	1.505 in/day

MCWD

Percolation/Evaporation Pond #7

<u>Date</u>	<u>P&E</u>
7/21/2014	Start
7/22/2014	2.8"
7/23/2014	2.8"
7/24/2014	2.8"
7/25/2014	2.8"
7/26/2014	2.8"
7/27/2014	2.8"
7/28/2014	2.8"
7/29/2014	2.8"
7/30/2014	2.8"
7/31/2014	2.8"
8/1/2014	2.8"
8/2/2014	2.8"
8/3/2014	2.8"
8/4/2014	1.1"
8/5/2014	1.1"
8/6/2014	Dry
Total:	31.84 inches 16 days
Average evaporation rate from 7/21 to 8/6	
11 days in July	3.555
5 days in August	1.560
Total Pan Evaporation	5.11 in
Adjustment for Open Water Surface	0.80
Total Evaporation	4.09
Total Percolation	27.75 in
Average Percolation Rate	1.734 in/day

Weighted Average percolation rate:

Pond	Area	Percolation Rate	
5	3.07	1.760935	5.406071935
6	4.29	1.504983	6.456377512
7	4.79	1.734274	8.307173387
Sum	12.15		20.16962283
Weighted Average		1.660051	

ATTACHMENT 2

Malaga County Water District
Wastewater Treatment & Disposal Facilities
Estimated Capacity Wastewater Disposal - 100 Year Rainfall Water Balance, Discharge and Storage

WWTF POND CALCULATIONS:

DATA:

Month	Number of Days per Month	100 Yr. Rainfall ^{1/} (in/month)	100 Yr. Evaporation ^{3/} (in/month)
January	31	5.14	0.90
February	28	3.70	1.46
March	31	4.53	2.09
April	30	2.76	3.71
May	31	0.01	6.21
June	30	0.31	6.85
July	31	0.00	8.14
August	31	0.00	6.99
September	30	1.10	4.68
October	31	1.58	3.09
November	30	3.16	1.20
December	31	1.59	0.85
Total	365	23.88	46.17

Discharge to canal	0	MGD
Daily Effluent Production ^{5/}	= 1,085,000	gpd
Pond Wet Area ^{7/}	= 23.24	acres
Pond Storage	= 139.4	ac-ft
Pond Percolation Rate	= 1.66	in/day
Additional Pond Wet Area	=	acres
Additional Pond Storage	= 0.0	ac-ft
Estimated Pond Percolation Rate	= 1.00	in/day
Total Storage	= 139.4	ac-ft
Total Storage	= 45,436,726	gal

Effluent Produced (gal/month)	Effluent To Canal (gal/month)	Effluent to Ponds (gal/month)	Surface Rainfall ^{19/} (gal/month)	Surface Evaporation ^{20/} (gal/month)	Pond Percolation ^{21/} (gal/month)	Monthly Change in Storage (gal/month)	Required Storage Capacity ^{23/} (gal)
33,635,000	0	33,635,000	3,243,677	567,959	32,474,638	3,836,080	8,030,702
30,380,000	0	30,380,000	2,334,943	921,356	29,331,931	2,461,656	10,492,358
33,635,000	0	33,635,000	2,858,727	1,318,927	32,474,638	2,700,162	13,192,520
32,550,000	0	32,550,000	1,741,741	2,341,254	31,427,069	523,418	13,715,938
33,635,000	0	33,635,000	6,311	3,918,918	32,474,638	(2,752,245)	10,963,693
32,550,000	0	32,550,000	195,630	4,322,800	31,427,069	(3,004,239)	7,959,454
33,635,000	0	33,635,000	0	5,136,874	32,474,638	(3,976,512)	3,982,942
33,635,000	0	33,635,000	0	4,411,149	32,474,638	(3,250,787)	732,155
32,550,000	0	32,550,000	694,172	2,953,387	31,427,069	(1,136,284)	0*
33,635,000	0	33,635,000	997,084	1,949,993	32,474,638	207,453	207,453
32,550,000	0	32,550,000	1,994,167	757,279	31,427,069	2,359,819	2,567,272
33,635,000	0	33,635,000	1,003,394	536,406	32,474,638	1,627,350	4,194,622
Total (gal)	0	396,025,000	15,069,846	29,136,302	382,362,673	-404,129	September 1st

Total Area = 23.2 acres Total (ac-ft) = 1,215.4 0.0 1,215.4 46.2 89.4 1,173.4 -1.2 September 1st
-404,129

1/ Rainfall Data per the Western Regional Climate Center.
3/ Evaporation data per WRCC X 0.75
5/ Design Capacity Effluent Production
7/ Total existing wet area of the existing lagoons.
19/ Surface Rainfall = Volume of 100 Year rainfall on the existing WWTF treatment and storage ponds and proposed storage ponds.
20/ Surface Evaporation = Volume of effluent and rain water evaporating from the existing WWTF treatment and disposal ponds.
21/ Pond Percolation = Volume of effluent and rain water percolating into the ground for existing ponds 1 through 8.
23/ Required Storage = Theoretical starting point Sept. 1st where pond storage starts at zero with monthly contributions.
36/ Maximum Storage Needed = Peak end of month pond storage volume needed (gallons & ac-ft).
37/ Storage Available from all ponds = Total volume of available storage.
39/ Check Balance = Comparison of this value with total wastewater processed.

Maximum Required storage	13,715,938
Total Storage Available ^{37/}	45,436,726 gal
Extra Storage:	31,720,788 gal
	97 ac-ft
Total Effluent Production:	396,025,000 gal
Total Effluent Exported:	0 gal
Total Surface Rainfall ^{19/} :	15,069,846 gal
Total Evaporation ^{20/} :	29,136,302 gal
Total Percolation ^{21/} :	382,362,673 gal
Effluent Applied to Crop:	0 gal
Check Balance ^{39/} :	396,429,129 gal

Updated: 10/24/14
Print Date: 12/23/14



ATTACHMENT 3

Malaga County Water District
Wastewater Treatment & Disposal Facilities
Estimated Capacity Wastewater Disposal - 100 Year Rainfall Water Balance, Discharge and Storage

WWTF POND CALCULATIONS:

DATA:

Month	Number of Days per Month	100 Yr. Rainfall ^{1/} (in/month)	100 Yr. Evaporation ^{3/} (in/month)	Discharge to canal	0 MGD
January	31	5.14	0.90	Daily Effluent Production ^{5/} = 850,000 gpd	6 ft deep
February	28	3.70	1.46	Pond Wet Area ⁷ = 23.24 acres	
March	31	4.53	2.09	Pond Storage = 139.4 ac-ft	
April	30	2.76	3.71	Pond Percolation Rate = 1.29 in/day	6 ft deep
May	31	0.01	6.21	Additional Pond Wet Area = 0.0 acres	
June	30	0.31	6.85	Additional Pond Storage = 0.0 ac-ft	
July	31	0.00	8.14	Estimated Pond Percolation Rate = 1.00 in/day	6 ft deep
August	31	0.00	6.99	Total Storage = 139.4 ac-ft	
September	30	1.10	4.68	Total Storage = 45,436,726 gal	
October	31	1.58	3.09		
November	30	3.16	1.20		
December	31	1.59	0.85		
Total	365	23.88	46.17		

Effluent Produced (gal/month)	Effluent To Canal (gal/month)	Effluent to Ponds (gal/month)	Surface Rainfall ^{19/} (gal/month)	Surface Evaporation ^{20/} (gal/month)	Pond Percolation ^{21/} (gal/month)	Monthly Change in Storage (gal/month)	Required Storage Capacity ^{23/} (gal)
26,350,000	0	26,350,000	3,243,677	567,959	25,236,315	3,789,403	7,845,500
23,800,000	0	23,800,000	2,334,943	921,356	22,794,091	2,419,496	10,264,996
26,350,000	0	26,350,000	2,858,727	1,318,927	25,236,315	2,653,485	12,918,481
25,500,000	0	25,500,000	1,741,741	2,341,254	24,422,240	478,247	13,396,728
26,350,000	0	26,350,000	6,311	3,918,918	25,236,315	(2,798,922)	10,597,806
25,500,000	0	25,500,000	195,630	4,322,800	24,422,240	(3,049,410)	7,548,396
26,350,000	0	26,350,000	0	5,136,874	25,236,315	(4,023,189)	3,525,207
26,350,000	0	26,350,000	0	4,411,149	25,236,315	(3,297,464)	227,743
25,500,000	0	25,500,000	694,172	2,953,387	24,422,240	(1,181,455)	0*
26,350,000	0	26,350,000	997,084	1,949,993	25,236,315	160,776	160,776
25,500,000	0	25,500,000	1,994,167	757,279	24,422,240	2,314,648	2,475,424
26,350,000	0	26,350,000	1,003,394	536,406	25,236,315	1,580,673	4,056,097
Total (gal)	310,250,000	0	15,069,846	29,136,302	297,137,256	-953,712	September 1st

Total Area = 23.2 acres

* Start at 0 Stored September 1st

1/ Rainfall Data per the Western Regional Climate Center.
 3/ Evaporation data per WRCC X 0.75
 5/ Design Capacity Effluent Production
 7/ Total existing wet area of the existing lagoons.
 19/ Surface Rainfall = Volume of 100 Year rainfall on the existing WWTF treatment and storage ponds and proposed storage ponds.
 20/ Surface Evaporation = Volume of effluent and rain water evaporating from the existing WWTF treatment and disposal ponds.
 21/ Pond Percolation = Volume of effluent and rain water percolating into the ground for existing ponds 1 through 8.
 23/ Required Storage = Theoretical starting point Sept. 1st where pond storage starts at zero with monthly contributions.
 36/ Maximum Storage Needed = Peak end of month pond storage volume needed (gallons & ac-ft).
 37/ Storage Available from all ponds = Total volume of available storage.
 39/ Check Balance = Comparison of this value with total wastewater processed.

Maximum Required storage	13,396,728
Total Storage Available ^{37/}	45,436,726 gal
Extra Storage:	32,039,998 gal
	98 ac-ft
Total Effluent Production:	310,250,000 gal
Total Effluent Exported:	0 gal
Total Surface Rainfall ^{19/} :	15,069,846 gal
Total Evaporation ^{20/} :	29,136,302 gal
Total Percolation ^{21/} :	297,137,256 gal
Effluent Applied to Crop:	0 gal
Check Balance ^{39/} :	311,203,712 gal

Updated: 10/24/14
 Print Date: 12/23/14



ATTACHMENT 4



SOP for Pond Maintenance and Monitoring

1. Weekly pond level readings in inches shall be taken and entered into the Pond Capacity Matrix to determine pond volume in MG, pond capacity in use, and pond capacity available.
2. Weekly totals from the Pond Capacity Matrix shall be entered on the Weekly Pond Monitoring report. The Weekly Pond Monitoring report shall be an attachment to the monthly DMR to supplement the pond data submitted in the DMR.
3. Ponds shall be operated one at a time. When the pond in service reaches 100% freeboard capacity, it shall be taken offline and isolated to collect percolation and evaporation data. A new pond shall be selected for all secondary effluent.
4. The pond taken offline to collect percolation and evaporation data shall be isolated and have a measuring stick implanted to record daily level. When that pond completely empties the data shall be used to calculate the percolation/evaporation rate of the pond.
5. When a pond reaches a percolation/evaporation rate of less than 1.5 inches/day it shall be taken out of service, allowed to dry, and disked with the tractor and disc. If the same pond fails to achieve a percolation/evaporation rate of 1.5 inches/day or greater the next time it is isolated and monitored, the pond shall be taken out of service for scraping and ripping.
6. If total pond volume is equal to or greater than 50% of total freeboard capacity, the District Engineer shall perform a calculation from all percolation/evaporation data and secondary effluent flow data to determine the volume of tertiary discharge required to not exceed total pond capacity freeboard limits.
7. Based upon the District Engineer's calculation above, a determination shall be made when and at what rate tertiary discharge shall begin. Consideration will be made to coincide tertiary discharge with Fresno Irrigation District water delivery through Central Canal.
8. The monthly DMR cover letter shall explain any requirements for tertiary discharge and the rate and timing of anticipated tertiary discharge.
9. The District will, as part of its budget process, provide sufficient funding to perform disposal pond monitoring and maintenance as required by this SOP.

ATTACHMENT 5

Yellow Cells for data entry

325851 gal/af

ict

gd) Disposal Pond Available Capacity

Required Disposal Pond Capacity (percolation rate of 1.3 in/d)
gallons

Available Capacity Exceeds Required Capacity?
gallons

Available Disposal Pond Capacity as of October 31, 2014

Pond	Freeboard (ft)	Available Depth (ft)	Acreage (acres)	Available Capacity (acre-ft)	Available Capacity (gal)
1	2.5	0.5	1.29	0.645	210,174
2	8	6	0.76	4.56	1,485,881
3	8	6	2.59	15.54	5,063,725
4	8	6	2.5	15	4,887,765
5	3.2	1.2	3.07	3.684	1,200,435
6	5.5	3.5	4.29	15.015	4,892,653
7	8	6	4.79	28.74	9,364,958
8	8	6	3.95	23.7	7,722,669
Total			23.24	106.884	34,828,258

Total Depth (ft)
8
8
8
8
8
8
8
8
8

5,107,194

Y

Available Disposal Pond Capacity as of November 30, 2014

Pond	Freeboard (ft)	Available Depth (ft)	Acreage (acres)	Available Capacity (acre-ft)	Available Capacity (gal)
1	8	6	1.29	7.74	2,522,087
2	8	6	0.76	4.56	1,485,881
3	4	2	2.59	5.18	1,687,908
4	7	5	2.5	12.5	4,073,138
5	7	5	3.07	15.35	5,001,813
6	8	6	4.29	25.74	8,387,405
7	8	6	4.79	28.74	9,364,958
8	8	6	3.95	23.7	7,722,669
Total			23.24	123.51	40,245,857

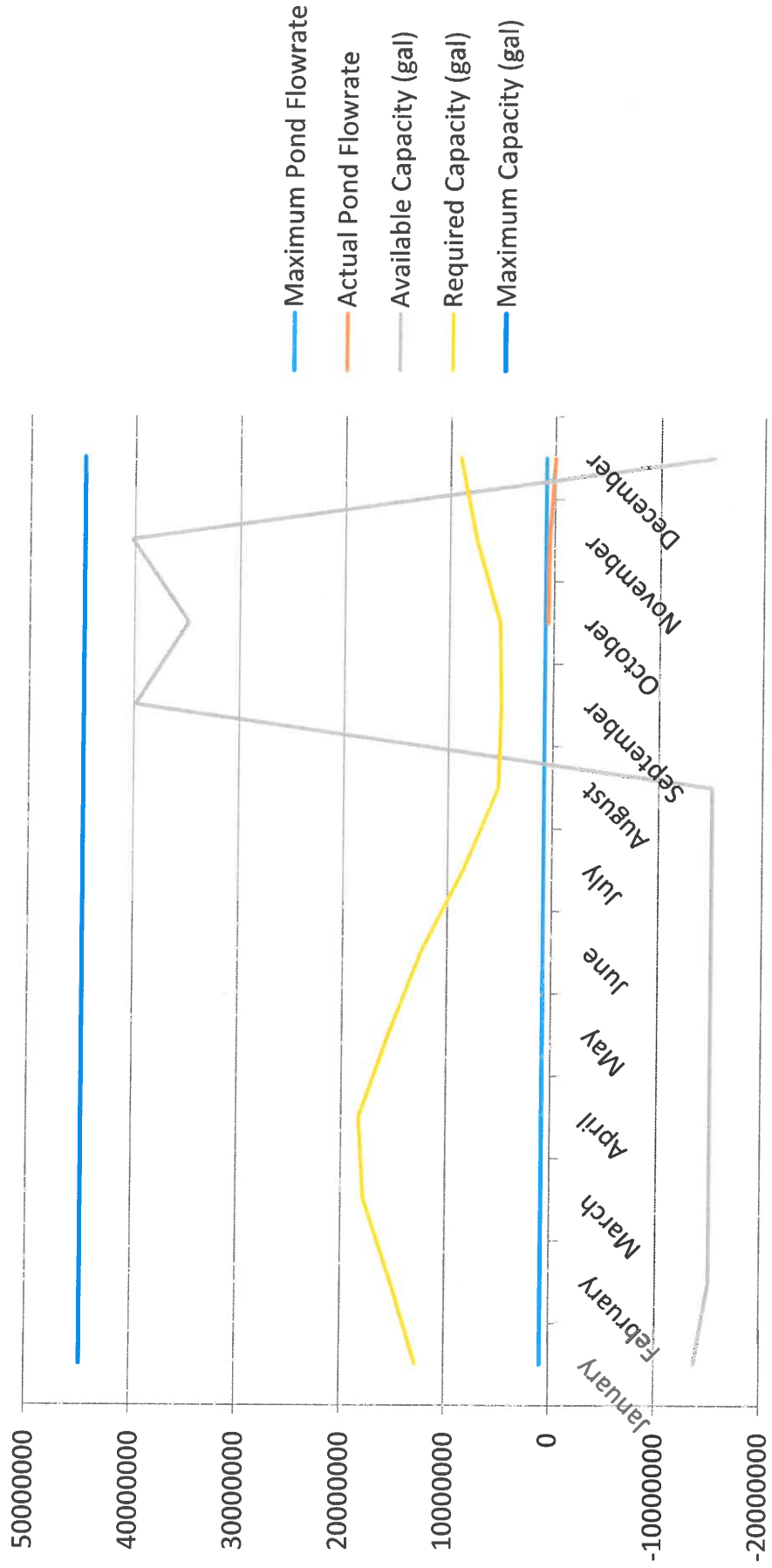
Total Depth (ft)
8
8
8
8
8
8
8
8

7,421,842

Y

ATTACHMENT 6

MCWD Comparison of Actual and Required Pond Storage Capacity



Appendix I

Standard Operation Procedure



SOP for Pond Maintenance and Monitoring

1. Weekly pond level readings in inches shall be taken and entered into the Pond Capacity Matrix to determine pond volume in MG, pond capacity in use, and pond capacity available.
2. Weekly totals from the Pond Capacity Matrix shall be entered on the Weekly Pond Monitoring report. The Weekly Pond Monitoring report shall be an attachment to the monthly DMR to supplement the pond data submitted in the DMR.
3. Ponds shall be operated one at a time. When the pond in service reaches 100% freeboard capacity, it shall be taken offline and isolated to collect percolation and evaporation data. A new pond shall be selected for all secondary effluent.
4. The pond taken offline to collect percolation and evaporation data shall be isolated and have a measuring stick implanted to record daily level. When that pond completely empties the data shall be used to calculate the percolation/evaporation rate of the pond.
5. When a pond reaches a percolation/evaporation rate of less than 1.5 inches/day it shall be taken out of service, allowed to dry, and disked with the tractor and disc. If the same pond fails to achieve a percolation/evaporation rate of 1.5 inches/day or greater the next time it is isolated and monitored, the pond shall be taken out of service for scraping and ripping.
6. If total pond volume is equal to or greater than 50% of total freeboard capacity, the District Engineer shall perform a calculation from all percolation/evaporation data and secondary effluent flow data to determine the volume of tertiary discharge required to not exceed total pond capacity freeboard limits.
7. Based upon the District Engineer's calculation above, a determination shall be made when and at what rate tertiary discharge shall begin. Consideration will be made to coincide tertiary discharge with Fresno Irrigation District water delivery through Central Canal.
8. The monthly DMR cover letter shall explain any requirements for tertiary discharge and the rate and timing of anticipated tertiary discharge.
9. The District will, as part of its budget process, provide sufficient funding to perform disposal pond monitoring and maintenance as required by this SOP.

Appendix J

Water Balance for 0.85 mgd

Malaga County Water District
Wastewater Treatment & Disposal Facilities
Estimated Capacity Wastewater Disposal - 100 Year Rainfall Water Balance, Discharge and Storage

DATA:

Month	Number of Days per Month	100 Yr. Rainfall ^{1/} (in/month)	100 Yr. Evaporation ^{3/} (in/month)	Discharge to canal	0 MGD
January	31	5.14	0.90	Daily Effluent Production ^{5/} =	850,000 gpd
February	28	3.70	1.46	Pond Wet Area ^{7/} =	23.24 acres
March	31	4.53	2.09	Pond Storage =	139.4 ac-ft
April	30	2.76	3.71	Pond Percolation Rate =	1.29 in/day
May	31	0.01	6.21	Additional Pond Wet Area =	0.00 acres
June	30	0.31	6.85	Additional Pond Storage =	0.0 ac-ft
July	31	0.00	8.14	Estimated Pond Percolation Rate =	1.00 in/day
August	31	0.00	6.99	Total Storage =	139.4 ac-ft
September	30	1.10	4.68	Total Storage =	45,436,726 gal
October	31	1.58	3.09		
November	30	3.16	1.20		
December	31	1.59	0.85		
Total	365	23.88	46.17		

WWTF POND CALCULATIONS:

Effluent Produced (gal/month)	Effluent To Canal (gal/month)	Effluent to Ponds (gal/month)	Surface Rainfall ^{19/} (gal/month)	Surface Evaporation ^{20/} (gal/month)	Pond Percolation ^{21/} (gal/month)	Monthly Change in Storage (gal/month)	Required Storage Capacity ^{23/} (gal)
26,350,000	0	26,350,000	3,243,677	567,959	25,236,315	3,789,403	7,845,500
23,800,000	0	23,800,000	2,334,943	921,356	22,794,091	2,419,496	10,264,996
26,350,000	0	26,350,000	2,858,727	1,318,927	25,236,315	2,653,485	12,918,481
25,500,000	0	25,500,000	1,741,741	2,341,254	24,422,240	478,247	13,396,728
26,350,000	0	26,350,000	6,311	3,918,918	25,236,315	(2,798,922)	10,597,806
25,500,000	0	25,500,000	195,630	4,322,800	24,422,240	(3,049,410)	7,548,396
26,350,000	0	26,350,000	0	5,136,874	25,236,315	(4,023,189)	3,525,207
26,350,000	0	26,350,000	0	4,411,149	25,236,315	(3,297,464)	227,743
25,500,000	0	25,500,000	694,172	2,953,387	24,422,240	(1,181,455)	0*
26,350,000	0	26,350,000	997,084	1,949,993	25,236,315	160,776	160,776
25,500,000	0	25,500,000	1,994,167	757,279	24,422,240	2,314,648	2,475,424
26,350,000	0	26,350,000	1,003,394	536,406	25,236,315	1,580,673	4,056,097
Total (gal)	310,250,000	0	310,250,000	15,069,846	29,136,302	297,137,256	-953,712
			952.1	0.0	952.1	46.2	89.4
						911.9	-2.9

1/ Rainfall Data per the Western Regional Climate Center.
 3/ Evaporation data per WRCC X 0.75
 5/ Design Capacity Effluent Production
 7/ Total existing wet area of the existing lagoons.
 19/ Surface Rainfall = Volume of 100 Year rainfall on the existing WWTF treatment and storage ponds and proposed storage ponds.
 20/ Surface Evaporation = Volume of effluent and rain water evaporating from the existing WWTF treatment and disposal ponds.
 21/ Pond Percolation = Volume of effluent and rain water percolating into the ground for existing ponds 1 through 8.
 23/ Required Storage = Theoretical starting point Sept. 1st where pond storage starts at zero with monthly contributions.
 36/ Maximum Storage Needed = Peak end of month pond storage volume needed (gallons & ac-ft).
 37/ Storage Available from all ponds = Total volume of available storage.
 39/ Check Balance = Comparison of this value with total wastewater processed.

Maximum Required storage	13,396,728
Total Storage Available ^{37/} :	45,436,726 gal
Extra Storage:	32,039,998 gal
	98 ac-ft
Total Effluent Production:	310,250,000 gal
Total Effluent Exported:	0 gal
Total Surface Rainfall ^{19/} :	15,069,846 gal
Total Evaporation ^{20/} :	29,136,302 gal
Total Percolation ^{21/} :	297,137,256 gal
Effluent Applied to Crop:	0 gal
Check Balance ^{39/} :	311,203,712 gal

Updated: 10/14/15
 Print Date: 2/3/17



Appendix K

Evaporation Pan Information

255-212 Min-Max Thermometer

The **255-212 Min-Max Thermometer** can be configured as either a floating or submersible thermometer for measuring the minimum and maximum temperatures of water, such as in an evaporation pan. It features a digital thermometer mounted on a non-magnetic base. The built-in solar radiation shield protects the thermometer against direct sunlight.

In a float-mounted installation, two floats are installed on the thermometer base to float the thermometer approximately 1/4" below the water surface. The thermometer is then attached to an anchor using flexible lines at least 10" long, but short enough to keep the unit approximately one foot from the edge of the pan and the gauge.

In a submerged installation, the thermometer base rests on the bottom of the pan. A non-magnetic handle is fastened to the base and hooked over the edge of the pan. The thermometer should be located on the inside-bottom of the south side of the pan (in the northern hemisphere) to ensure that the thermometer is shaded as much as possible from the direct rays of the sun.

Specifications

Thermometer type: Digital minimum-maximum
 Typical range: 0 to 150° F or -18 to 65° C
 Resolution: 0.1° from -19.9° to 199.9°, otherwise 1°
 Accuracy: ± 0.5° C or ± 1° C
 Dimensions:
 Stainless steel probe diameter 0.14", length 5"
 Case diameter 1-3/4", depth 1/2"
 Weight: 1-1/2 oz

General

Dimensions: 11-1/4" long without floats, 13-1/2" with floats
 Weight/shipping: 1 lb/3 lbs

Ordering Information

255-212D Floating/Submersible Min-Max Thermometer, digital
 210-4039 Replacement Thermometer

255-200 Evaporation Pan

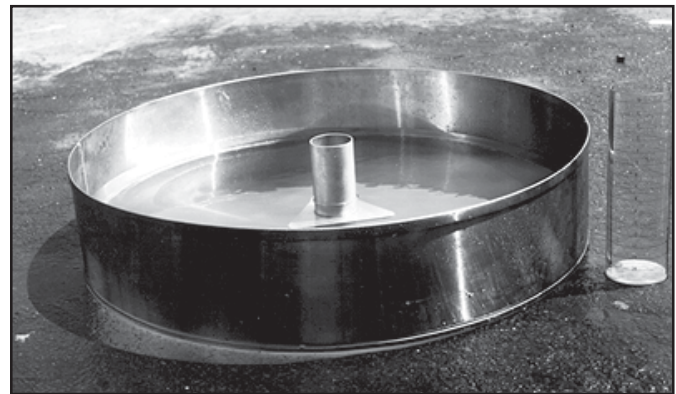
The **Model 255-200 Evaporation Pan** is a standard, National Weather Service Class A type for evaporation measurement. It is normally installed on a wooden platform set on the ground in a grassy location. The pan is filled with water and exposed to represent an open body of water. The pan is normally filled to within 2.5 inches of the top of the pan. The evaporation rate can be measured by manual readings or with an analog output evaporation gauge.

Specifications

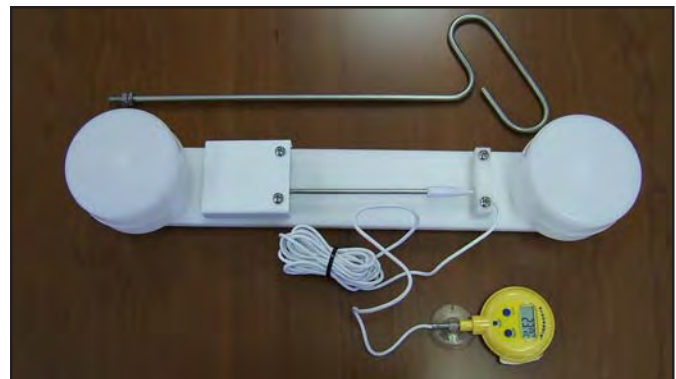
Material: Low carbon stainless steel
 Construction: Heliarc welded, 1/2" drain plug
 Size: 10" H x 47.5" Dia (254 mm x 1026 mm)
 Weight/shipping: 50 lbs/62 lbs (23 kg/28 kg)
 Shipping carton dimensions: 49" x 48" x 10"

Ordering Information

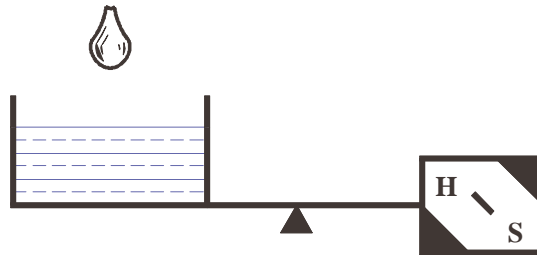
255-200 Class A Stainless Steel Evaporation Pan



255-200 Evaporation Pan (shown with stillwell and replacement graduate)



255-212D Floating/Submersible Min-Max Thermometer



INSTRUCTION MANUAL

EVAPORATION PAN

CLASS A

QUALITY SYSTEM
ISO
9001
2000
CERTIFIED

HYDROLOGICAL SERVICES PTY LTD
PO BOX 332, LIVERPOOL B.C NSW 1871, AUSTRALIA
Phone: (Int.) 612 9601 2022 Fax:(Int.) 612 9602 6971
Phone: (Nat.) (02) 9601 2022 Fax:(Nat.) (02) 9602 6971
Email: sales@hydrologicalservices.com

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I HYDROLOGICAL SERVICES STANDARD WARRANTY TERMS

WARRANTY, DISCLAIMER AND LIMITATION OF LIABILITY:

We warrant this product to be free from defects in material and workmanship for a period of three years from the date of shipment hereof or its total rated life, whichever first occurs. During the warranty period, we will repair or replace this product if it is returned to us with shipping charges prepaid and we determine it to be defective. This warranty shall not apply if this product has been subjected to misuse, negligence, accidents, or misapplied, or modified or repaired by unauthorised persons, or improperly installed, and we shall not be liable to any person for personal injury or property damage caused by such a product.

All other warranties, express and implied, including warranties of MERCHANTABILITY and FITNESS FOR A PARTICULAR PURPOSE, are disclaimed. All other remedies and liabilities, including incidental, consequential, and special damages, losses, and expenses, are excluded.

Note: It is Hydrological Services' policy to support all of our products. If design or workmanship problems arise after this statutory warranty period we request that you contact us.

CLASS A EVAPORATION PAN

II GENERAL

The Class A Evaporation Pan is used for measurement of water evaporation. It is normally installed on a wooden platform set on the ground in a grassy location. The pan is filled with water and exposed to represent an open body of water. The pan is filled to the datum in the fixed point gauge. The evaporation rate can be measured by hook gauge or by refilling to the datum in the fixed point gauge.



Figure 1: CLASS A EVAPORATION PAN WITH FIXED POINT GAUGE AND MEASURING CYLINDER

III SPECIFICATION

Material:	Galvanised iron.
Construction:	Welded.
Size:	255 mm x 1207 mm diameter.
Packed Weight:	65 Kg Crated.

IV INSTALLATION

The Class A Evaporation Pan is normally installed on a wooden platform on the ground. Please refer to figure below for details.

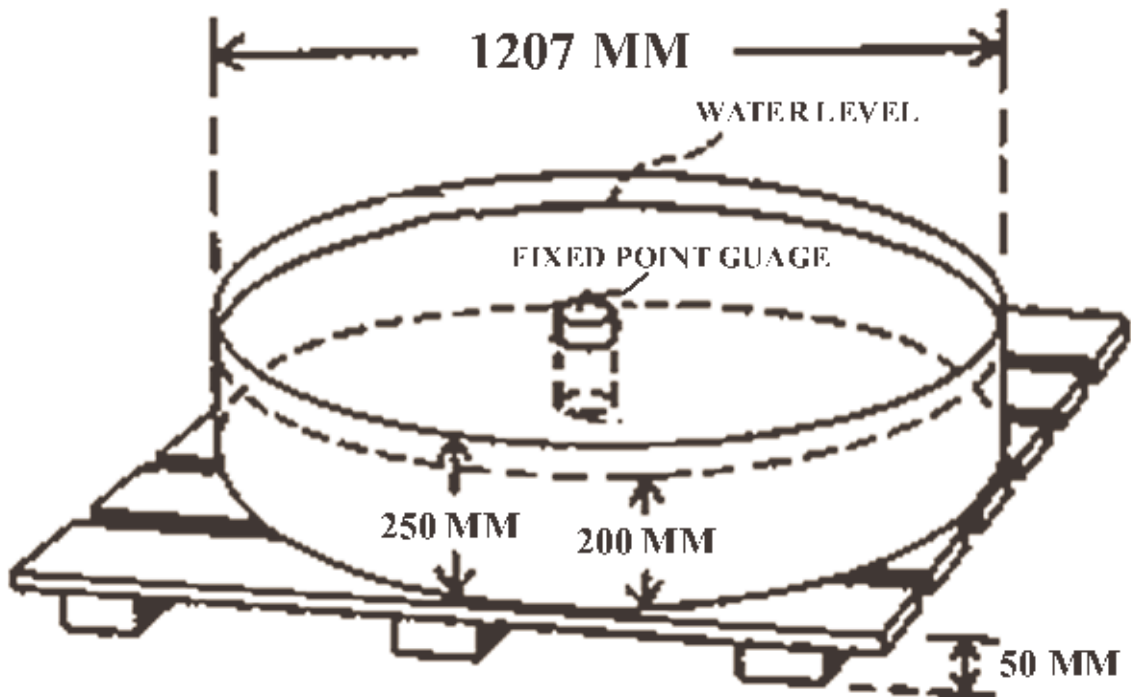


Figure 2: CLASS A EVAPORATION PAN INSTALLED ON A WOODEN PLATFORM

V OPERATION

A. Rainfall

To calculate the evaporation it is necessary to measure the rainfall and the water level in the pan at the same time.

Normal Rainfall Situation:

1. Read the raingauge every day at 8:00 or 9:00 O' clock. If the raingauge is empty no entry need to be made against the date [i.e in column (L)]. [see figure (4) and figure (6)].
2. If the reading is 0.1 mm (i.e below the first graduation in the measure) enter the word "trace" in column (L) [see figure (4) and figure (6)] . **Note:** Days in which rainfall is less than 0.1 mm are not considered as rain days.
3. If the amount measured is due entirely to frost, fog or dew please write the word "frost", "fog" or "dew" beside the entry of the amount. **Note:** although an amount of 0.2 mm or more may be entered these particular days are not counted as rain days.
4. If there is an error in the raingauge reading due to "raingauge overflow", "raingauge leaking" or "funnel blocked by hail" enter the amount and enter the reason for suspecting the reading in the "remarks" section.

Unusual Heavy Rainfall

1. In addition to the routine check of rainfall at 8:00 or 9:00 O'clock, it is valuable to provide information of the actual time when heavy rainfall occurs.
2. If heavy rainfall has been falling for some hours a reading of the raingauge at the time is considered a valuable information.
3. A reading of the raingauge at the end of a thunderstorm also provides valuable information.

B. Class A Evaporation Pan

1. Measure the evaporation daily at 8:00 or 9:00 O'clock.
2. If an observation is missed leave the columns for that day blank and enter the time interval since the previous observation in the remarks section (e.g. "72 hours period" entered on Monday when Saturday and Sunday are missed).

Case1: Water level in the pan is **below** the fixed point proceed as follow:

- (a). Let "A" be the amount of water added to the pan, enter the "A" value in column (F) of the observation chart.

- (b). Water should only be added using the supplied **measuring cylinder**. **Always full measures** should be used.

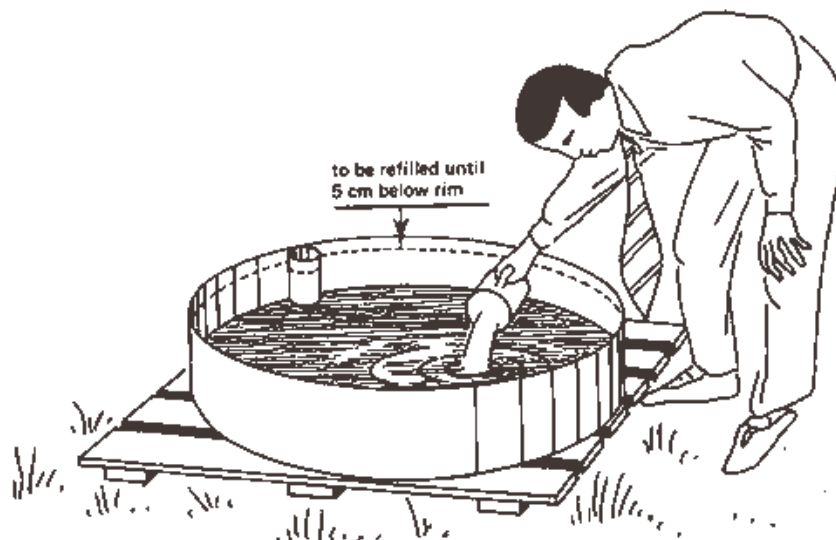


Figure 3: Refilling water to the fixed point gauge (datum).

- (c). Let “G” be the **number** of full measures (i.e filled to the zero mark in the measuring cylinder).
- (d). Add the “G” value to column (G) in the observation chart and times the “G” value by 4.
- (e). Let “H” be the value of full measure **amount** added to the pan. Therefore the H value is obtained as shown in equation (1) below.

$$G \times 4 = H \quad (\text{Equation 1}).$$

Let say $G = 5 \Rightarrow H = 5 \times 4 = 20 \text{ mm}$ (Equation 2)

- (f). Add the “H” value to the observation chart as shown in figure (4) below.

Rainfall, Evaporation Observations					Station: <i>SYDNEY</i>					Time: <i>9:00</i>		Date: <i>13/8/20</i>	
Day	Water Temperature (°C)				Amount of Water Added or Removed(mm)					Rainfall (mm)	for office use only	Evaporation (mm)	Remarks
	before touching		after setting		A or R	no. of full measures	full measures amount	part measure amount	total				
	max	min	max	min						if A in col. R L-K = M			
	B	C	D	E	F	G x 4 = H	J	(H+J)=K	L		M		
1	26	21	22	22	A	5 x 4 =	20.0	2.4	22.4	0.6	23	5 FULL MEASURES	
2						x 4 =							

Figure 4: Example (1)- When adding water to the pan.

- (g). When the water level just reaches the fixed point **read**, to the nearest 0.2 mm, the level of the water remaining in the measure.
- (h). Let “J” be the level of the water remaining in the measure. Add this value to the observation chart (see figure 4)

$$\text{Let Say: } J = 2.4 \text{ mm} \quad (\text{equation 3})$$

- (i). Let “K” be the entries added in column “H” and “J”

$$\text{Therefore: } K = H + J \quad (\text{equation 4})$$

Substitute equations (2) and (3) in equation (4)

$$\text{Therefore } K = 20 + 2.4 = 22.4 \text{ mm} \quad (\text{equation 5})$$

- (j). Add the rainfall value in column “L” to the “K” value and enter the result in column “M” of the observation chart

Therefore the evaporation to the nearest 0.2 mm is calculated as follows:

$$M = L + K \quad (\text{equation 6})$$

By looking at the example in figure (4) the value of “M” will be:

$$M = 0.6 + 22.4 = 23.0 \text{ mm}$$

Note: Please note equation (6) is only used when water is added to the evaporation pan by the observer.

Case2: Water level in the pan is above the fixed point proceed as follow:

- (a). Let “R” be the amount of water removed from the pan, enter the “R” value in column (F) of the observation chart.
- (b). Water should only be removed using a vessel and the supplied **measuring cylinder**. Remove water with a vessel and pour into measuring cylinder till you reach the **zero mark**. Continue with the operation until the level of water required in the pan is reached. If the last measure is **partly filled** read value to the nearest 0.2 mm.
- (c). Let “G” be the **number** of full measures removed (i.e filled to the zero mark in the measuring cylinder).
- (d). Add the “G” value to column (G) in the observation chart and times the “G” value by 4.

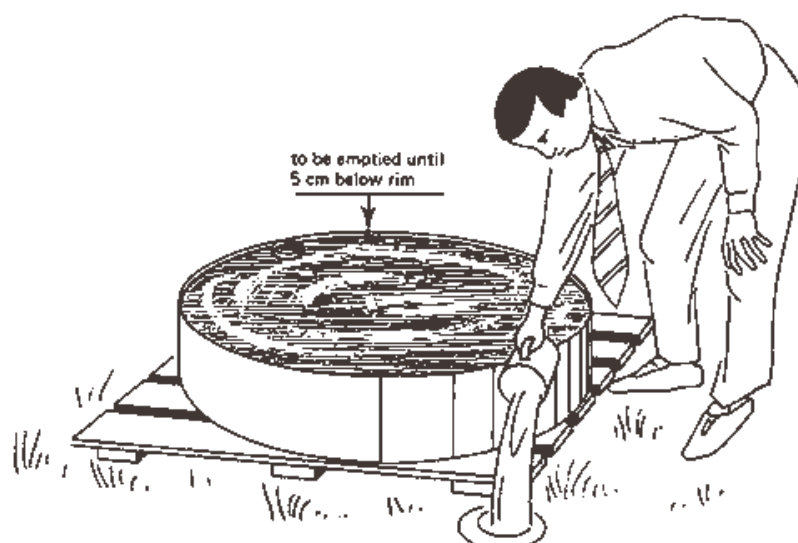


Figure 5: Emptying water to the fixed point gauge (datum).

- (e). Let “H” be the value of full measure **amount** removed from the pan. Therefore the H value is obtained as shown in equation (7) below.

$$G \times 4 = H \quad (\text{equation 7}).$$

Let say $G = 2 \Rightarrow H = 2 \times 4 = 8 \text{ mm}$ (equation 8)

- (f). Add the “H” value to the observation chart as shown in figure (6) below.

Rainfall, Evaporation Observations					Station: <u>NEWCASTLE</u>					Time: <u>9:30</u>		Date: <u>13/8/12</u>	
Day	Water Temperature (°C)				Amount of Water Added or Removed(mm)					Rainfall (mm)	for office use only	Evaporation (mm)	Remarks
	before touching		after setting		A or R	no. of full measures	full measures amount	part measure amount	total	24 hours to 0900		if A in col. F L+K = M	
	max	min	max	min								if A in col. R L-K = M	
	B	C	D	E	F	G x 4 = H	J	(H+J)=K	L	M			
1	20	16	18	18	R	2 x 4 =	8.0	1.6	9.6	24.8	15.2	2 FULL MEASURES	
2						x 4 =							

Figure 6: Example (2)- When removing water from the pan.

- (g). Let “J” be the level of the water remaining in the partly filled measure. Add this value to the observation chart (see figure 6)

Let Say: $J = 1.6 \text{ mm}$ (equation 9)

(h). Let “K” be the entries added in column “H” and “J”

$$\text{Therefore: } K = H + J \quad (\text{equation 10})$$

Substitute equations (8) and (9) in equation (10)

$$\text{Therefore } K = 8 + 1.6 = 9.6 \text{ mm} \quad (\text{equation 11})$$

(i). Subtract the rainfall value in column “L” from the “K” value and enter the result in column “M” of the observation chart

Therefore the evaporation to the nearest 0.2 mm is calculated as follows:

$$M = L - K \quad (\text{equation 12})$$

By looking at the example in figure (6) the value of “M” will be:

$$M = 24.8 - 9.6 = 23.0 \text{ mm}$$

Note: Please note equation (12) is only used when water is removed from the evaporation pan by the observer.

In there is a Bird Guard in use with the evaporation pan. Please the gate on the top when adding or removing water from the pan and close when operation is finished.

VI OBSERVATION CHART TEMPLATE

Please Refer to next page for recording template.

Rainfall, Evaporation					Station: _____					Time: _____		Date: ___/___/20___	
Day	Water Temperature (°C)				Amount of Water Added or Removed(mm)					Rainfall (mm)	for office use only	Evaporation (mm)	Remarks
	before touching		after setting		A or R	no. of full measures	full measures amount	part measure amount	total	24 hours to 0900		if A in col. F L+K = M	
	max	min	max	min								if R in col. F L-K = M	
	B	C	D	E	F	G x 4 =	H	J	(H+J)=K	L		M	
1						x 4 =							
2						x 4 =							
3						x 4 =							
4						x 4 =							
5						x 4 =							
6						x 4 =							
7						x 4 =							
8						x 4 =							
9						x 4 =							
10						x 4 =							
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22						x 4 =							
23						x 4 =							
24						x 4 =							
25						x 4 =							
26						x 4 =							
27						x 4 =							
28						x 4 =							
29						x 4 =							
30						x 4 =							
31						x 4 =							
Total									Total Rainfall		Total Evap.		Name Of Observer : _____
Mean													Signature: _____

HYDROLOGICAL SERVICES PTY LTD

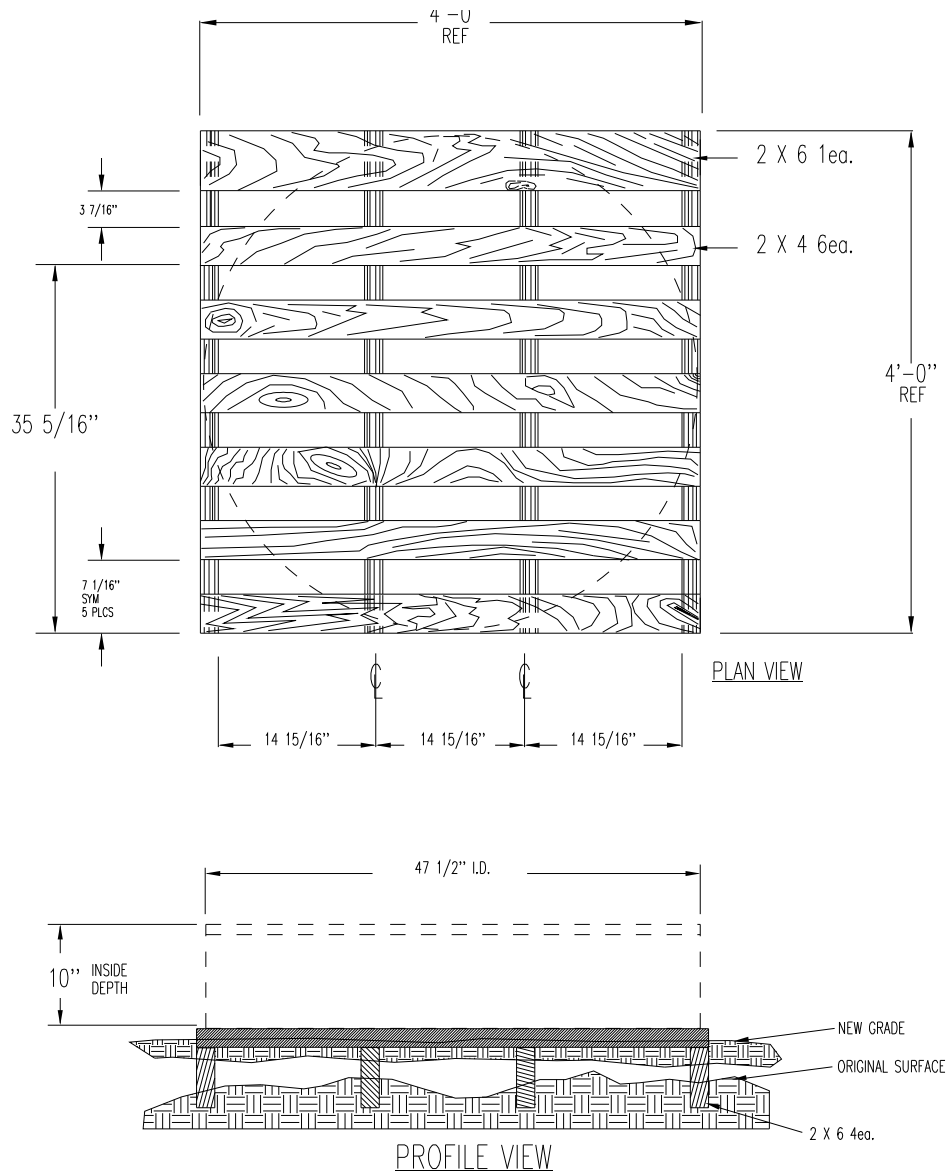
VII PART LIST

PART NAME	PART NUMBER	REMARK
Class A Evaporation Pan	SC051-01	
Bird Guard	SC051-02	Optional
Fixed Point Gauge	SC051-03	
Measuring Cylinder	SC051-08	

VIII REFERENCES

1. Bureau Of Meteorology Australia
2. WWW.FAO.ORG/

255-250 Evaporation Pan Platform



Appendix L
Percolation Ponds 1 – 5 Monitoring Results (June – August 2016)

MCWD WWTP Disposal Ponds Percolation Rate

	Start	End	Initial Depth	Final Depth	Evaporation					Total Percolation	Total days	Percolation Rate
					June	July	Aug.	Sept.	Total			
			inches	inches	0.28	0.28	0.25	0.19	inches	inches		in/day
Pond 1	7/22/2016	8/31/2016	65	0	0	10	31	0	10.58	54.42	41	1.33
Pond 2	7/22/2016	8/31/2016	65	0	0	10	31	0	10.58	54.42	41	1.33
Pond 3	7/22/2016	9/6/2016	65	0	0	10	31	6	11.70	53.30	47	1.13
Pond 4	6/1/2016	7/14/2016	65	0	30	14	0	0	12.33	52.67	44	1.20
Pond 5	7/22/2016	8/31/2016	65	0	0	10	31	0	10.58	54.42	41	1.33
Average												1.26

Notes:

Evaporation rate is adjusted to 80% of Class "A" pan in irrigation pasture for open water surface.

Percolation rate measurements are based on falling-head reducing-area scenario, the actual full pond percolation rate is expected to be high

AVERAGE MONTHLY EVAPORATION FROM CLASS 'A' PAN IN IRRIGATED PASTURE ENVIRONMENTS AT CALIFORNIA STATE UNIVERSITY AT FRESNO FROM 1968-2010

Month	Average	STD DEV	STD Error
January	1.26	0.28	0.04
February	2.08	0.41	0.06
March	3.94	0.77	0.12
April	6.03	0.86	0.13
May	8.75	1.03	0.16
June	10.43	0.92	0.14
July	11.02	0.73	0.11
August	9.67	0.68	0.11
September	6.99	0.57	0.09
October	4.42	0.49	0.07
November	2.25	0.4	0.06
December	1.21	0.3	0.05

Appendix M
Percolation Pond 7 Monitoring Results (July – August 2016)

MCWD

Percolation/Evaporation Pond #7

<u>Date</u>	<u>P&E</u>
7/21/2014	Start
7/22/2014	2.8"
7/23/2014	2.8"
7/24/2014	2.8"
7/25/2014	2.8"
7/26/2014	2.8"
7/27/2014	2.8"
7/28/2014	2.8"
7/29/2014	2.8"
7/30/2014	2.8"
7/31/2014	2.8"
8/1/2014	2.8"
8/2/2014	2.8"
8/3/2014	2.8"
8/4/2014	1.1"
8/5/2014	1.1"
8/6/2014	Dry

AVERAGE MONTHLY EVAPORATION FROM
CLASS 'A' PAN IN IRRIGATED PASTURE
ENVIRONMENTS AT CALIFORNIA STATE
UNIVERSITY AT FRESNO FROM 1968-2010

Month	Average	STD DEV	STD Error
January	1.26	0.28	0.04
February	2.08	0.41	0.06
March	3.94	0.77	0.12
April	6.03	0.86	0.13
May	8.75	1.03	0.16
June	10.43	0.92	0.14
July	11.02	0.73	0.11
August	9.67	0.68	0.11
September	6.99	0.57	0.09
October	4.42	0.49	0.07
November	2.25	0.4	0.06
December	1.21	0.3	0.05

Total: 31.84" in 15 Days

Average evaporation rate from 7/21 to 8/6

10 days in July	3.555
5 days in August	1.560
Total Pan Evaporation	5.11 in
Adjustment for Open Water Surface	0.80
Total Evaporation	4.09
Total Percolation	27.75 in
Average Percolation Rate	1.850 in/day

Appendix N

Conceptual Boiler Blowdown Reduction

Wastewater Flow Data from PPG & Rio Bravo

		PPG		Rio Bravo	
		2013	2014	2012	2013
Jan	31	71347	42724	119860	59614
Feb	28	62283	43837	107991	13803
Mar	31	67213	62614	120812	111150
Apr	30	77228	53392	138148	121208
May	31	84471	47994	120143	113073
Jun	30	91944	53275	131137	117395
Jul	31	67345	47519	107654	122585
Aug	31	58164	59875	98240	105744
Sep	30	52289	68875	123222	117742
Oct	31	35857	66384	86166	95159
Nov	30	36211		72230	102797
Dec	31	74649		124873	127035
	365	23704476	54649	41076002	36925886
		64,944		112,537	101,167

Reuse of Boiler Blow Down with RO Treatment

PPG Average WW Flow	GPD	65,000
Riobrava Average WW Flow	GPD	110,000
Total	GPD	175,000
% of Boiler Blow Down		90%
boiler water	GPD	157,500
Average EC	us/cm	1,100
EC of Blow Down after Recycling	us/cm	3000
Bcondensed Boiler Blow Down	GPD	57,750
Reduction in Wastewater Flow	GPD	99,750
RO Recovery Rate		90%
RO permeate	GPD	51,975
RO Reject	GPD	5,775
RO Permeate EC	us/cm	30
RO Reject EC	us/cm	29,730

Reuse of Boiler Blow Down with RO Treatment

PPG Average WW Flow	GPD	65,000
Riobrava Average WW Flow	GPD	110,000
Total	GPD	175,000
% of Boiler Blow Down		90%
boiler water	GPD	157,500
Average EC	us/cm	1,100
EC of Blow Down after Recycling	us/cm	3000
Condensed Boiler Blow Down	GPD	57,750
Reduction in Wastewater Flow	GPD	99,750
RO Recovery Rate		90%
RO permeate	GPD	51,975
RO Reject	GPD	5,775
RO Permeate EC	us/cm	30
RO Reject EC	us/cm	29,730
RO Capital Cost	\$8/GPD	462,000
Reject Disposal Capital		406,494
Total Capital Cost		868,494
RO Operation Cost	\$/Yr	100,000
Reject Disposal Operation Cost	\$/Yr	5,000
Water Saving	\$300/Acft	(50,990)
Total Operation Cost		54,010

Treatment of Boiler Blowdown

	A	B	C	D
	RO Treatment	Direct Reuse	Direct Percolation	Evaporation
	Condense boiler blowdown to 3000 EC, reuse permeate, evaporate reject stream	Remain same boiler blowdown level, store and reuse for park irrigation and percolation	Increase boiler blowdown, divert to perc pond	Reduce water use for boiler to 5000 EC, evaporate
Treatment Capital Cost	\$ 868,494			
Storage, pumping and piping		\$ 590,000	\$ 424,000	\$ 2,093,965
Permitting		\$ 30,000	\$ 30,000	
Operational Cost (Saving)	\$ 54,010	\$ (20,525)	\$ 13,262	\$ (41,286)
Monitoring and Reporting		\$ 5,000	\$ 5,000	
Pros				
	Reuse high quality water, reduce water use	Reduce irrigation water use	Recharge groundwater	Reduce boiler water use
	Operation within industrial area	Low capital cost, low OM cost (credit)	Low capital cost, low OM cost	Land might be mix used
	Free up WWTP and disposal capacity	Free up WWTP and disposal capacity	Free up WWTP and disposal capacity	Free up WWTP and disposal capacity
Cons				
	High Capital and OM cost	Boiler water use stay same or increase	Increase boiler water use	Vest/bird control
	Additional equipment to maintain	Need to identify irrigation needs		High Capital and OM cost
		Need perc pond	Need large perc pond	Large land

Options for RO reject stream

		Evaporator to condense and trucking	Evaporator to condense and ZLD	Evaporation pond	Deep well injection	Trucking to bay area
Total Reject Stream	GPD	6000	6000	6000	6000	6000
Land	Acres		0.17	1.62		
Land cost (\$40K/ac)			\$ 6,721	\$ 64,693		
Pond/drying beds (48"/yr)	SF		7,320	70,450		
Paving Cost (\$4/SF)			\$ 29,278	\$ 281,801		
Equipment		260 GPH evaporator	260 GPH evaporator		Well and Pump	
Equipment cost		\$ 220,000	\$ 220,000			
Tank, pump and piping		\$ 100,000	\$ 120,000	\$ 60,000		\$ 20,000
Installation		\$ 50,000	\$ 50,000			\$ 10,000
Capital Cost		\$ 370,000	\$ 425,999	\$ 406,494	\$ -	\$ 30,000
Evap O&M (0.05/Gallon treated)		\$ 109,500	\$ 109,500	\$ 5,000		
Concentrate		600 GPD	600 GPD			
Truckloads/year (5000-Gal)		43.8				438
Trucking & tipping (\$350/truckload)		\$ 15,330				\$ 153,300
Total O&M Cost		\$ 124,830	\$ 109,500	\$ 5,000		\$ 153,300
Present worth		\$ 2,144,134	\$ 1,982,258	\$ 477,556		\$ 2,208,761

Appendix O

Planning Grant Application Documents

Get To Know Us...

California's Clean Water State Revolving Fund (CWSRF)

The Water Boards' Division of Financial Assistance administers the CWSRF Program. The CWSRF helps communities prevent pollution of precious water resources to maintain their beneficial uses.

Since its inception in 1989, the CWSRF has provided below-market rate financing for the construction of wastewater treatment and water recycling facilities, for implementation of nonpoint source and storm drainage pollution control solutions, and for the development and implementation of estuary plans to protect and promote the health, safety, and welfare of all Californians.

The Division also provides financial assistance through other funding programs to fulfill the State Water Board's Mission:

To preserve, enhance, and restore the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations.

For information on all of the Water Boards' funding programs, please visit the Division's website at: http://www.waterboards.ca.gov/water_issues/programs/grants_loans/



We've got the **green...**
to keep California's **water clean**
CLEAN WATER STATE REVOLVING FUND
State Water Resources Control Board
DIVISION OF FINANCIAL ASSISTANCE
1001 I Street, 17th Floor
Sacramento, CA 95814



STATE OF CALIFORNIA
Clean Water State Revolving Fund

Below-Market FINANCING

FOR WASTEWATER & WATER QUALITY



Below-Market Water Quality Financing

CLEAN WATER STATE REVOLVING FUND (CWSRF) PROGRAM HELPS PROTECT CALIFORNIA'S WATER

Eligible Applicants

- Any city, town, district, or other public body created under state law
- A Native American tribal government or an authorized Native American tribal organization having jurisdiction over disposal of sewage, industrial wastes or other waste
- Any designated and approved management agency under Section 208 of the Clean Water Act
- 501(c)(3)'s and National Estuary Programs

Eligible Projects

- Planning, Design and/or Construction of publicly-owned facilities including:
 - Wastewater treatment plants
 - Sewer collectors and interceptors
 - Combined sewers
 - Septic to sewer conversions
 - Storm water reduction and treatment
 - Water reclamation facilities
- Planning, Design and/or Implementation of:
 - Nonpoint source (NPS) projects or programs
 - Estuary conservation and management plans

When to Apply

ANYTIME! There is no application deadline.

How to Apply

Complete and submit an application online through the Financial Assistance Application Submittal Tool (FAAST) at <https://faast.waterboards.ca.gov>.

The application is also available on the CWSRF website at http://www.waterboards.ca.gov/water_issues/programs/grants_loans/srf/srf_forms.shtml or by calling (916) 327-9978.

In lieu of FAAST, applications may be submitted via email, CD, or hardcopy to:

CleanWaterSRF@waterboards.ca.gov or
State Water Resources Control Board
CWSRF Marketing Unit
1001 I Street, 17th Floor
Sacramento, CA 95814

Funding Terms

- **Financing Limit:** NO maximum funding limit!
- **Interest Rate:** ½ most recent State General Obligation (GO) Bond Rate at time of funding approval
- **Financing Term:** Up to 30 years or useful life of the project
- **Repayment:** Begins one year after completion of construction
- Limited principal forgiveness may also be available for some projects

Be a Frequent Financer!

The CWSRF values its repeat customers and makes it easier to finance multiple projects in your Capital Improvement Plans!

- General documents applicable to all projects are saved to reduce paperwork duplication.
- Once your agency has established multi-year financing capability, limited financial documents are required for further borrowing.
- Applications are assigned to the same Project Manager whenever possible.

Additional Information

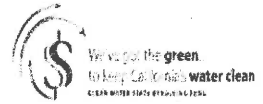
For more information and program updates, please visit the CWSRF website at http://www.waterboards.ca.gov/water_issues/programs/grants_loans/srf/index.shtml

Questions?

We are here to help! If you have any questions, please contact the CWSRF at (916) 327-9978 or CleanWaterSRF@waterboards.ca.gov.



CWSRF Financial Assistance Application Before you Start



You can help speed the application review process by ensuring your application contains accurate and complete information. To avoid delays in the processing of your application, we recommend you take a few minutes to review the pointers and tips below before starting your application.

- ✓ An overview of the financing process can be found on the Division's web site at http://www.waterboards.ca.gov/water_issues/programs/grants_loans/srf/docs/forms/application_process.pdf.
- ✓ You may find it helpful to review the policy or guidelines applicable to your project. These can be found at [Clean Water State Revolving Fund Policy](#) and [Water Recycling Funding Program Guidelines](#)
- ✓ Although the [Potential CWSRF Flags Worksheet](#) is not required as part of your application, it is recommended that you review this worksheet and alert the Division of Financial Assistance staff at your earliest opportunity of any issues that may potentially affect your application.
- ✓ [Contact the Division](#) as early as possible to coordinate your financing with your project's schedule.
(NOTE: No action is necessary on your part to have your project added to the [Project List](#). The Division will make arrangements for your project to be added to the Project List once you submit a complete or partial application. If you plan to submit an application for CWSRF financing, the Division recommends that you start by submitting the [General Information Package](#) to obtain a project number and a Project Manager. The General Information package will give the Division sufficient information to add your project to the Project List.)
- ✓ Submit complete packages whenever possible.
(NOTE: Projects are funded based on a complete application. Partial packages may be submitted, but complete packages will be reviewed before incomplete packages, and complete applications will be reviewed and approved for financing first.)
- ✓ The Environmental Package generally requires the longest review time – you should focus on that Package before the Technical and Financial Security Packages for successful CWSRF financing. After you have submitted a complete, or mostly complete, Environmental Package, you should coordinate with your assigned Project Manager on the timing of the Technical and Financial Security Packages to ensure that the information is as current as possible.
- ✓ Have your legal counsel review the [FAQs](#) regarding the legal opinion we will need from you to approve financing. If your legal counsel anticipates any issues with providing this legal opinion, we can arrange a discussion with our legal counsel. The Division of Financial Assistance's legal counsel will contact your legal counsel approximately eight weeks prior to execution of the financing agreement to finalize the legal opinion needed for the application.
- ✓ Clearly type or print all information.
- ✓ Sign and date the application where indicated.
- ✓ Include all required attachments.

Submitting Your Application

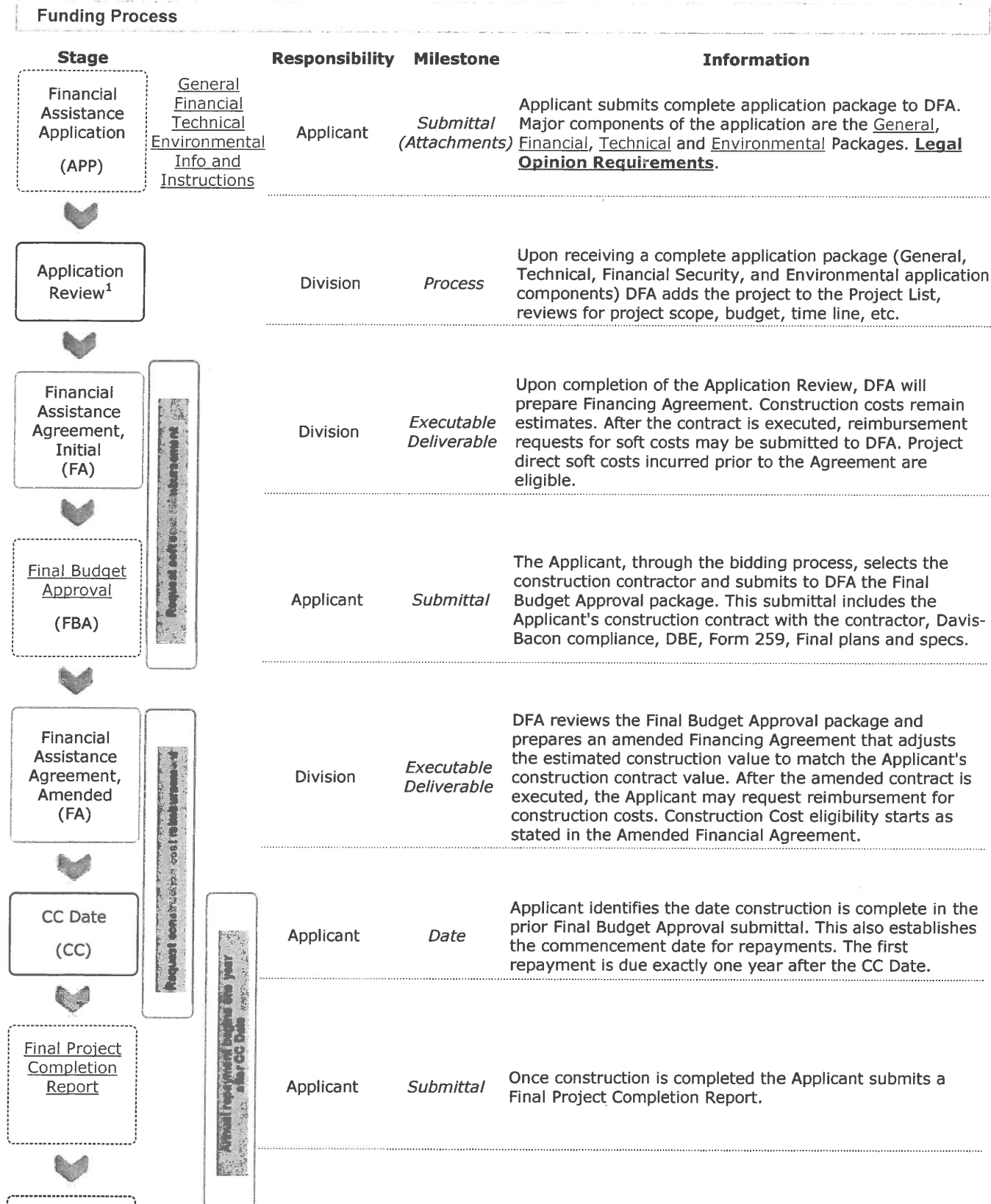
The application and attachments can be submitted electronically or as a hard copy in one of the following three ways:

- 1) Apply online via the Financial Assistance Application Submittal Tool (FAAST): <https://faast.waterboards.ca.gov>. This is the preferred method for submitting your application. There are three short videos below that will teach you how to use FAAST. The minimum requirement to submit a CWSRF application in FAAST is the General Information Form. Once the CWSRF application is submitted in FAAST, a Project Manager will be assigned to help you complete the application process.
- 2) Send the application and attachments via email to cleanwatersrf@waterboards.ca.gov.
- 3) Mail a CD and/or hard copy to:

**State Water Resources Control Board
Division of Financial Assistance
ATTN: Marketing Unit
1001 I Street, 16th Floor, Sacramento, CA 95814
P.O. Box 944212
Sacramento, CA 94244-2120**

Financial Assistance Application Submittal Tool (FAAST) Tutorials

-  [How to Create a FAAST Account](#)
-  [How to Start & Submit a CWSRF Application \(only for Construction/Implementation\)](#)
-  [How to Upload Post Submission Attachments](#)



Annual Reports

Applicant

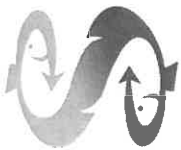
Submittal If required, the Applicant will submit Reports to DFA as *(Attachments)* stated in the Financial Agreement.

¹Non-routine, controversial projections must receive State Water Board Approval

(Updated 2/18/16)

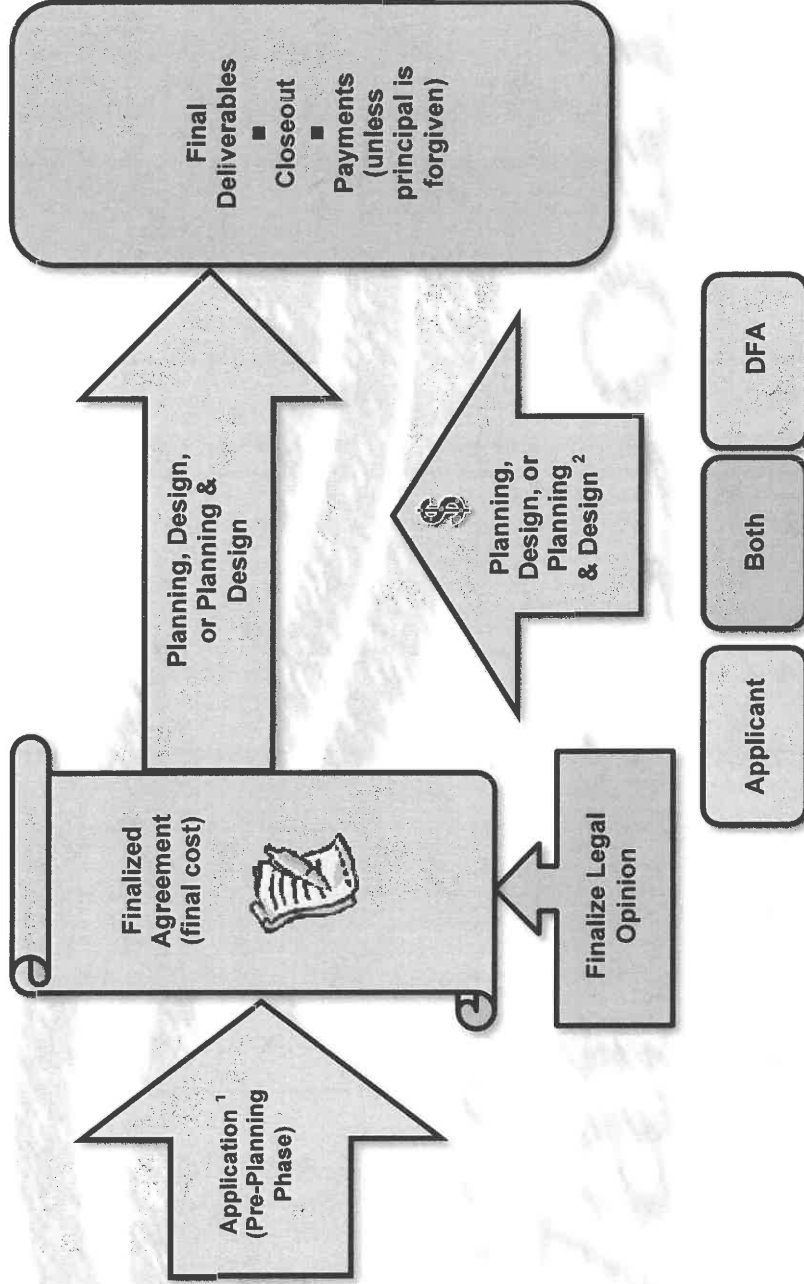
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The California Water Boards include the State Water Resources Control Board and nine Regional Boards
The State Water Board is one of six environmental entities operating under
the authority of the California Environmental Protection Agency
Cal/EPA | ARB | CalRecycle | DPR | DTSC | OEHHA | SWRCB



Clean Water
State Revolving Fund

CALIFORNIA CLEAN WATER STATE REVOLVING FUND Planning, Design, or Planning and Design Application Process



FOOTNOTES:

- 1 The application for a planning, design, or planning and design financing agreement consists of the application form, the “technical” package, and the “financial security” package. Incomplete applications may be submitted, but complete applications will be reviewed and approved for financing first.
- 2 Disbursement of planning, design, or planning and design costs require an executed financing agreement. Disbursement will be limited to 70 percent of the financing amount until the recipient submits the draft deliverables. Disbursement will be limited to 90 percent of the financing amount until the recipient submits the final deliverables.

TABLE 3.a: Administration Fund Balance

	7/1/15 – 12/31/15	1/1/16 – 6/30/16	7/1/16 – 12/31/16
Beginning Balance	\$21,561,866	\$21,851,059	\$18,757,797
Collected	\$4,431,291	\$3,275,738	\$3,242,850
Spent	(\$4,142,098)	(\$6,369,000)	(\$6,624,000)
End Balance	\$21,851,059	\$18,757,797	\$15,376,647

TABLE 3.b: SCG Fund Balance

	7/1/15 – 12/31/15	1/1/16 – 6/30/16	7/1/16 – 12/31/16
Beginning Balance	\$23,071,271	\$26,943,160	\$27,225,540
Collected	\$7,442,010	\$4,799,575	\$6,856,756
Spent	(\$3,570,121)	(\$4,517,195)	(\$2,990,104)
End Balance*	\$26,943,160	\$27,225,540	\$31,092,192

*Ending Balance does not account for existing commitments

TABLE 4.a: SCG Planning Grants

Eligible Applicants:	Public agencies, 501(c)(3) non-profit organizations, federally recognized tribes and state tribes on Native American Commission consult list		
Affordability Criteria	Grant Amount		
Population ⁴²	Community MHI	Percent of Total Project Cost	Maximum Grant Per Project ⁴⁰
<20,000	DAC <80 percent of Statewide MHI	100 percent	\$500,000

TABLE 4.b: SCG Construction Grant

Eligible Applicants:	Public agencies, 501(c)(3) non-profit organizations, federally recognized tribes and state tribes on Native American Commission consult list				
Eligible Project Type	CWSRF-eligible wastewater projects ⁴¹				
Affordability Criteria			Grant Amount		
Population ⁴²	Community MHI	Wastewater Rates as a Percentage of MHI ⁴³	Percentage of Total Eligible Project Cost	Maximum Grant Amount Per Project ^{44,45,46}	Maximum Cost Per Household / Project
< 20,000	MHI ≤ 100% Statewide MHI	≥4%	50%	\$6 million	\$30,000
	DAC <80% of Statewide MHI	≥1.5%	75% ⁴⁷		
	SDAC <60% of Statewide MHI	NA	100%		

⁴⁰ For a regional planning project, DFA may elect to approve more than \$500,000 in SCG funds, not to exceed \$500,000 in SCG funding per community included in the regional plan. A community may not receive more than \$1,000,000 in total planning costs (\$500,000 for treatment plant upgrades plus \$500,000 for collection system improvements). Notwithstanding the maximum planning grant amounts outlined herein, on a case-by-case basis, for good cause, the Deputy Director of the Division may approve additional planning grant funds. Upon DFA's determination of sufficient planning funding needs, more than 15 percent of the funds available per Prop 1 may be used to fund planning and technical assistance activities.

Planning or Design Application Information and Instructions

Administered by the State Water Resources Control Board (State Water Board), Division of Financial Assistance (Division), the Financial Assistance Application is designed to help determine your eligibility for planning or design funding through the Clean Water State Revolving Fund (CWSRF) Program.

Before proceeding with your application, please read the *Policy for Implementing the Clean Water State Revolving Fund*. The planning/design financing process is described in Section VIII:

http://www.waterboards.ca.gov/water_issues/programs/grants_loans/srf/finalpolicy0513.shtml

This package includes the instructions for completing the application for planning or design financing.

Please Note: Construction financing can typically be approved after planning work is complete. Most projects will receive design funding as part of the construction agreement. In a limited number of cases, more detailed design work may be required prior to approval of construction financing. It is expected that a separate design financing agreement will only be needed in these cases. If you are requesting design financing, you should explain the status of planning work and the Division may request to review existing planning documents prior to approving design financing.

Submitting Your Application

You can help the review process by ensuring your application contains accurate and complete information. To avoid delays in the processing of your application, we recommend:

Contact the Division of Financial Assistance as early as possible to coordinate your application with your project's schedule; contact information is provided on the next page.

Submit a complete application package whenever possible.

(NOTE: Projects are funded based on a complete application. Partial packages may be submitted, but complete packages will be reviewed and approved for financing first.)

Have your legal counsel review the FAQs:

http://www.waterboards.ca.gov/water_issues/programs/grants_loans/srf/docs/forms/legal_faq.pdf

The Division of Financial Assistance's legal counsel will contact your legal counsel approximately eight weeks prior to execution of the financing agreement to discuss required legal opinion language.

Clearly type or print all information.

Sign and date the application where indicated.

The application and attachments can be submitted electronically or as a hard copy in one of the following three ways. Applicants are encouraged to utilize the Financial Assistance Application Submittal Tool (FAAST) to streamline the application submittal and review process, but if that will create a hardship, email or mail can be utilized instead:

- 1) Apply online via the FFAST: <https://faast.waterboards.ca.gov>

To submit a CWSRF application in FFAST you must complete all the tabs in FFAST and attach the CWSRF Planning/Design Application. (Note: Attaching the Planning/Design Application is not the same as submitting the application. Once the CWSRF Planning/Design Application has been uploaded, you must still complete the application by clicking on the "Submit" button.) A project manager will be assigned once the CWSRF Planning/Design Application is submitted in FFAST. The project manager will help the applicant complete the application process.

To submit additional documents for the same project, **DO NOT** start a new application, instead click on the Submitted Applications link on the Main Menu and choose the project from the list of previously submitted applications. Open the Attachments tab, and then the Post-Submission sub-tab. Choose which document from the Attachment Category drop-down list and then select the file to upload. The project manager will receive an email notification letting them know you have submitted additional information for review.

The following FFAST resources are available online:

[Frequently Asked Questions](#)

[How-to-Videos](#)

[User Manual](#)

If you need assistance you can also contact the FFAST Help Desk, which is staffed Monday through Friday 8am through 5pm, at 1-866-434-1083 or FFAST_ADMIN@waterboards.ca.gov.

- 2) Send the application and attachments via email to cleanwatersrf@waterboards.ca.gov.
- 3) Mail a CD and/or hard copy to:

**State Water Resources Control Board
Division of Financial Assistance
ATTN: Marketing Unit
1001 I Street, 16th Floor, Sacramento, CA 95814
P.O. Box 944212
Sacramento, CA 94244-2120**

CONTACT INFORMATION

If you have general questions regarding the program, contact the CWSRF at
(916) 327-9978

or

cleanwatersrf@waterboards.ca.gov

If you already submitted a CWSRF Financial Assistance application and would like to know the status, please check the CWSRF Application Status Report at

http://www.waterboards.ca.gov/water_issues/programs/grants_loans/srf/docs/forms/appstatusweb.pdf

If you have specific questions regarding the program or your application, please refer to the CWSRF Contact List on the Division's web site at

http://www.waterboards.ca.gov/water_issues/programs/grants_loans/srf/docs/cwsrf_contacts.pdf

PLANNING/DESIGN APPLICATION INSTRUCTIONS

Section I – Applicant Information

Applicant (Entity) Name – Enter the entity that will be the legal signatory to a financing agreement.

Entity Type – Enter one of the following entity types:

Public – local or state (including cities, counties, and districts with wastewater authority)

Indian Tribe - Federally recognized tribes

Nonprofit (nonpoint source and estuary projects only)

Other – please specify

Charter City/County – Indicate if the applicant is a charter city/county.

Street Address – Enter the applicant’s physical street address. Make sure to enter the applicant’s zip code plus the 4-digit add-on code.

Mailing Address – Enter the applicant’s mailing address, if different from the street address. Make sure to enter the zip code plus the 4-digit add-on code for the mailing address.

Congressional District(s) – Enter the Congressional district(s) where the project will be physically located. If the project will span multiple Congressional Districts (i.e., a pipeline project), list all affected districts. A map of California Congressional Districts can be found at <http://www.house.gov/representatives/find/>.

State Senate District(s) – Enter the State Senate district(s) where the project will be physically located. Refer to <http://findyourrep.legislature.ca.gov/>.

State Assembly District(s) – Enter the State Assembly district(s) where the project will be physically located. Refer to <http://findyourrep.legislature.ca.gov/>.

County – Enter the County (or Counties) where the project will be physically located.

Regional Water Board - Check the Regional Water Quality Control Board (Regional Water Board) jurisdiction(s) where the project will be physically located or affected by the project. A list of Regional Water Boards can be found at http://www.waterboards.ca.gov/publications_forms/publications/factsheets/docs/region_brds.pdf.

Federal Tax ID No. – Enter the Federal tax identification number of the applicant.

Data Universal Numbering System (DUNS) No. - This number is required to receive CWSRF financing. If you don’t already have a DUNS number, you can get more information at http://www.whitehouse.gov/sites/default/files/omb/grants/duns_num_guide.pdf.

Authorized Representative Name, Title - The authorized representative is the person who has been authorized by resolution or ordinance to sign and submit the application materials, certify compliance with applicable state and federal laws, execute the financial assistance agreement and amendments, and certify disbursement requests.

Auth. Rep. Phone - Enter the authorized representative’s telephone number.

Auth. Rep. Email – Enter the authorized representative’s email address.

General Contact Person – Enter the name of the person who is the day-to-day contact for the project. This person should be able to answer general questions about the project and application.

General Contact Person Phone – Enter the contact person’s telephone number.

General Contact Person Email – Enter the contact person’s email address.

Financial Contact Person – Enter the name of the person who can respond to questions regarding the applicant’s financial information.

Financial Contact Person Phone – Enter the contact person’s telephone number.

Financial Contact Person Email – Enter the contact person’s email address.

Local Legal Counsel – Enter the name of the person who is the applicant’s local legal counsel for the project. This person will be the one that the Division of Financial Assistance’s legal counsel will contact prior to execution of the financing agreement to discuss what legal opinion language is needed.

Local Legal Counsel Phone – Enter the local legal counsel’s telephone number.

Local Legal Counsel Email – Enter the local legal counsel’s email address.

Bond Counsel (if applicable) – Enter the name of the bond counsel person who can respond to questions regarding the applicant’s existing debt.

Bond Counsel Phone (if applicable) – Enter the bond counsel’s telephone number.

Bond Counsel Email (if applicable) – Enter the bond counsel’s email address.

Section II - Project Information

Project Title – Enter the title or name of the project.

CWSRF Planning/Design Financing Amount Requested – Enter the amount of planning or design financing you are requesting through the CWSRF Program.

Section III – Project Service Area Demographics

Active Service Connections - If the active wastewater connection is currently and directly served by the wastewater collection system, enter the following for the applicable connection type:

Number of active wastewater service connections that are currently and directly served by the wastewater collection system
Current monthly service charge

Projected monthly service charge that will be in place after the proposed project is completed

Rate increase effective date for projected monthly service charges – Enter the estimated date that the projected monthly service charges will go into effect (if unknown, assume one year after construction completion).

Date of the most recent Proposition 218 public hearing – Enter the date of the last public hearing where wastewater rates were approved.

Current Year Median Household Income – Enter the estimated Median Household Income (MHI) for the proposed project service area, using the most recent income survey. If an income survey is not available, MHI estimates may be found at the Census Bureau website at <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml#none>. Enter “Median Household Income in the Past 12 Months” and the municipality name into the Quick Search box. If you cannot locate data for your community, you may contact the Division at cleanwatersrf@waterboards.ca.gov for additional assistance.

Current Year Estimated Population Served – Enter the estimated population of the proposed project service area.

Are less than 50% of residences permanently occupied? – Place a check () in the box to indicate whether or not less than 50% of residences are permanently occupied.

Section IV – Regulatory Information

NPDES Permit or WDR Order No. – Enter the National Pollutant Discharge Elimination System Permit number or the Waste Discharge Requirement number, if applicable. Please indicate if any enforcement action has occurred as a result of the water quality problem.

As indicated in Section IV- Attachments, you should attach copies of any project related discharge requirements and/or enforcement orders (Attachment 2).

Section V – Compliance with Urban Water Management and Water Rights Requirements

Indicate whether the applicant is an Urban Water Supplier, and if yes, whether an Urban Water Management Plan has been submitted. An Urban Water Supplier provides water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. The Urban Water Management Planning Act, Water Code, Section 10631.5, requires every urban water supplier to prepare and adopt an Urban Water Management Plan that includes specific elements.

Check (✓) the box indicating if your entity is a water diverter and subject to section 5101 of the Water Code. Subdivision (e)(1) states that on or after January 1, 2012, monthly records of water diversion must be reported to the State Water Board’s Division of Water Rights.

Section VI - Discussion of Material Events, Material Obligation Conditions, and Any Debt Limit

Identify any current, prior, or pending material events such as bankruptcy, defaults, litigation, grand jury findings, unscheduled draws on reserve funds, substitution of insurers or their failure to perform, unscheduled draws on credit enhancements, actions taken in anticipation of filing Chapter 9, rating changes, relevant conditions in material obligations, and any local debt limit.

Section VII – Green Project Reserve (GPR)

1. Check () the box indicating if this project or a portion of this project is eligible for CWSRF GPR. Municipalities applying for GPR-eligible projects or project components may be eligible for principal forgiveness. United States Environmental Protection Agency (U.S. EPA) Guidance regarding GPR eligibility is available online at: https://www.epa.gov/sites/production/files/2015-04/documents/green_project_reserve_eligibility_guidance.pdf
2. Indicate the percentage of total project cost within each GPR category. Only the components of the project that clearly advance one or more of the objectives articulated in the four GPR categories should be counted as GPR eligible. If the Project qualifies for more than one GPR category, please indicate the percentage in each category, and then the total percentage of the project that qualifies for GPR. The above U.S. EPA guidance lists categorically eligible project types under each of the 4 categories. If your project is not categorically eligible, you may consider preparing a business case to document GPR eligibility. The decision criteria and required content for business cases are provided in the U.S. EPA guidance above.

Section VIII – Attachments

1 - Plan of Study:

- o Explanation of water quality problem to be addressed (including information about any existing or pending enforcement actions)
- o Scope of planning or design work
- o Budget
- o Schedule (including specific deliverables and submittal dates)
- o If the Plan of Study includes design work, it should explain the status of planning work, and the Division may request to review existing planning documents prior to approving design financing.

2 - Certification for Compliance with Water Metering Form: Water Code sections 525 through 529.7 prohibit water purveyors, both agricultural and urban, from receiving State funds if metering requirements are not met. If you are an urban water supplier (i.e., supply to more than 3,000 customers or supplying more than 3,000 acre-feet annually), you must comply with this requirement. Please consult with your legal counsel and review sections 525 through 529.7 of the Water Code before completing this certification.

3 - Regional Water Quality Control Board Requirements: Submit any permit requirements and/or enforcement orders that have been issued by the Regional Water Board relative to the proposed project. If the proposed project is not subject to permit requirements and/or enforcement orders, please indicate this in the comment box.

4 - Authorizing Resolution/Ordinance: This resolution or ordinance designates the Authorized Representative(s) for the project, who will have the authority to sign and submit the CWSRF application materials, certify compliance with applicable state and federal laws, execute the financial assistance agreement and amendments, and certify disbursement requests.

5 - Relevant Service, Management, Operating, or Joint Powers Agreements: If applicable, provide a copy of any relevant service, management, operating, or joint powers agreements with any amendments and a summary explanation of the shared financial and management responsibilities of the parties. *(No template exists)*

6 - Audited Financial Statements: Provide COMPLETE audited financial statements for the most recent three years. Identify any restricted funds and the reason for the restrictions as well as all sources of security to be pledged. Submit via hardcopy, CD, e-mail, or web link. Refer to the schedule below:

Application Date	Required Financial Statements
January 1 st through June 30 th	Most recent three years, including last Fiscal Year. Example: <i>Application on March 1, 2017, requires Financial Statements for Fiscal Years 2013/14; 2014/15; and 2015/16.</i>
July 1 st through December 31 st	Most recent three years prior to current Fiscal Year. Example: <i>Application on September 1, 2016, requires Financial Statements for Fiscal Years 2012/13; 2013/14 and 2014/15</i>

7 – Rate Adoption Resolution/Ordinance: Attach a copy of the most recent board resolution, ordinance, or similar document which approved the water rates adoption currently in place.

8 – Existing Related Debt: Submit a schedule of all material debt secured by the PRF or the system, along with a copy of each relevant debt document (e.g., loans, private placements, bond indentures, installment sale agreements, etc.). If there are any pending debts, provide draft or estimated information. This schedule will be an exhibit to the DWSRF financing agreement and will rank related debt according to priority in relation to the proposed DWSRF debt (senior, parity, or subordinate tier). If the applicant has no other debt (except other DWSRF debt), the Authorized Representative must provide a letter stating this. In most cases, the DWSRF debt will be on parity with related debt.

Link to Debt Management Policy: _____

- If the entity has no other material debts, submit a letter signed by the authorized representative that verifies this; or
- Submit a draft or estimated information for any other pending debts/financing.

The following attachment is not required if you are a Small Disadvantaged Community applying for a 100% grant (please contact the Division if you have questions regarding eligibility).

9 - Pledged Revenues and Fund(s) Resolution/Ordinance: Federal law requires applicants to establish a dedicated source of revenue for repayment. The financing agreement will identify the pledged revenue(s) and fund(s) (PRF). The majority of CWSRF applications for wastewater projects are secured with “the Wastewater Enterprise fund and Net Revenues thereof”. If your CWSRF financing agreement will also be secured with other PRFs such as special assessments or a special tax, the template language will need to be modified accordingly. If you are uncertain as to the appropriate wording, a draft version may be submitted with the initial application. A reserve fund may also be required.

Certification and Signature of Authorized Representative

The authorized representative is the person who has the authority to sign and submit the application materials, certify compliance with applicable state and federal laws, execute the financial assistance agreement and amendments, and certify disbursement requests.

Print the name and title of the authorized representative.
Sign and date the application.

PLANNING OR DESIGN FINANCIAL ASSISTANCE APPLICATION

I. APPLICANT INFORMATION

Applicant (Entity) Name:			
Entity Type: <input type="checkbox"/> Public - Local <input type="checkbox"/> Public - State <input type="checkbox"/> Indian Tribe <input type="checkbox"/> Nonprofit <input type="checkbox"/> Other: Specify _____			
Charter City/County: <input type="checkbox"/> Yes <input type="checkbox"/> No			
Street Address:	City:	State:	Zip+4 Code:
Mailing Address:	City:	State:	Zip+4 Code:
Congressional District(s):			
State Senate District(s):			
State Assembly District(s):			
County (or Counties):			
Regional Water Board: <input type="checkbox"/> 1 (North Coast) <input type="checkbox"/> 2 (San Francisco Bay) <input type="checkbox"/> 3 (Central Coast) <input type="checkbox"/> 4 (Los Angeles)			
<input type="checkbox"/> 5 (Central Valley) <input type="checkbox"/> 6 (Lahontan) <input type="checkbox"/> 7 (Colorado River) <input type="checkbox"/> 8 (Santa Ana) <input type="checkbox"/> 9 (San Diego)			
Federal ID No.:		Data Universal Numbering System (DUNS) No.:	
Authorized Representative Name, Title:			
Phone No.: ()		Email Address:	
General Contact Person Name:			
Phone No.: ()		Email Address:	
Financial Contact Person Name:			
Phone No.: ()		Email Address:	
Legal Counsel Name:			
Phone No.: ()		Email Address:	
Bond Counsel Name (if applicable):			
Phone No.: ()		Email Address:	

II. PROJECT INFORMATION

Project Title:
CWSRF Planning/Design Financing Amount Requested: \$

III. PROJECT SERVICE AREA DEMOGRAPHICS

Active Service Connections			<input type="checkbox"/> Not Applicable
Connection Type	Number of Connections	Current Monthly Service Charge	Projected Monthly Service Charge at Planning Completion*
Residential		\$	\$
Commercial		\$	\$
Industrial		\$	\$
Other		\$	\$
TOTAL		\$	\$

*Rate increase effective date for projected monthly service charges:

State Use Only	
CWSRF Project #	
Project Manager	
Date Received	

Date of the most recent Proposition 218 public hearing:																									
Current Year Median Household Income: \$	Current Year Estimated Population Served:																								
Are less than 50% of residences permanently occupied?	Yes No																								
IV. REGULATORY INFORMATION																									
NPDES Permit and/or WDR Order No.:																									
Has enforcement action occurred as a result of the water quality problem?	<input type="checkbox"/> Yes <input type="checkbox"/> No																								
V. COMPLIANCE WITH URBAN WATER MANAGEMENT AND WATER RIGHTS REQUIREMENTS																									
Are you an Urban Water Supplier*?	<input type="checkbox"/> Yes <input type="checkbox"/> No																								
If yes, have you submitted an Urban Water Management Plan to the Department of Water Resources?	<input type="checkbox"/> Yes <input type="checkbox"/> No																								
*An Urban Water Supplier provides water for municipal purposes either directly or indirectly to more than 3,000 customers or supplies more than 3,000 acre-feet of water annually. The Urban Water Management Planning Act, Water Code, Section 10631.5, requires every urban water supplier to prepare and adopt an Urban Water Management Plan that includes specific elements.																									
Is your entity a water diverter and subject to section 5103 of the Water Code?	<input type="checkbox"/> Yes <input type="checkbox"/> No																								
VI. DISCUSSION OF MATERIAL EVENTS, MATERIAL OBLIGATION CONDITIONS, AND ANY DEBT LIMIT																									
Identify any current, prior or pending material events such as bankruptcy, defaults, litigation, grant jury findings, unscheduled draws on reserve funds, substitution of insurers or their failure to perform, unscheduled draws on credit enhancements, actions taken in anticipation of filing Chapter 9, rating changes, relevant conditions in material obligations, and any local debt limit.																									
VII. GREEN PROJECT RESERVE (GPR)																									
1. Is this project, or a portion of this project, eligible for the <u>CWSRF GPR</u> ? YES NO																									
If no, skip to Section VI																									
2. Which GPR Category(ies) are applicable, and identify whether the project is categorically eligible or requires a business case to demonstrate eligibility.																									
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">% of Total Project Cost*</th> <th style="width: 25%;">Category</th> <th style="width: 25%;">Categorically Eligible</th> <th style="width: 25%;">Business Case Attached</th> </tr> </thead> <tbody> <tr> <td></td> <td>Green Infrastructure</td> <td></td> <td></td> </tr> <tr> <td></td> <td>Water Efficiency</td> <td></td> <td></td> </tr> <tr> <td></td> <td>Energy Efficiency</td> <td></td> <td></td> </tr> <tr> <td></td> <td>Environmentally Innovative</td> <td></td> <td></td> </tr> <tr> <td></td> <td>Total</td> <td></td> <td></td> </tr> </tbody> </table>		% of Total Project Cost*	Category	Categorically Eligible	Business Case Attached		Green Infrastructure				Water Efficiency				Energy Efficiency				Environmentally Innovative				Total		
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* Includes associated planning and design costs.																									

VIII. ATTACHMENTS

- 1 – Plan of Study
- 2 – Certification for Compliance with Water Metering Form
- 3 – Regional Water Quality Control Board Requirements
- 4 – Authorizing Resolution/Ordinance
- 5 - Relevant Service, Management, Operating or Joint Powers Agreements
- 6 - Audited Financial Statements
- 7 – Rate Adoption Resolution/Ordinance
- 8 – Related Debt

The following attachment is not required for Small Disadvantaged Communities applying for 100% grant:

- 9 – Pledged Revenues and Fund(s) Resolution/Ordinance

CERTIFICATION AND SIGNATURE OF AUTHORIZED REPRESENTATIVE

To the best of my knowledge and belief, I certify that I am authorized to submit this application; the information provided in this application is true and correct; the documentation has been duly authorized by the governing body of the applicant; and the entity possesses the legal authority to apply for the financing and enter into a financing agreement with the State Water Resources Control Board and to finance and construct the proposed facilities.

Name of Authorized Representative: _____ Title: _____

Signature of Authorized Representative: _____ Date: _____

**CERTIFICATION FOR COMPLIANCE WITH WATER METERING
REQUIREMENTS FOR FUNDING APPLICATIONS**



Funding Entity name: State Water Resources Control Board

Funding Program name: Clean Water State Revolving Fund

Applicant (Entity name): _____

Please check one of the boxes below and sign and date this form.

As the authorized representative for the applicant Entity, I certify under penalty of perjury that the Entity is not an urban water supplier, as that term is understood pursuant to the provisions of section 529.5 of the Water Code.

As the authorized representative for the applicant Entity, I certify under penalty of perjury that the applicant Entity has fully complied with the provisions of Division 1, Chapter 8, Article 3.5 of the California Water Code (sections 525 through 529.7 inclusive) and that the ordinances, rules, or regulations submitted with this certification as listed below have been duly adopted and are in effect as of this date.

I understand that the Funding Entity will rely on this signed certification in order to approve funding and that false and/or inaccurate representations in this Certification Statement may result in loss of all funds awarded to the applicant for its project. Additionally, for the aforementioned reasons, the Funding Entity may withhold disbursement of project funds, and/or pursue any other applicable legal remedy.

Name of Authorized Representative
(Please print)

Title

Signature of Authorized Representative

Date

AUTHORIZING RESOLUTION/ORDINANCE

RESOLUTION NO: _____

WHEREAS _____ RESOLVED BY THE _____
(insert appropriate findings) *(insert name of Governing Board of the Entity)*
OF THE _____ (the "Entity"), AS FOLLOWS:
(insert Entity name)

The _____ (the "Authorized Representative") or designee is
(insert Title of Authorized Representative)
hereby authorized and directed to sign and file, for and on behalf of the Entity, a Financial Assistance
Application for a financing agreement from the State Water Resources Control Board for the planning, design,
and construction of _____ (the "Project").
(insert Project Name)

This Authorized Representative, or his/her designee, is designated to provide the assurances, certifications,
and commitments required for the financial assistance application, including executing a financial assistance
agreement from the State Water Resources Control Board and any amendments or changes thereto.

The Authorized Representative, or his/her designee, is designated to represent the Entity in carrying out the
Entity's responsibilities under the financing agreement, including certifying disbursement requests on behalf of
the Entity and compliance with applicable state and federal laws.

CERTIFICATION

I do hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted
at a meeting of the _____ held
(insert name of Governing Board of the Entity)
on _____
(Date)

(Name, Signature, and Seal of the Clerk or Authorized Record Keeper of the Governing Board of the Agency)

RELATED DEBT

The following related debts are senior to the proposed CWSRF financing:

Name of Lender and Title of Debt or Loan Number	Debt Security or Source of Revenue	Debt Service Coverage Requirement	Rating	Original Debt Amount	Current Balance	Payment Amount	Interest Rate	Debt Term & Maturity Date
				\$	\$	\$		/
				\$	\$	\$		/
				\$	\$	\$		/

The following related debts are on parity to the proposed CWSRF financing:

Name of Lender and Title of Debt or Loan Number	Debt Security or Source of Revenue	Debt Service Coverage Requirement	Rating	Original Debt Amount	Current Balance	Payment Amount	Interest Rate	Debt Term & Maturity Date
				\$	\$	\$		/
				\$	\$	\$		/
				\$	\$	\$		/
				\$	\$	\$		/

The following related debts are subordinate to the proposed CWSRF financing:

Name of Lender and Title of Debt or Loan Number	Debt Security or Source of Revenue	Debt Service Coverage Requirement	Rating	Original Debt Amount	Current Balance	Payment Amount	Interest Rate	Debt Term & Maturity Date
				\$	\$	\$		/
				\$	\$	\$		/
				\$	\$	\$		/
				\$	\$	\$		/

Attach copies of the debt documents associated with the above debt.

PLEDGED REVENUES AND FUND(S) (PRF) RESOLUTION

WHEREAS _____
(insert appropriate findings regarding intent, authority, and procedure)

THEREFORE BE IT RESOLVED, the _____ (the "Entity") hereby
(insert Entity name)
dedicates and pledges _____
(insert exact name of revenue stream and designated fund containing those revenues)

to payment of any and all Clean Water State Revolving Fund and/or Water Recycling Funding Program
financing for _____ (the "Project"). The
(insert Project name and 4-digit CWSRF Project number)

Entity commits to collecting such revenues and maintaining such fund(s) throughout the term of such financing and until the Entity has satisfied its repayment obligation thereunder unless modification or change is approved in writing by the State Water Resources Control Board. So long as the financing agreement(s) are outstanding, the Entity's pledge hereunder shall constitute a lien in favor of the State Water Resources Control Board on the foregoing fund(s) and revenue(s) without any further action necessary. So long as the financing agreement(s) are outstanding, the Entity commits to maintaining the fund(s) and revenue(s) at levels sufficient to meet its obligations under the financing agreement(s).

CERTIFICATION

I do hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the _____ held
(insert name of Governing Board of the Entity)
on _____
(Date)

(Name, Signature, and Seal of the Clerk or Authorized Record Keeper of the Governing Board of the Agency)