Hidden Valley Lake Community Services District

SPECIAL MEETING

DATE: MAY 25, 2017

TIME: 5:30 p.m.

PLACE: Hidden Valley Lake CSD
Administration Office, Boardroom
19400 Hartmann Road
Hidden Valley Lake, CA

1) CALL TO ORDER

2) PLEDGE OF ALLEGIANCE

3) ROLL CALL

4) APPROVAL OF AGENDA

5) DISCUSSION AND POSSIBLE ACTION: Discuss and accept Coastland's Engineering Report (Presented at the April 2017 Board meeting by John Griffin): Meter moratorium and Cr6.

6) DISCUSSION AND POSSIBLE ACTION: Discuss and approve the General Manager's authority to enter into a contract with Coastland Engineering to assist with the support proposal, required engineering estimates and reports for FEMA reimbursement and Hazardous Mitigation request, not to exceed $14,935.00. Funding for this contract will be included in our FEMA/CalOES request for reimbursement.

7) PUBLIC COMMENT

8) ADJOURNMENT

Public records are available upon request. Board Packets are posted on our website at www.hiddenvalleylakecsd.com. Click on the "Board Packet" link on the Agenda tab.

In compliance to the Americans with Disabilities Act, if you need special accommodations to participate in or attend the meeting please contact the District Office at 987-9201 at least 48 hours prior to the scheduled meeting.

Public shall be given the opportunity to comment on each agenda item before the Governing Board acts on that item, G.C. 54953.3. All other comments will be taken under Public Comment.

FINAL DRAFT
HEXAVALENT CHROMIUM IMPROVEMENTS
ENGINEERING REPORT
DATED: APRIL 14, 2017

A. Water System Information

Describe the current state of the water system and its facilities. Include thorough details of source(s), storage, treatment, and distribution system, including capacities, sizing, types, and treatment techniques.

The current water system for Hidden Valley Lake Community Services District (District) consists three wells off of Grange Road (Grange Well-02, Grange Well-03 and Grange Well-04). Per Permit Amendment #5 to the Domestic Water Supply Permit, the permitted production rates for the three wells are as follows:

- *Grange Well-02 (PS Code 1710015-002): 715 gallons per minute (gpm)*
- *Grange Well-03 (PS Code 1710015-003): 338 gpm*
- *Grange Well-04 (PS Code 1710015-004): 1,260 gpm*

The District primarily relies upon Grange Well-02 and Grange Well-04 for its water supply, with Grange Well-03 supplementing during periods of high water demand.

Power for the wells is supplied by PG&E. There are no backup generators associated with any of the wells and the panels are not equipped with receptacles for an emergency generator. Backup power is necessary in case of power outages or other emergency situations.

The District's water treatment facilities consist of chlorine gas injection (near Grange Well-04). The District uses two 150-lb gas cylinders that have an automatic switch-over device to supply the chlorine gas. At least one spare full cylinder is kept in the chlorination shed.

Untreated water is injected with chlorine and conveyed approximately 7,000 feet in parallel 8-inch and 12-inch diameter water mains to a redwood chlorine contact tank. The contact tank has a capacity of 31,000 gallons and is located adjacent to the District's administrative office. This redwood tank is in very poor condition and in need of replacement.

The distribution system consists of a network of approximately 31 miles of water mains ranging in size from 4 to 12 inches in diameter. A breakdown of total length of mains by pipe diameter is presented in Table 1.

Table 1 – Summary of Lengths of Water Mains by Diameter

Diameter (in.)	*4*	*6*	*8*	*10*	*12*	*Total*
Total length (feet)	*3,000*	*115,000*	*35,300*	*4,600*	*6,900*	*164,800*

The storage system consists of a total of seven tanks, in addition to the storage tank located adjacent to the administration office. Detailed information on each tank is presented in Table 2.

Table 2 – Summary of Storage Tanks

Tank Name	Pressure Zone	Capacity (MG)	Date Constructed	Material	Condition
Little Peak	Little Peak	0.50	1988	Steel	Fair
9	9	0.15	1968	Redwood	Poor
1A	1	0.15	1968	Redwood	Poor
1B	1	0.20	1992	Redwood	Poor
1C	1	0.50	2004	Steel	Good
4A	4	0.15	1968	Redwood	Poor
4B	4	0.50	2004	Steel	Good
Admin Office	4	0.031	1984	Redwood	Poor

The distribution system consists of eight pressure zones which are hydraulically separated by pressure reducing valves (PRVs) and altitude valves.

Water is pumped from the Administration Office tank to either Zone 1 or Zone 4. Two storage tanks in Zone 4, at an altitude of 1130 feet above sea level, serve 880 connections. Three storage tanks in Zone 1, at an altitude of 1295 feet above sea level, serve 647 connections. A booster station within Zone 1 pumps water to Tank 9, at an elevation of 1600 feet above sea level, and serves 776 connections, also known as Zone 9 and the Knollview zone. Within Zone 9, a booster station pumps water to a 500,000 gallon storage tank at an elevation of 2090 feet above sea level, and serves 79 connections, also known as the Little Peak and Eagle Rock zones.

The Administration offices are not equipped with backup power. Backup power is necessary in order to re-fill the tanks in case of emergency. Further, the Administration Office tank is undersized for its use and needs to be replaced with a larger tank.

Attach a system map which identifies the major facilities as described above.

Figure 1 provides a general vicinity layout of the District in comparison to Lake County. Figure 2 outlines the boundaries of the District's service area and highlights the locations of the wells, administrative office (with booster pump station), and storage tanks. Figure 3 provides a schematic of the District's water system. Figure 4 presents the approximate boundaries of the pressure zones in the District's water system.

Specify which agency has jurisdiction over your public water system. If your system is under Local Primacy Agency (LPA) jurisdiction, include the LPA County.

The agency with jurisdiction over the District is the California State Water Resources Control Board Division of Drinking Water (DDW) for the Mendocino District.

Provide the water system permit number, status, and any amendments, including dates.

The District's original Domestic Water Supply Permit (Number 02-03-06P1710015) was issued on April 10, 2006. Since that date, a total of five amendments have been issued. Table 4 identifies the amendment number and date of issuance. A copy of the permit and each amendment is included in Appendix A.

Table 4 – Permit and Amendments Dates

Description	***Date of Issuance***
Permit 02-03-06P1710015	*April 10, 2006*
Amendment #1	*October 31, 2008*
Amendment #2	*May 29, 2009*
Amendment #3	*February 15, 2012*
Amendment #4	*June 29, 2012*
Amendment #5	*June 6, 2013*

B. Problem Description

Describe the drinking water problem to be addressed by the project. The problem description can be reported by providing the following information:

i. Historical description of the ranked problem

On September 28, 2015, the District received a hexavalent chromium Maximum Contaminant Level (MCL) trigger letter (Letter) from DDW. The Letter stated that the MCL, set at 10 parts per billion (ppb), became effective on July 1, 2014. Further, the Letter stated that the District's Grange Well-04 exceeded the rolling four quarter average.

The hexavalent chromium results from the District's Grange Wells-02 and 04 exceeded the new MCL effective on July 1, 2014. Tables 5a & 5b presents historical hexavalent chromium concentration from untreated groundwater samples in Grange Wells-02 through -04 for the past three years.

ii. Source of the problem

The source of the high hexavalent chromium concentration is naturally occurring deposits in the area of the District's groundwater wells.

iii. Violations committed by the water system

The violations committed are due to exceedance of the recently lowered MCL which resulted in the District falling out of compliance with California Health and Safety Code (CHSC) Division 104 Section 116555(a)(1), 116431 and Title 22, California Code of Regulations (CCR) Section 64431. A copy of the DDW Violation Letter, District's Compliance Plan and DDW approval of District's Compliance Plan are included in Appendix B.

C. Alternative Solutions

All feasible alternatives must be evaluated. For example: if the problem is a contaminated well, alternatives may include drilling a new well, installing treatment, blending the water, purchasing water, or physically consolidating with an adjacent water system.

Provide description of each of the following options. Include explanation as to why each option is technically feasible and its effectiveness in resolving compliance issue in the long-term.

The District has identified a total of seven options for analysis. These options include a new water treatment process for the removal of hexavalent chromium (Option 1), a new well with lower hexavalent chromium concentrations (Options 2a through 2d), re-developing Grange Well-03 (Option 3), and plugging zone(s) of high hexavalent chromium in Grange Well-04 (Option 4). A brief description of each option is presented, followed by preliminary planning level cost estimates of capital and 20-year operational costs.

In order for Options 2a through 2d and 3 to be effective, a reduction in production rate in Grange Well-04 will be necessary to allow for blending of the water sources to achieve compliance with the MCL.

As discussed previously, the existing chlorine contact redwood tank at the administrative building is in poor condition and undersized. With this project, this tank would be demolished and a new, larger steel tank constructed. Further, for improved security and access, the existing building adjacent to the redwood tank would be demolished and new access/security improvements will be constructed.

- *Option 1 – New treatment process*

  Option 1 consists of purchase and installation of a package treatment plant to treat the water to a concentration below 10 ppb. Recent testing by the Soquel Creek Water District indicates that a Strong Base Anion Exchange (SBA-IX) treatment process is capable of treating water to meet the new MCL.

  In general, an SBA-IX treatment process consists of the following (excerpt from technical study Hexavalent Chromium Treatment with Strong Base Anion Exchange, sponsored by Water Research Foundation):

  - *Pretreatment typically includes prefiltration to protect the resin bed from particulate fouling. Since the functional groups of SBA-IX resins remain ionized over a wide pH range, there is not typically a requirement for pH depression for operation (Clifford 1990).*

  - *Once pretreated, the water passes through pressure vessels containing SBA-IX resin where the Cr(VI) and other anions are exchanged for chloride. Following the ion exchange step, the treated water is typically disinfected prior to entering the distribution system. As needed, pH adjustment and/or other stabilization may be done prior to sending the water to the distribution system.*

  - *When the exchange sites are filled with contaminants, the resin is said to be exhausted and requires regeneration (Brandhuber et al. 2004). Regeneration is accomplished by using a 1.5% to 12% sodium chloride (NaCl) solution to impart a*

concentration gradient to replace the contaminant anions on the resin with chloride. Multiple bed volumes (BV) of the regenerant are used to restore the exchange capacity (Siegel and Clifford 1988). However, management of regenerant brine often limits the applicability SBA-IX for drinking water treatment.

Envirogen Technologies, Inc., a manufacturer of an SBA-IX treatment system, was consulted for preliminary information for such a system. A typical site layout plan from Envirogen Technologies, Inc. is included in Appendix C.

Facilities needed for this option include SBA-IX treatment equipment, a backup emergency generator, backwash water drain line (for brine), and electrical controls located within a new building. Additionally, a solids handling process will be needed for concentration and disposal of backwash solids generated during the backwash and regeneration process.

All facilities would be constructed above the 100-year floodplain. The treatment facilities would be located in-line after Grange Well-02. Additional land acquisition will be needed for construction and operation of these facilities.

- *Option 2a – New well near storm water pump station*

  Option 2a's solution for addressing the high hexavalent chromium concentrations would be to drill a new well on the District's property near a flood control structure north of Putah Creek. Data collected by the District indicates that hexavalent chromium concentrations in groundwater are lower when wells are closer to Putah Creek, (including Grange Well-03.)

  This option would provide an alternate water source which should ensure continued low hexavalent chromium concentrations due to proximity with Putah Creek. The District would blend water from the new well with the water from the existing Grange Well-04, as well as Grange Wells 02 and 03 (when they are permitted to operate during lower flows), which would also help to reduce the demand on these wells.

  The first step is to construct a test well to collect water quality samples and conduct aquifer pump testing. The project would move to design if the results of the water quality and aquifer pump testing were positive.

  Facilities needed for this option include a new well, chlorination system, backup emergency generator, and electrical controls located within a new building. All facilities would be constructed above the 100-year floodplain. Other needed components include an access road to the well site and a new transmission main from the proposed well site to the District's existing 12-inch water main.

  Power is available from the existing storm water pump station. With this option, there would be no land acquisition costs, as the site is owned by the District. Site grading costs are expected to be significant as the site is within the 100-year floodplain and the overall site would have to be elevated.

- *Option 2b – New well near sewer lift station*

  Option 2b's solution for addressing the high hexavalent chromium concentrations would be to drill a new well on the District's property near a wastewater lift station north of Putah Creek. Data collected by the District indicates that hexavalent chromium concentrations in groundwater are lower when wells are closer to Putah Creek, (including Grange Well-03.)

  This option would provide an alternate water source which should ensure continued low hexavalent chromium concentrations due to proximity with Putah Creek. The District would blend water from the new well with the water from the existing Grange Well-04, as well as Grange Wells 02 and 03 (when they are permitted to operate during low flows), which would also help to reduce the demand on these wells.

  The first step is to construct a test well to collect water quality samples and conduct aquifer pump testing. The project would move to design if the results of the water quality and aquifer pump testing were positive.

  Facilities needed for this option include a new well, chlorination system, backup emergency generator, and electrical controls located within a new building. All facilities would be constructed above the 100-year floodplain. Other needed components include an access road to the well site and a new transmission main from the proposed well site to the District's existing 12-inch main.

  Power is available from the existing sewer lift station. Land acquisition costs are eliminated as the site is owned by the District. Site grading costs are expected to be significant as the site is within the 100-year floodplain.

- *Option 2c – New well on Hidden Valley Lake Association property*

  Option 2c's solution for addressing the high hexavalent chromium concentrations would be to drill a new well on the Hidden Valley Lake Association's property near the base of Hidden Valley Lake Dam. This option is speculative, but is rooted in the assumption that the hexavalent chromium concentration in groundwater is low due to the low hexavalent chromium concentrations in the water in Hidden Valley Lake.

  A potential risk with this option is that the proximity of the well to Hidden Valley Lake could cause the water produced from this well to be classified as being under the influence of surface water. This classification would trigger need for additional treatment. The cost and scope for the additional treatment is not reflected in this report.

  The first step is to construct a test well to collect water quality samples and conduct aquifer pump testing. The project would move to design if the results of the water quality and aquifer pump testing were positive.

  Facilities needed for this option include a new well, chlorination system, backup emergency generator, and electrical controls located within a new building. Other needed components include an access road to the well site and a new transmission main from the proposed well site to an existing main on Hidden Valley Road. An in-line static mixer will be installed, to meet contact time requirements. Significant distribution system

improvements are not anticipated as necessary to accommodate this new tie-in. This new well will connect into Zone 4, the same pressure zone that Grange Well-02, Grange Well-03, and Grange Well-04 are connected into. Further, this option allows for water supply into the system from two separate sources, providing redundancy that the system currently lacks. Usage of this well will reduce reliance on the Grange Well cluster, allowing it to be used in support of the new well to meet system demands.

Land acquisition is not needed for this option, as Hidden Valley Lake homeowner's association has indicated that they would be willing to give the land to the District for this project. Grading costs are minimized as the site is outside of the 100-year floodplain.

- *Option 2d – Abandon and Replace Grange Well-03*

  Option 2d's solution for addressing the high hexavalent chromium concentrations would be to abandon the existing Grange Well-03 and drill a new well near the existing Grange Well-03. The location of this well would be closer to Putah Creek to achieve lower hexavalent chromium concentrations.

  This option would provide an alternate water source which should ensure continued low hexavalent chromium concentrations due to its proximity with Putah Creek. The District would blend water from the new well with the water from the existing Grange Well-02 and Grange Well-04 as needed to meet system demands.

  Facilities needed for this option include a new well, backup emergency generator, and electrical controls located within a new building. An improved access road is also included due to heavy drilling and construction equipment.

  Power is available from the existing well site, but may need to be upsized to accommodate a larger pump and motor. While the District does have a 60 foot wide easement for the wells and pipelines, additional land acquisition would be needed for the construction phase of the project.

- *Option 3 – Redevelop Grange Well-03*

  The third option for addressing the high hexavalent chromium concentrations would be to redevelop the existing Grange Well-03 in an effort to increase the overall production capacity of the well. The exact location would be determined, but expected to be re-located closer to Putah Creek.

  This option would provide an alternate water source which should ensure continued low hexavalent chromium concentrations due to proximity with Putah Creek. The District would blend water with the water from the existing Grange Well-02 and Grange Well-04 as needed to meet system demands.

  Facilities needed for this option include a backup generator and electrical controls located within a new building. An improved access road is also included due to heavy drilling and construction equipment.

  Power is available from the well site, but may need to be "upsized" to accommodate a larger pump and motor. While the District does have a 60 foot wide easement for the wells

and pipelines, additional land acquisition would be needed for the construction phase of the project.

- *Option 4 – Identify and plug zones of highest hexavalent chromium in Grange Well-04*

  The fourth option for addressing the high hexavalent chromium concentrations would be to identify zones of high hexavalent chromium concentrations in Grange Well-04 through testing and then plugging these zones. This option would maintain the existing water source and would ideally reduce high hexavalent chromium concentrations by isolating the areas of highest concentration. This option is technically feasible because it would eliminate the areas of high hexavalent chromium concentrations, leaving only the zones with lower hexavalent chromium concentrations. The risk is that the zone(s) isolated are also the zone(s) with the greatest production rate, leaving the District with a well that no longer provides sufficient flows to meet system demands.

  Facilities needed for this option include a backup generator and electrical controls located within a new building. An improved access road is also included due to heavy drilling and construction equipment.

  While the District does have a 60 foot wide easement for the wells and pipelines, additional land acquisition would be needed for the construction phase of the project.

- *Tank 1, 4, and 9 Sites*

  All options also include replacement of redwood tanks at the Tank 1, Tank 4, and Tank 9 sites. The specific improvements proposed at each tank site are as follows:

  - *Tank 1 – Demolition of both redwood storage tanks and replacement with one larger (500,000 gallon) tank, along with disinfection, testing and re-connection to the existing system piping. A new gate and fence are also proposed for this site.*

  - *Tank 4 – Demolition of the redwood storage tank and replacement with one larger (250,000 gallon) tank, along with disinfection, testing and re-connection to the existing system piping. Due to the more remote location of this site, a security system with cameras is also proposed.*

  - *Tank 9 – Demolition of the redwood storage tank and replacement with one larger (500,000 gallon) tank, along with disinfection, testing and re-connection to the existing system piping. Due to the constraints at this site, specifically lack of space and the fact that this tank feeds the booster pumps that send water to the Eagle Rock and Little Peak zones, temporary water storage is needed during construction. A temporary "pillow tank" (40,000 gallons) will be placed just outside the existing fence, necessitating temporary fencing and a small amount of grading to provide a level surface for the pillow tank.*

  The locations of Grange Wells-02 through -04 and wells associated with Options 2a through 2d are shown in Figure 2. The defined 100-year flood plain is shown in Figure 5.

All systems must evaluate consolidation with another water system as one of the alternatives. If consolidation is deemed infeasible, the reasons for that determination must be described.

Consolidation with other systems must be evaluated for systems that are in reasonably close proximity (within 5 miles depending on regional terrain). After evaluation, consolidation may be deemed a non-viable alternative due to costs, physical factors, or limitations of the adjacent water system. Consolidation should be discussed if it is technically feasible regardless of the potential cooperation of an adjacent system. Provide explanation as to why consolidation is infeasible, including the following:

Distance to nearest public water system

> *The nearest public water system is the Callayomi County Water District (CCWD), located in the town of Middletown, approximately 4.5 miles to the southwest.*

Cost to construct water main from nearest system to Hidden Valley Lake

> *Consolidation with CCWD would require installation of an 18" main that would likely follow the right-of-way of State Highway 29 to the CCWD water treatment plant. Such an alignment is estimated to be about 4.6 miles from the District's existing Grange Road Well-04 and have a cost of around $7 million. As both the District and CCWD are small municipalities, such a project cost is deemed infeasible.*

Lack of additional capacity by other systems to meet HVL CSD's demands

> *Additionally CCWD lacks the additional capacity to meet the District's demands. Another difficulty posed by consolidation is the local terrain which consists of mountains and rolling hills separated by valleys, which will lead to significant head loss between the systems and require substantial pumping demands.*

In addition to evaluating and discussing the feasibility of each alternative, the Engineering Report must estimate and compare the capital costs and operations and maintenance (O&M) costs, including certified operating personnel, and disposal of waste from treatment, over a 20-year period. The report must also analyze the technical effectiveness (including reliability) of each alternative. See Table 6 for an example of evaluating alternatives.

Table 6 – Planning Level Capital and 20 Year O&M Costs

Option	*Capital Cost*	*20-Year O&M Cost*	*Feasible (Y/N)*	*Reliability (1 through 5)*	*Technical Effectiveness (1 through 5)*	*Overall Ranking (1 through 7)*
1	*$ 9,112,000*	*$ 3,850,000*	*Y*	*4*	*5*	*5*
2a	*$ 8,066,000*	*$ 1,069,000*	*Y*	*4*	*5*	*4*
2b	*$ 7,359,000*	*$ 1,069,000*	*Y*	*4*	*5*	*3*
2c	*$ 7,088,000*	*$ 1,069,000*	*Y*	*4*	*5*	*1*
2d	*$ 6,827,000*	*$ 769,000*	*Y*	*4*	*4*	*2*
3	*$ 5,953,000*	*$ 892,000*	*Unknown*	*2*	*1*	*7*
4	*$ 6,076,000*	*$ 892,000*	*Unknown*	*2*	*1*	*6*

Note – Capital costs include replacement of existing redwood tanks at Tank 1, Tank 4, and Tank 9 sites in all options, estimated at $3.944M.

The highest ranked option must be the most long-term, cost-effective solution.

Technical effectiveness and feasibility should also be considered. However, preference is given to the project alternative that achieves an acceptable result at the least cost over the long-term.

> *In the long term, it is expected that Options 1 and 2 (a – d) will reliably maintain acceptable hexavalent chromium levels for the longest period of time. Pilot testing for an SBA-IX is recommended to confirm treatment is an acceptable option. As long as pilot testing results are favorable and the package treatment plant is properly serviced and maintained, it would be an effective solution through the end of the operating lifespan of the plant. For the wells in Option 2, assuming that test well results indicate favorable hexavalent chromium concentrations, then these would be an acceptable option as hexavalent chromium levels are unlikely to increase in the aquifer.*
>
> *Option 3 on the other hand, would rely upon the ability to redevelop Grange Well-03 in order to increase the production rate. The production rate would need to be increased by approximately a factor of 4 to meet system demands and allow for blending with Grange Well-03 and Grange Well-04 in order to meet the hexavalent chromium compliance limit. Ideally, the upgrades would account for the past problems, but there is the potential to encounter the same issues again in the future, bringing the long-term reliability of this option into question.*
>
> *Option 4 has potential production and high hexavalent chromium concentration risks. Since this option involves plugging well screen(s), production will be reduced which will put a strain on the supply, especially as the well declines in efficiency over time. Another potential issue with this option is that if hexavalent chromium concentrations are elevated in the various water bearing zones, plugging zones of high concentration might only temporarily reduce the hexavalent chromium concentration or reduce production rate exorbitantly.*

Include results in above table and provide detailed preliminary conceptual engineering cost estimates and preliminary 20-Year O&M cost estimates in appendices to report.

> *See Appendix D for detailed preliminary conceptual engineering cost estimates and preliminary 20-year O&M cost estimates. (Capital and O&M cost estimates)*

The California Environmental Quality Act (CEQA) requires that the environmental impacts of each alternative be determined and compared.

Discuss in generalities the likely level of study needed for each option.

- *Option 1 – New treatment process*

  Option 1 is expected to be a CEQA mitigated negative declaration because it involves the installation of a package treatment plant and ancillary facilities at the existing well site and will require minimal disturbance of the surrounding area. Because this is an addition to a pre-existing facility, with no increase in overall production quantity, it is not anticipated that the project will result in significant adverse environmental impacts.

- *Option 2a – New well near storm water pump station*

  While Option 2a involves installation of a well and ancillary facilities with no increase in overall production quantity, due to the need for significant grading to bring the site outside the 100-year flood plain, Option 2a is expected to be a CEQA focused environmental impact report. Even with the increased level of analysis, it is not anticipated that the project will result in significant adverse environmental impacts.

- *Option 2b – New well near sewer lift station*

  While Option 2b involves installation of a well and ancillary facilities with no increase in overall production quantity, due to the need for significant grading to bring the site outside the 100-year flood plain, Option 2b is expected to be a CEQA focused environmental impact report. Even with the increased level of analysis, it is not anticipated that the project will result in significant adverse environmental impacts.

- *Option 2c – New well on Hidden Valley Lake Association property*

  While Option 2c involves installation of a well and ancillary facilities with no increase in overall production quantity, Option 2c is expected to be a CEQA focused environmental impact report due to the potential that the water supply may be categorized as groundwater under the influence of surface water by DDW. Additional groundwater studies would be necessary to determine if this is the case. Even with the increased level of analysis, it is not anticipated that the project will result in significant adverse environmental impacts. However, the scope of this option would increase substantially if DDW determines that the proposed groundwater from the well is categorized as groundwater under the influence of surface water.

- *Option 2d – Abandon and Replace Grange Well-03*

  Option 2d is expected to be a CEQA categorical exemption class 2 because it involves abandonment and replacement of the existing Well-03, along with construction of ancillary facilities. Because all work on this project is expected to take place on previously developed land, it is not anticipated that the project will result in significant adverse environmental impacts.

- *Option 3 – Redevelop Grange Well-03*

  Option 3 is expected to be a CEQA categorical exemption class 2 because it involves reconstruction of the existing Well-03, along with construction of ancillary facilities. Because all work on this project is expected to take place on previously developed land, it is not anticipated that the project will result in significant adverse environmental impacts.

- *Option 4 – Identify and plug zones of highest hexavalent chromium*

  Option 4 is expected to be a CEQA categorical exemption class 2 because it involves improvements to the existing Well-04, along with construction of ancillary facilities. Because all work on this project is expected to take place on previously developed land, it is not anticipated that the project will result in significant adverse environmental impacts.

- *All options include replacement of redwood tanks at the Tank 1, Tank 4, and Tank 9 sites. While volumes of these tanks are increasing, the purpose is to provide for current system*

needs, and not to accommodate additional growth. The level of evaluation is similar to the four options.

D. Selected Construction Project

Describe the project that will be constructed to resolve the problem. Each component or unit process, as well as related equipment, should be described as to necessity (with respect to solving the problem), function, size, and relationship to other project components.

The project description must identify any elements of the project that are believed to be ineligible for funding using the eligibility criteria in the SDWSRF statutes and regulations. The construction project can include ineligible components; however, the applicant will need to identify a funding source other than SDWSRF funds to pay for the ineligible portion.

Do not include water system improvements that are not directly related to the problem being solved. Major elements of the proposed project must be directly related to the primary problem in order to be eligible. With respect to water mains, for example, if a new well is being drilled to solve a source water problem, the piping to connect the well to the distribution system is eligible but piping to replace old or leaking distribution lines may not be eligible unless the old distribution system has supporting documentation to be in the fundable categories.

CDPH recognizes water conservation measures, including water meters, energy efficiency features, and water system security upgrades, as valuable enhancements to projects. Therefore, when appropriate in the context of the funded project, components such as water meters, auxiliary generators, upgraded fencing, or other measures to improve water conservation, energy efficiency, reliability, and security components may be eligible for loan funds. The components must be included as part of the project application to be considered for funding.

Provide more detailed description of highest ranked option. Include all other needed components of improvements, including the following items:

The recommended project (Option 2c) would provide for a new well in the vicinity of Hidden Valley Lake. Based on discussions with Division of Drinking Water (DDW) staff, DDW is supportive of a new well in this location. Further, the DDW is supporting of using this well as a second source supply, augmenting Grange Well-02, Grange Well-03, and Grange Well-04, reducing the demand currently placed on these three wells.

The selected project will also include demolition of an existing inadequately sized 31,000 gallon redwood water storage tank and associated control building, construction of a 90,000 gallon bolted steel tank to replace the redwood tank, installation of SCADA controls and associated programming on new and existing facilities, two new auxiliary generators, and security fencing around existing facilities, as well as improved access roads.

Installation of SCADA will give the District real time data from their water production and distribution systems, allowing for greater efficiency and quicker response time to changes or emergencies within the system and enhance system reliability, given that the District would be operating a system that is supplied from multiple points.

Installation of auxiliary generators will allow the District to continue operating their facilities during times of emergency or power outage. Given the recent history of catastrophic wildfires in the region, having emergency power is especially valuable to ensure that water resources needed to protect the community against fires. Also, emergency generators will ensure that customers continue to receive drinking water when other utilities may be unavailable.

Installation of security fencing will minimize trespassing on District property which will reduce the risk of tampering with the District's facilities. Given the importance of drinking water, it is vital that the District keep its water supply facilities safe and secured. New security improvements are proposed at the administrative building as well as the access road to the Grange wells.

Lastly, the existing redwood storage tanks identified in Table 2 are in poor condition and in need of replacement. The project includes replacement of all redwood storage tanks with slightly larger facilities matching peak day and fire flow demands.

Describe how the project would solve the primary problem and the results that would be expected.

The selected option will solve the primary problem of high hexavalent chromium concentration by drilling a new well in an area with historically low hexavalent chromium concentrations and blending with well water from Grange Well-04 to achieve an overall hexavalent chromium concentration that is below the DDW mandated mcl of 10 ppb. The new well will be in an area naturally low in hexavalent chromium concentration. Based on current concentrations, the blending ratio will likely be approximately 70% from the new well and 30% from Grange Well-04.

Consult local/county planning documents and describe if the plans are consistent or exempt.

The Lake County General Plan, Section 5.2, outlines Public Facilities & Services Goal #2 as: to ensure the provision of an affordable, sustainable, reliable, safe, and adequate water supply with distribution and storage facilities to meet the existing and future needs in the County. The goal of this project is to affordably provide safe and reliable drinking water to the residents of Hidden Valley Lake, which is consistent with the General Plan.

Describe any green infrastructure components included in the project. Water systems whose projects have green infrastructure must provide descriptions, costs, and benefits for these components. For details, please consult the Guidelines for Green Infrastructure included as part of the application packet (Enclosure 7).

A possible green infrastructure addition to this project that the District is investigating is the addition of a turbine for hydroelectric power production from the outflow from the dam. Hydro power would allow the District to sell excess power for additional revenue. Initial evaluations indicate that such a system is feasible and cost-effective. Although not planned as part of the project, the District may decide to investigate the option for solar power generation, especially if power costs increase substantially.

If the project involves consolidation, please consult the Guidelines for Consolidation Projects included as part of the application packet (Enclosure 13).

Not applicable

E. Eligibility

See the SDWSRF Project Eligibility table below. If the project contains ineligible construction items, estimate the percentage of indirect costs (planning, design, administrative, etc.) that apply to the eligible and ineligible construction portions. This can be based on a straight proration, which will be the method used by CDPH unless some other means is indicated.

Although you will specify an eligible amount of funding, CDPH will make the final determination after completing a detailed review of the application.

Based on the current components of the project (Option 2c), all components are eligible for funding.

Include all land that will be acquired for the purpose of the project. All land acquisitions will need to comply with the Uniform Relocation Act (Enclosure 14).

Land acquisition is not anticipated for this project.

F. Final Plans and Specifications

The final Plans and Specifications should include the following elements:

For wells:

Indicate the expected yield of the well, well casing, and the size of the pump. Any assumptions and design criteria used to size the facilities should also be shown. Any reasonable methods may be used to estimated flows, water demands, or unit capacities, including the use of existing records, comparisons with similar water systems, and American Water Works Association or Ten-State standards.

Final plans and specifications will be provided to DDW for review and comment at a later stage of the project. The proposed well yield is anticipated to be in the vicinity of 1,200 gpm. Well casing materials and sizing of the pump and motor will be based on the results of pilot hole testing to be conducted during the preliminary engineering phase.

A map or drawing must be included in the report that shows the location of key facilities of the existing system (e.g. sources, treatment units, reservoirs, storage tanks, and primary distribution mains) and the proposed location of new facilities. Unless shown elsewhere, the map also needs to delineate clearly the service area of the water system. If land will be purchased or easement procured, the size, location, and purpose of each parcel must be shown or described in the application.

See Figures 1 through 5 for the locations of existing and proposed facilities.

State law prohibits the SDWSRF from funding growth inducing projects. For SDWSRF, project design growth is limited to 10 percent above the capacity needed to serve existing maximum day demand. Federal law makes ineligible any project whose purpose is "primarily to serve future growth." This is interpreted by CDPH to mean that excess capacity will not be funded by SDWSRF. However, since public water systems are also utilized for fire protection, SDWSRF can fund pipelines capable of meeting fire flow requirements.

SDWSRF allows for fire flow consideration in source and treatment facility design, but restricts the additional capacity for fire flow to no greater than the maximum day demand. In combination, this means that excess capacity, greater than (2.00P+0.10P), where P is maximum day demand will not be funded by the SDWSRF for the design of source, treatment and storage facilities. Excess capacity can be included in a proposed project but the applicant must identify another means of funding the excess capacity. The project is "primarily to serve future growth" when the project is more than double the capacity needed to serve existing water demand. The applicant may decide to pay for additional excess capacity (no greater than 0.90P) from another source; however, if the proposed capacity of a major source, treatment, or storage component is more than 3.00P, the entire project would be declared ineligible and excluded from SDWSRF funding.

The application must include several analyses and address certain items in order to establish the eligible design capacity of the project. These steps are explained below. As indicated earlier, all assumptions, criteria, and calculations used must be shown and described.

Step 1: Determine the existing maximum day demand as of the date of submission of the application. Where possible, maximum day demand should be based on records of usage experienced by the water system during recent periods (e.g. during the past 5 years). Where such records are not available, the applicant must calculate approximate maximum day demand based on available information and include the methodology used.

> *Based on historical usage, recent maximum day well production is approximately 1.53 million gallons per day (July 25, 2014). For the purposes of this report, this is assumed to equate to maximum day demand. Please note that this maximum day usage occurred when the State mandated water conservation in the range of 33%.*

Step 2: Determine the anticipated growth within the service area in the next ten years, the resultant projected water demand, and the amount of growth or water demand to be included in the project.

> *Growth is expected to be minimal for the next 10 years. Recent historical data indicates that the number of connections have increased by less than 0.5% annually for the last ten years. Using an assumed growth rate of 0.5% annually, approximately 125 new connections are projected over the next 10 years. At an assumed peak day usage of 650 gallons per day (gpd) per connection, the anticipated growth would require approximately an additional 80,000 gpd of water supply.*

Step 3: Determine the design capacity or size of proposed key facilities to meet the maximum day demand determined in step 1. Include any water sources, primary treatment unit processes, pumping and storage facilities, and transmission mains. The Engineering Report must include the assumptions and criteria used to size the units. If a specific item of equipment (such as a water main) is not available in the size determined to be eligible, the next larger available size may be used; these upgraded components remain subject to the 3P size limitation for a project with fire flow and 2P size limitation for project with no fire flow.

Because recent peak day usage occurred during a period of mandated water conservation (July 25, 2014), estimated peak day demand is anticipated to reach approximately 2 million gallons per day (MGD) in ten years, which equates to approximately a 33% increase of the peak day demand measured in 2014.

The yield of the proposed new well is estimated at 1,200 gpm. Assuming that production of Grange Well-04 would be approximately 500 gpm (which would achieve a blended hexavalent chromium average system concentration below 10 ppb) and the wells were in use for 18 hours during a peak demand day, the production rate is estimated at 1.84 mgd. Therefore, the proposed well is sized within SRF fundable levels.

The existing District storage capacity is 2.15 million gallons (MG). Using SRF standards of 2.1 times peak day demand to determine total storage that is "fundable", an increase in storage capacity of approximately 1 MG is acceptable. The proposed size of the new steel tank is within acceptable guidelines, based on the District's peak day demand. Site constraints limit the size of the new steel tanks.

As discussed previously, depending on available funding, the District desires to replace five existing redwood tanks with new steel tanks. A total of 1.34 MG of new storage would meet the SRF funding requirements. The exact location of additional storage would be based on specific demands in each pressure zone.

While funding to accommodate future growth is limited, applicants can include provisions within the eligible project that will facilitate the construction of additional treatment units in the future. For example, piping and valve arrangements and pipe "stub-outs" to accommodate future treatment units can be included in the project funding.

Not applicable

Describe any impact on peak flow demand caused by industrial or commercial entities.

The Hidden Valley Lake community consists of mainly residential connections to the water system. Accordingly, industrial and commercial uses generally have low impact on the peak flow demand. Commercial uses historically use approximately 4.2 MG per year or approximately 1.8% of the total water consumption. Commercial consumption has also been historically stable from year to year and even month to month. Based on past records, commercial use is expected to maintain the same demand and impact on peak flow as it has shown in the past.

The useful life of the key system components (the elements that make up the largest construction budget items) of the project should be estimated.

The estimated useful life of the new tank, pipeline, wells, pumps, treatment plant and SCADA system are all expected to be in the range of 50 years given regular maintenance intervals.

The cost estimate for the project must break the total cost into various project elements. In addition to a detailed project breakdown, a project budget sheet must be completed. At a minimum, the project budget sheet should contain the line items listed in the template. More line

items can be added to the bottom of the template if needed. If the project includes tasks not listed on the budget sheet, feel free to add items.

Applicants are not limited to the amount stated in the pre-application. It is expected that the Engineering Report will contain detailed estimates based on the final Plans and Specifications.

See Appendix D for planning level capital and O&M cost analyses for all options evaluated. These costs will be updated and refined as the project moves through design. A breakdown of planning level capital costs for the Option 2d, the recommended option, is presented below in Table 7.

Table 7 – Recommended Project Cost Breakdown

Cost Breakdown		
Component	*Total Cost*	*Ineligible Portion*
Construction (Major Items)		
Demolition	*$215,000*	*N/A*
New Well Drilling & Equip.	*$660,000*	*N/A*
New Steel Tanks	*$2,397,000*	*N/A*
E & I (incl. SCADA & VFDs)	*$220,000*	*N/A*
Other Site Improvements	*$504,000*	*N/A*
Backup/Auxiliary Power	*$193,000*	*N/A*
Other Misc. Const. Items	*$141,000*	*N/A*
Mobilization	*$218,000*	
Subtotal	*$4,548,000*	*N/A*
Construction and Estimating Contingency	*$1,137,000*	*N/A*
Preliminary Engineering	*$144,000*	*N/A*
Test Well Drilling	*Included above*	*N/A*
Design Engineering	*$324,000*	*N/A*
Bid Phase Services	*Included in PM below*	*N/A*
Eng. Services During Const.	*$121,000*	*N/A*
Land Acquisition	*$0,000*	*N/A*
CM & Construction Observation	*$400,000*	*N/A*
Legal/Admin	*$79,000*	*N/A*
CEQA/NEPA	*$50,000*	*N/A*
Project Management	*$285,000*	*N/A*
TOTAL	*$7,088,000*	*N/A*

Note: Construction and estimating contingency is 25%, given the preliminary stage of the project. The contingency will be refined as the project moves through design.

Enter the total cost to complete the construction project, the eligible project cost, and the estimated annual increase in operation and maintenance cost.

As identified in Table 7, the total project cost is estimated at $7,088,000. The annual increase in operations and maintenance costs are estimated at $60,450. This assumes that the District does not move forward with a hydroelectric facility as described above.

G. Proposed Schedule

Include a proposed schedule for project completion. The schedule should allow time needed for the completion of financing, processing of construction bids, start of construction, and completion of construction. The CDPH District Office will use these estimates as a basis for preparation of an overall project schedule.

The original project schedule was included in the Compliance Plan, dated April 14, 2016. The project schedule has been updated to reflect the recommended project and is included as Figure 6.

Table 5a

Total Chromium Concentrations in Grange Wells-02 through -04

Well	Date	Results (ug/l)
2	12/3/2013	18
2	3/3/2014	20
2	12/19/2014	17
2	1/21/2015	11
2	3/24/2015	11
2	1/20/2016	11
2	6/2/2016	16
3	12/3/2013	11
3	3/3/2014	3.8
3	12/19/2014	5.3
3	1/21/2015	4.7
3	2/17/2015	<10
3	3/24/2015	ND
3	3/24/2015	6
3	1/20/2016	<10
3	6/2/2016	<10
3	3/8/2017	<10
4	12/3/2013	21
4	3/3/2014	22
4	12/19/2014	23
4	1/21/2015	20
4	3/24/2015	20
4	1/20/2016	18
4	6/2/2016	22
4	3/8/2017	20

Table 5b

Hexavelent Chromium Concentrations in Grange Wells-02 through -04

Well	Date	Results (ug/l)
2	3/3/2014	**21**
2	12/19/2014	**16**
2	1/21/2015	**12**
2	3/24/2015	**14**
2	6/9/2015	7.8
2	12/31/2015	**12**
2	2/24/2016	**14**
2	6/2/2016	**14**
2	12/14/2016	**16**
3	12/3/2013	**11**
3	3/3/2014	4.3
3	12/19/2014	5.1
3	1/21/2015	5
3	2/17/2015	5.1
3	3/24/2015	5.4
3	3/24/2015	5.3
3	6/9/2015	4.2
3	12/31/2015	3.7
3	2/24/2016	7.8
3	6/2/2016	6.9
3	12/14/2016	3.5
3	3/8/2017	5.7
4	12/3/2013	**24**
4	3/3/2014	**24**
4	12/19/2014	**22**
4	1/21/2015	**22**
4	3/24/2015	**19**
4	6/9/2015	**19**
4	12/31/2015	**20**
4	2/24/2016	**12**
4	6/2/2016	**19**
4	3/8/2017	**20**

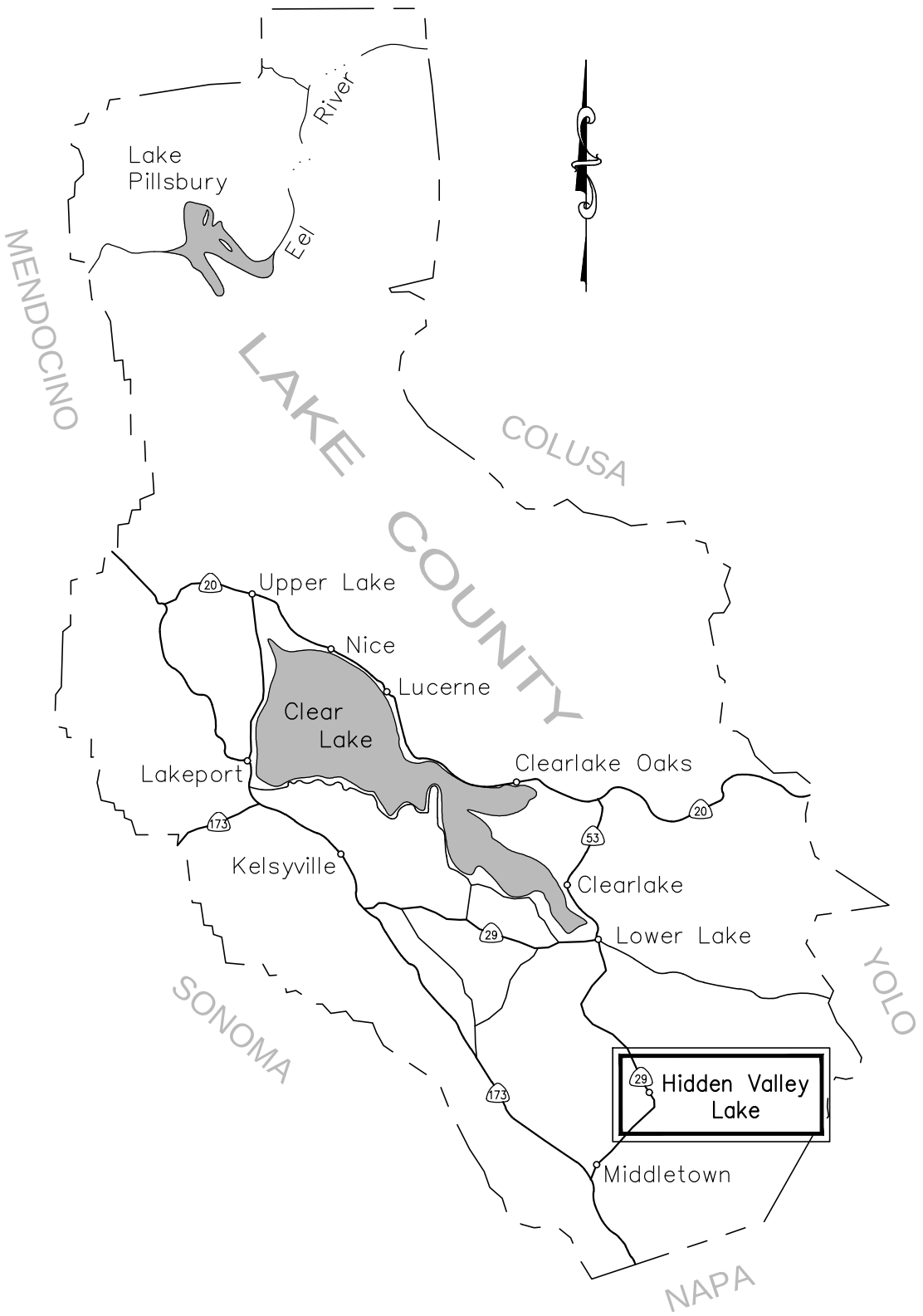


FIGURE 1

Coastland Civil Engineering, Inc.
11865 Edgewood Road, Auburn, CA 95603
530.888.9929 530.889.9979 Fax

HIDDEN VALLEY LAKE CSD

VICINITY MAP

ORIGINAL PLOT DATE: 16-NOV-2016

LITTLE PEAK TANK
EAGLE ROCK RD
SERVICE AREA BOUDARY
COYLE SPRINGS RD
UNIT 9 TANK
GREEN RIDGE RD
DEAR HILL RD
SERVICE AREA BOUDARY
CONESTOGA RD
SPRUCE GROVE RD
N SHORE DR
HIDDEN VALLEY LAKE
WELL SITE OPTION 2c
HIDDEN VALLEY RD
SPYGLASS RD
HWY 29
TANK 1b
TANK 1c
TANK 1a
MOON RIDGE RD
HVL CSD Admin Office Storage Tank
HARTMANN RD
SERVICE AREA BOUDARY
POWDER HORN RD
TANK 4b
TANK 4a
MOUNTAIN MEADOWS N
WELL SITE OPTION 2a
WELL SITE OPTION 2b
SERVICE AREA BOUDARY
WELL 3
WELL SITE OPTION 2d
WELL 2
WELL 4

FIGURE 2

HIDDEN VALLEY LAKE CSD

SERVICE BOUNDARY WITH GRANGE WELLS AND WELL OPTIONS 2a-2d LOCATIONS

Coastland Civil Engineering, Inc.
11865 Edgewood Road, Auburn, CA 95603
530.888.9929 530.889.9979 Fax

Images: Xrefs: Lake Co. Parcels 2-Jun-2016.dwg
Path: F:\Civil 3D Projects\993466\dwg\993-466_Vicinity.dwg Layout Name: Fig 2 Plot Date: Nov 23, 2016 at 01:51 pm

ORIGINAL PLOT DATE: 16-NOV-2016

LITTLE PEAK
500,000 GAL
EL 2090

2100
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900

EAGLE ROCK ROAD
PRV-5

FLOAT
CONTROL

TANK 9
150,000 GAL

EL 1600

TANK 9
BOOSTER STATION

PRV-6
DEER HILL AND
CONESTOGA RD.

GLENWOOD ROAD
PRV-3

SPRUCE GROVE
ROAD PRV-7

GREENRIDGE
BOOSTER STATION

PRV/
PSV

NORTHSHORE AND
GREENRIDGE PRV-4

DEER HILL ROAD AND
HIDDEN VALLEY ROAD
PRV-2

200,000 GAL
TANK 1B

150,000 GAL
TANK 1A

500000 GAL
TANK 1C

EL 1297

EL 1292.70

DONKEY HILL AND
POWDER HORN
PRV-1

ALTITUDE
VALVE
EL 1130

EL 1131.0
TANK 4A
500,000 GAL.

TANK 4B
150,000 GAL.

PRV

PRV/PSV

WATER TREATMENT PLANT

TO GRANGE ROAD
WELLS

30,000 GAL
CONTACT BASIN

LEGEND

- BOOSTER PUMP
- PRV PRESSURE REDUCING VALVE
- ALTITUDE VALVE
- FLOAT CONTROL VALVE
- ZONE 1 & LITTLE PEAK
- ZONE 1A & KNOLLVIEW
- ZONE 4 & EAGLE ROCK
- ZONE 9
- ZONE 9
- PRV/PSV PRESSURE RELIEF, PRESSURE SUSTAINING AND BACK PRESSURE VALVE

HIDDEN VALLEY LAKE CSD
EXISTING WATER SYSTEM SCHEMATIC

FIGURE 3

Coastland Civil Engineering, Inc.
11865 Edgewood Road, Auburn, CA 95603
530.888.9929 530.889.9979 Fax

HIDDEN VALLEY LAKE CSD
DISTRICT EXISTING WATER SYSTEM SCHEMATIC

Images: Xrefs: Lake Co. Parcels 2-Jan-2016.dwg
Path: F:\Civil 3D Projects\99-3466\dwg\99-3466_vicinity.dwg Layout Name: Fig 3 Plot Date: Nov 23, 2016 at 12:33 pm

ORIGINAL PLOT DATE: 16-NOV-2016

N

NTS

ZONE 9

SERVICE AREA BOUDARY

COYLE SPRINGS RD

GREEN RIDGE RD

EAGLE ROCK RD

LITTLE PEAK ZONE

EAGLE ROCK ZONE

ZONE 9

CONESTOGA RD

SERVICE AREA BOUDARY

SPRUCE GROVE RD

ZONE 9A

N SHORE DR

KNOLL VIEW ZONE

KNOLL VIEW ZONE

ZONE 1

DEAR HILL RD

HIDDEN VALLEY LAKE

ZONE 1

MOON RIDGE RD

HARTMANN RD

SERVICE AREA BOUDARY

ZONE 1A

POWDER HORN RD

ZONE 1

MOUNTAIN MEADOWS N

ZONE 4

HIDDEN VALLEY RD

SPYGLASS RD

SERVICE AREA BOUDARY

HWY 29

PRESSURE ZONES

- ZONE 1
- ZONE 4
- ZONE 1A
- ZONE 9
- ZONE 9A
- KNOLL VIEW
- EAGLE ROCK
- LITTLE PEAK

FIGURE4

HIDDEN VALLEY LAKE CSD

WATER SYSTEM PRESSURE ZONES

Coastland Civil Engineering, Inc.
11865 Edgewood Road, Auburn, CA 95603
530.888.9929 530.889.9979 Fax

Images: Xrefs: Lake Co Parcels 2-Jun-2016.dwg
Paths: F:\Civil 3D Projects\993466\dwg\99-3466_vicinity.dwg Layout Name: Fig 4 Plot Date: Apr 03, 2017 at 02:49 pm

ORIGINAL PLOT DATE: 16-NOV-2016

FLOOD ZONE LEGEND

- A
- AE
- AE, FLOODWAY
- AO
- D
- X

A BOUDARY

EN RIDGE RD

R HILL RD

HIDDEN VALLEY LAKE

HARTMANN RD

SERVICE AREA BOUDARY

POWDER HORN RD

MOON RIDGE RD

MOUNTAIN MEADOWS N

WELL SITE
OPTION 2a
~2 ft DEEP

WELL SITE
OPTION 2b
~1 ft DEEP

WELL SITE
OPTION 2c

HIDDEN VALLEY RD

SPYGLASS RD

SERVICE AREA BOUDARY

HWY 29

WELL SITE
OPTION 2d

FIGURE 5

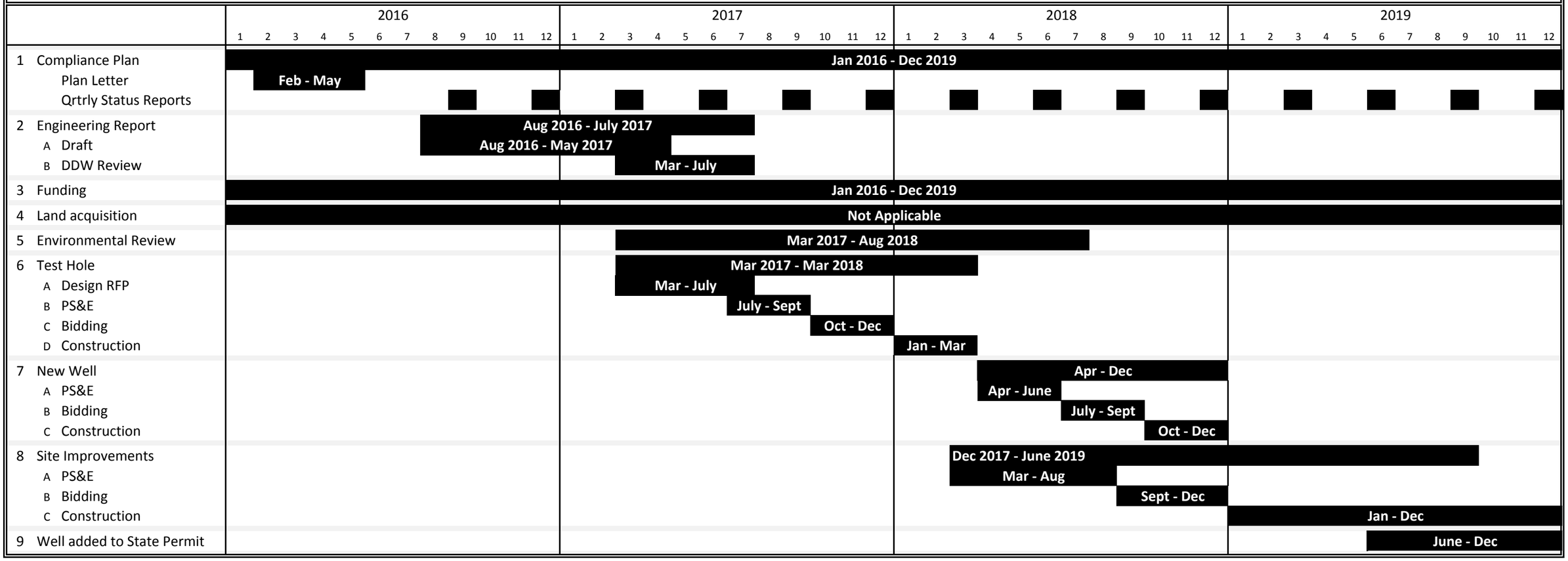
HIDDEN VALLEY LAKE CSD

PROPOSED WELL SITES
PROXIMITY TO 100 YEAR FLOOD ZONE

Coastland Civil Engineering, Inc.
11865 Edgewood Road, Auburn, CA 95603
530.888.9929 530.889.9979 Fax

Images: Xrefs: Lake Co. Parcels 2-Jun-2016.dwg
Paths: F:\Civil 3D Projects\993466\dwg\993466_Vicinity.dwg Layout Name: Fig 5 Plot Date: Nov 23, 2016 at 03:41 pm

Figure 6
Hidden Valley Lake CSD
Hexavalent Chromium MCL Compliance Schedule



STATE OF CALIFORNIA

AMENDMENT TO THE

DOMESTIC WATER SUPPLY PERMIT

Hidden Valley Lake Community Services District

1710015

ORIGINAL PERMIT NO. **02-03-06P1710015** DATE OF ISSUE: **April 10, 2006**

PERMIT AMENDMENT NO. **1** EFFECTIVE DATE: **October 31, 2008**

WHEREAS:

1. Section 116525(c) of the California Health and Safety Code (CHSC) authorizes the California Department of Public Health to renew, reissue, revise or amend any domestic water supply permit whenever the department deems it to be necessary for the protection of public health whether or not an application has been filed.

2. The California Department of Public Health conducted an annual inspection of the Hidden Valley Lake Community Services District and found no bacteriological data results for samples required at Well 03.

3. The California Department of Public Health has evaluated the facilities and supporting information and has determined that the amendment complies with all applicable State drinking water requirements.

THEREFORE:

The California Department of Public Health hereby removes Well 03 for use as a source of supply for the Hidden Valley Lake Community Services District public water system. The following conditions are hereby amended to domestic Water Supply Permit 02-03-06P1710015:

2. The only sources approved for potable water supply are:

Source	PS Code	Status	Capacity (Gallons per minute)
Grange Well-02	1710015-002	Active	660
Grange Well-03	1710015-003	Standby	445
Grange Well-04	1710015-004	Active	500

This amendment shall be appended to and shall be considered to be an integral part of the Domestic Water Supply Permit Number 02-03-06P1710015, issued on April 10, 2006.

FOR THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH

Bruce H. Burton, P.E.
District Engineer
Mendocino District

October 31, 2008
Date

1710015 / Permit
080916-Permit Amendment No1 / AJL

STATE OF CALIFORNIA

AMENDMENT TO THE

DOMESTIC WATER SUPPLY PERMIT

Hidden Valley Lake Community Services District

1710015

ORIGINAL PERMIT NO. **02-03-06P1710015** DATE OF ISSUE: **April 10, 2006**

PERMIT AMENDMENT NO. **2** EFFECTIVE DATE: **May 29, 2009**

WHEREAS:

1. Section 116525(c) of the California Health and Safety Code (CHSC) authorizes the California Department of Public Health to renew, reissue, revise or amend any domestic water supply permit whenever the department deems it to be necessary for the protection of public health whether or not an application has been filed.

2. The Hidden Valley Lake Community Services District submitted an application for domestic water supply amendment on May 15, 2009 to change its Well 03 from Standby to Active status. Laboratory results for bacteriological samples collected on May 5 and May 12, 2009 for Well 03 were negative for both total coliform and *E. Coli.*

3. The California Department of Public Health has evaluated the facilities and supporting information and has determined that the amendment complies with all applicable State drinking water requirements.

THEREFORE:

The California Department of Public Health hereby changes the status of Well 03 from Standby to Active for use as a source of supply for the Hidden Valley Lake Community Services District public water system. The following conditions are hereby amended to domestic Water Supply Permit 02-03-06P1710015:

2. The only sources approved for potable water supply are:

Source	PS Code	Status	Capacity (Gallons per minute)
Grange Well-02	1710015-002	Active	660
Grange Well-03	1710015-003	Active	445
Grange Well-04	1710015-004	Active	500

4. Bacteriological and chemical tests shall be performed in compliance with the California Code of Regulations, Title 22, and in accordance with the requirements of the Department. Specifically:

   a) The distribution system shall be sampled for bacteriological water quality at the minimum frequency required by Section 64423, Title 22 of the California Code of Regulations. Sampling must be conducted in accordance with the water system's approved bacteriological sampling plan. Results of sampling performed must be submitted by the laboratory to the Department by the 10th day of the following month.

      In the event of a positive routine sample, repeat sampling must be conducted in accordance with the water system's approved bacteriological sampling plan and Section 64424, Title 22 of the California Code of Regulations. In addition, prior to disinfection of any of the sources, bacteriological samples shall be collected at each source, prior to treatment, and analyzed for total coliform and *E.Coli.* Samples must be analyzed by a Department approved laboratory using an approved method that enumerates bacteriological results to a density of at least 2,400 organisms per 100 milliliters.

   b) The well sources shall be sampled in accordance with the chemical monitoring requirements in Sections 64400 through 64470, Title 22 of the California Code of Regulations and as directed by the Department. Chemical and bacteriological monitoring samples must be taken prior to any treatment.

This amendment shall be appended to and shall be considered to be an integral part of the Domestic Water Supply Permit Number 02-03-06P1710015, issued on April 10, 2006.

FOR THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH

Bruce H. Burton, P.E.
District Engineer
Mendocino District

May 29, 2009
Date

1710015 / Permit
080916-Permit Amendment No2 / AJL

STATE OF CALIFORNIA

AMENDMENT TO THE

DOMESTIC WATER SUPPLY PERMIT

Hidden Valley Lake Community Services District

1710015

ORIGINAL PERMIT NO. **02-03-06P1710015** DATE OF ISSUE: **April 10, 2006**

PERMIT AMENDMENT NO. **3** EFFECTIVE DATE: **February 15, 2012**

WHEREAS:

1. Section 116525(c) of the California Health and Safety Code (CHSC) authorizes the California Department of Public Health to renew, reissue, revise or amend any domestic water supply permit whenever the department deems it to be necessary for the protection of public health whether or not an application has been filed.

2. The Hidden Valley Lake Community Services District requested a credit for 4 log inactivation of virus through its disinfection facility and transmission main.

3. The California Department of Public Health evaluated the facilities on August 12, 2010 and December 29, 2011. Supporting information was reviewed and the Department has determined that the amendment complies with all applicable State drinking water requirements.

THEREFORE:

The California Department of Public Health recognizes the 4 log inactivation system described by the District. The following conditions are hereby added to domestic Water Supply Permit 02-03-06P1710015:

9. Monthly reports on the operation of the Hidden Valley Lake Community Service District virus inactivation process are to be submitted to the Department by the tenth day of each month. The reports shall be signed by the chief water treatment plant operator, plant superintendent or other person directly responsible for the operation of the water treatment plant. The reports shall include the daily amount of water treated, daily maximum flow from combined sources, minimum daily chlorine residual, minimum daily temperature and a description of the volume in the transmission pipe.

10. Records of chemical dosages for all treatment chemicals used, instrument maintenance and calibration, and a list of water quality complaints and reports of waterborne illness received from consumers shall be maintained by the District. Any other data that the Department considers pertinent shall be submitted upon request. All treatment records shall be retained for not less than three years.

11. The District shall maintain and calibrate all chlorine analyzers at no less than the minimum frequency recommended by the manufacturer. The chlorine analyzer reading shall be compared to the average of three DPD (EPA method 334.0) chlorine residual grab samples on a weekly basis to ensure the calibration is correct. If the average of the three chlorine residual readings is more than 10% different than the chlorine analyzer reading, the chlorine analyzer unit shall be calibrated.

    The chlorine analyzer readings shall be recorded every fifteen minutes and used to prepare and calculate the minimum daily virus inactivation achieved for the monthly compliance report specified in 02-03-06P1710015, Condition 9.

    In the event the chlorine residual analyzer fails to operate or record the readings, the District shall document and take grab samples every four hours.

    An active and functioning low free chlorine residual alarm system shall be operated on a continuous basis by the District. The District's operators must be notified within 15-minutes by the alarm if the chlorine residual is less than the greater of 0.2 mg/L or the concentration required to achieve a 4 log inactivation of virus.

12. Raw bacteriological testing of Well 04, Well 03 and Well 02 shall be conducted at least once per month beginning in October of each year through April of the following year if the source is operating. The samples shall be analyzed by a laboratory that has been certified by the Department to perform total coliform and *E. Coli* analyses pursuant to Section 116390 of the California Health and Safety Code. The method used for analysis shall determine most probable number of coliform organisms up to a density of 2,400 organisms per 100 milliliters of sample. The results from each month of sampling shall be submitted to the Department before the 10th day of the following month.

13. Production at each source and combined shall be monitored at a minimum of a weekly basis. Each year, the District shall submit a production summary that describes the annual production from combined sources, maximum month from combined sources and maximum day from each source and combined sources. The District shall submit this summary to the Department with its Annual Report.

14. Routine tank inspections must be conducted on a monthly basis and, at minimum, check the following: verify overflow and vent screens are intact, overall sanitary condition, holes or cracks are present, corrosion, altitude valves are operating properly, level sensors, controls and pressure gauges are verified, cracking of foundation, status of vandalism and cathodic protection.

15. Each storage tank must be equipped with a sampling tap that is representative of water from the reservoir entering the distribution system by **December 31, 2012**.

16. The District shall complete a TMF Tune Up which can be accessed at http://neien.des.ucdavis.edu/tmf/ and submit a copy of the Results page to the Department by **April 30, 2012**.

17. A non-threaded down-turned sample tap for each source shall be installed at a point between the wellhead and the check valve by **March 30, 2012**.

18. The District shall install a 24 mesh corrosion resistant screen on the tank roof vent at Little Peak Storage Tank by **March 30, 2012**.

19. The District shall describe its plans to clean its storage tanks and remove sediment by **April 30, 2012**.

20. The District shall submit an emergency disinfection plan to the Department for review and approval by **March 30, 2012**. The approved plan shall be posted in the facility with the chlorine analyzer.

21. The District shall submit an updated bacteriological sampling site plan that includes Ground Water Rule provisions to the Department for review and approval by **March 30, 2012**.

22. The District shall collect an asbestos sample from its distribution system under conditions where asbestos contamination is most likely to occur once every nine years. The District shall collect an asbestos sample from its distribution system by **March 30, 2012**.

23. The District shall conduct lead and copper monitoring at twenty sites approved by the Department in June, July, August or September 2012.

24. Pursuant to Section 64558 of the California Code of Regulations, the District shall conduct a source capacity planning study by **February 1, 2013**. In addition to the elements specified in Section 64558, the study must specifically address the following:

    a. describe in writing to the Department the total maximum pumping allowed under California Division of Water Rights Permit 20770B and License 13527A by **March 30, 2012**.

    b. In accordance with Section 64554(f), the District shall complete a constant discharge (pumping rate) well capacity test in August, September or October 2012 unless seasonal precipitation has commenced. A report describing the test conducted and the results must be submitted to the Department by **December 31, 2012**. The constant discharge well capacity test must include Well 04, Well 03, Well 02, and Ag Well operating.

25. The District shall submit a copy of its operator procedures by **April 30, 2012**, which shall include, at minimum, standard operating procedures, disinfection protocol after main repairs or new main installations, flushing program procedures, valve maintenance procedures, storage tank inspection program

procedures, chemical dosage calculations, procedures describing how to change the chemical dosage.

26. The District shall submit a copy of its updated Master Plan by **December 31, 2013**.

This amendment shall be appended to and shall be considered to be an integral part of the Domestic Water Supply Permit Number 02-03-06P1710015, issued on April 10, 2006.

FOR THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH

Bruce H. Burton

Bruce H. Burton, P.E.
District Engineer
Mendocino District

February 15, 2012
Date

1710015 / Permit
2010Aug_Permit Amendment No3.docx / AJL

STATE OF CALIFORNIA

AMENDMENT TO THE

DOMESTIC WATER SUPPLY PERMIT

Hidden Valley Lake Community Services District

1710015

ORIGINAL PERMIT NO. **02-03-06P1710015** DATE OF ISSUE: **April 10, 2006**

PERMIT AMENDMENT NO. **4** EFFECTIVE DATE: **June 29, 2012**

WHEREAS:

1. Section 116525(c) of the California Health and Safety Code (CHSC) authorizes the California Department of Public Health to renew, reissue, revise or amend any domestic water supply permit whenever the department deems it to be necessary for the protection of public health whether or not an application has been filed.

2. The California Department of Public Health visited the water system and evaluated compliance items and chlorine alarm capability on June 21, 2012. The Department has deems that a permit amendment is necessary to ensure the protection of public health.

THEREFORE:

The following conditions are hereby amended for Domestic Water Supply Permit 02-03-06P1710015:

20. The District shall submit an emergency disinfection plan to the Department for review and approval by **December 31, 2012**. The approved plan shall be posted in the facility with the chlorine analyzer.

24. Pursuant to Section 64558 of the California Code of Regulations, the District shall conduct a source capacity planning study by **August 1, 2013**. In addition to the elements specified in Section 64558, the study must specifically address the following:

    a. Describe in writing to the Department the total maximum pumping allowed under California Division of Water Rights Permit 20770B and License 13527A by **December 31, 2012**.

    b. In accordance with Section 64554(f), the District shall complete a constant discharge (pumping rate) well capacity test in August,

September or October 2012 unless seasonal precipitation has commenced. A report describing the test conducted and the results must be submitted to the Department by **December 31, 2012**. The constant discharge well capacity test must include Well 04, Well 03, Well 02, and the Ag Well operating.

25. The District shall submit a copy of its operator procedures by **June 30, 2013**. The procedures shall include, at minimum, general operating procedures, disinfection protocol after main repairs or new main installations, flushing program procedures, valve maintenance procedures, storage tank inspection program procedures, chemical dosage calculations, procedures describing how to change the chemical dosage, and procedures to restore the alarm system and other facility components after a power outage.

27. The District shall test its low chlorine alarm on a monthly basis and maintain records of the alarm testing for Department review for a minimum of three years.

This amendment shall be appended to and shall be considered to be an integral part of the Domestic Water Supply Permit Number 02-03-06P1710015, issued on April 10, 2006.

FOR THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH

Michelle F. Frederick

Michelle F. Frederick, P.E.
District Engineer
Mendocino District

June 29, 2012
Date

State of California—Health and Human Services Agency
California Department of Public Health
DRINKING WATER FIELD OPERATIONS BRANCH
50 D STREET, SUITE 200, SANTA ROSA, CA 95404
PHONE: (707) 576-2145 / FAX: (707) 576-2722
INTERNET ADDRESS: www.cdph.ca.gov

Ron Chapman, MD, MPH
Director & State Health Officer

EDMUND G. BROWN JR.
Governor

June 29, 2012

Mr. Roland Sanford, interim General Manager
Hidden Valley Lake CSD
19400 Hartmann Road
Hidden Valley Lake, CA 95467

2012 WATER SYSTEM COMPLIANCE UPDATE

Dear Mr. Sanford,

On June 21, 2012, staff from the California Department of Public Health (Department) visited Hidden Valley Lake Community Services District (District) public water system to follow-up on historical compliance issues. Specifically, the Department reviewed the progress on compliance items identified in the February 15, 2012 letter from the Department, reviewed log sheets maintained to track when to calibrate the chlorine analyzer and tested the low chlorine alarm.

Listed below are items that must be addressed to ensure continued compliance with the California Health and Safety Code (CHSC) and California Code of Regulations (CCR). Amendment No. 4 of Domestic Water Supply Permit 02-03-06P1710015 is enclosed. Please, read the amendment carefully as it is an integral part of the Domestic Water Supply Permit Number 02-03-06P1710015, issued on April 10, 2006 and is legally binding.

Source Capacity

The District shall submit a source capacity report to the Department to document its maximum source capacity. This analysis should include the ability to supply the potable

water system during all periods and specifically evaluate water rights limitations and the mechanical and physical limitations of the well based on pump tests.

Lead and Copper Monitoring

The Department provided the District with a spreadsheet that contained historical lead and copper results collected from within the community. The District plans to continue its lead and copper monitoring by completing 20 sites between **June 1, 2012 and September 30, 2012**.

Consumer Confidence Report

The Department is available to review the 2011 Consumer Confidence Report. In past reports, the District had included constituents without detections, which is not required.

Low Chlorine Alarm System

During the inspection, the low chlorine alarm did not respond as expected. However, the District found that a power outage from earlier in the week disrupted its alarming. We understand that the District was able to reset the alarming system and the District tested the alarm in the afternoon of June 21, 2012 and the alarm function was restored. The District is required in Permit Amendment No. 4 to incorporate procedures into its Operations Plan that will address actions required following power outages.

If you have any questions about the items above, contact Amy Little at (707) 576-2147.

Sincerely,

Michelle F. Frederick

Michelle F. Frederick, P.E.
District Engineer
Mendocino District

Enclosure: Permit No. 02-03-06P1710015, Amendment No. 4

1710015/Inspection
2012June_InspLtr.docx/AJL

STATE OF CALIFORNIA

AMENDMENT TO THE

DOMESTIC WATER SUPPLY PERMIT

Hidden Valley Lake Community Services District

1710015

ORIGINAL PERMIT NO. **02-03-06P1710015** DATE OF ISSUE: **April 10, 2006**

PERMIT AMENDMENT NO. **5** EFFECTIVE DATE: **June 6, 2013**

WHEREAS:

1. Section 116525(c) of the California Health and Safety Code (CHSC) authorizes the California Department of Public Health to renew, reissue, revise or amend any domestic water supply permit whenever the department deems it to be necessary for the protection of public health whether or not an application has been filed.

2. The California Department of Public Health (Department) evaluated the Well Field Capacity Test Report for Hidden Valley Lake Community Services District (District) Grange Road Well Field prepared by GHD, Inc. submitted on December 26, 2012. The Department evaluated the District's water rights summary submitted on January 7, 2013.

3. The Department deems that a permit amendment is necessary to ensure the protection of public health.

THEREFORE:

Condition No. 2 of Domestic Water Supply Permit No. 02-03-06P1710015 is hereby amended to read:

2. The only sources approved for potable water supply are:

Source	**PS Code**	**Status**	**Estimated Capacity** (Gallons per minute)
Grange Well-02	1710015-002	Active	715
Grange Well-03	1710015-003	Standby	338
Grange Well-04	1710015-004	Active	1,260

The stated source capacity is based on a vineyard well located less than 100 feet to the east of Grange Well-04 not interrupting normal operations. The above capacity is subject to reduction pending how the vineyard well operations impact the capacity at Grange Well-04.

Condition No. 28 of Domestic Water Supply Permit 02-03-06P1710015 is added:

28. Prior to exceeding 2,500 connections in the distribution system, the District shall submit a completed, and Department approved, source capacity planning study in accordance with Section 64558, Title 22 of the California Code of Regulations. Active service connections are considered any service connection that is utilized at least six months of the year. The source capacity planning study must include an evaluation or assessment of how the vineyard well impacts Grange Well-04's capacity.

This amendment shall be appended to and shall be considered to be an integral part of the Domestic Water Supply Permit Number 02-03-06P1710015, issued on April 10, 2006.

FOR THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH

Michelle F. Frederick

Michelle F. Frederick, P.E.
District Engineer
Mendocino District

June 6, 2013
Date

1710015 / Permit
2013June_Permit Amendment No5.docx / AJL

State of California—Health and Human Services Agency
California Department of Public Health
DRINKING WATER FIELD OPERATIONS BRANCH
50 D STREET, SUITE 200, SANTA ROSA, CA 95404
PHONE: (707) 576-2145 / FAX: (707) 576-2722
INTERNET ADDRESS: www.cdph.ca.gov

Ron Chapman, MD, MPH
Director & State Health Officer

EDMUND G. BROWN JR.
Governor

June 6, 2013

Hidden Valley Lake Community Services District
c/o Mr. Roland Sanford, General Manager
19400 Hartmann Road
Hidden Valley Lake, CA 95467

Well Field Capacity Test Report and Water Rights Summary

Dear Mr. Sanford,

This letter is in regards to the report entitled Well Field Capacity Test Report (Report) for Hidden Valley Lake Community Services District (District) Grange Road Well Field prepared by GHD, Inc. submitted on December 26, 2012 and the District's water rights summary submitted on January 7, 2013, as requested by the Department of Public Health (Department) during an inspection. Thank you for this submittal. The Department of Public Health (Department) has reviewed the report and has the following comments:

1. Based on the water rights summary, the District must discharge to Putah Creek to ensure Median Daily Discharge (1954-1975) is maintained. Based on discussions with District staff, the Department understands that Well 03 and Ag Well are reserved for Putah Creek supplementation during the period of July 1 – October 31 for each year. If the District shifts its operations during this period such that Well 03 is available to its public water system, please notify the Department.

2. The pumping duration and recovery periods during the Well Field Capacity Test are considered adequate for wells in alluvial soils.

3. The District indicates that the vineyard well does not disrupt operations of the District's well field but this was not included in the well capacity evaluation. Given Well 04 and the Vineyard Well are located within respective cone of influences, the change in water elevation observed at the Vineyard Well during pumping and the similar screening of Well 04 (50 – 188 feet) and Vineyard Well (80 – 180 feet), the Department believes that the vineyard well could potentially impact Well-04 operations.

4. Given the District's maximum day demand is 1,060 gallons per day per connection (based on 2005 Annual Report) and there are 2,444 active service

connections, the District is required to ensure the wells have at least 2.6 MGD capacity. With the wells operating at capacity for 22 hours per day, the District is capable of producing 2.6 MGD and currently has adequate source capacity.

5. Based on the report findings, vineyard well operation and the District's operations, the total well capacity is as follows:

Uninterrupted by Vineyard Well Operations:

Period	**Wells available**	**Total capacity (gpm)**
July 1 – October 31	Well 02 and Well 04	715 + 1,260 = **1,975**
November 1 – June 30	Well 02, Well 03 & Well 04	715 + 388 + 1,260 = **2,363**

The Department encourages the District measure the vineyard well capacity and its impacts prior to performing significant expansion of the distribution system. Permit amendment No. 5 is enclosed to address the new capacity demonstrated in the Report and requirements associated with an increase of the District's number of active service connections. Please, read the permit amendment carefully as it is legally binding.

If you have any questions about this letter, please contact Amy Little at (707) 576-2147.

Sincerely,

Michelle F. Frederick

Michelle F. Frederick, P.E.
District Engineer
Mendocino District

Enclosure: Permit Amendment No. 5 to Domestic Water Supply Permit 02-03-06P1710015

c: Lake County Planning Department

Lake County Environmental Health

1710015/Permit
130516 well capacity.doc/AJL

CALIFORNIA
Water Boards

EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

State Water Resources Control Board
Division of Drinking Water

September 28, 2015

System No. 1710015

Hidden Valley Lake CSD
Matt Bassett, Acting General Manager
19400 Hartmann Road
Hidden Valley Lake, CA 95467

HEXAVALENT CHROMIUM MAXIMUM CONTAMINANT LEVEL (MCL) TRIGGER

Dear Mr. Bassett,

On July 1, 2014, a maximum contaminant level (MCL) for hexavalent chromium of 0.010 mg/L became effective for all public water systems. The MCL exceedance is determined based on a rolling average of four calendar quarters of data. This letter is to inform you that the Hidden Valley Lake Community Services District's Well 4 has exceeded the hexavalent chromium MCL of 0.010 mg/L after three quarters of sampling. The water quality data that has been electronically submitted to the state database is shown below.

SOURCE	DATE	FINDING	QAvg
002	6/9/2015	7.800	7.8
002	3/24/2015	10.000	11.0
002	1/21/2015	12.000	
002	12/19/2014	16.000	16.0
003	6/9/2015	4.200	4.2
003	3/24/2015	5.300	5.1
003	1/29/2015	5.100	
003	1/21/2015	5.000	
003	12/19/2014	5.100	5.1
004	6/9/2015	19.000	19.0
004	3/24/2015	19.000	20.5
004	1/21/2015	22.000	
004	12/19/2014	22.000	22.0
006	6/9/2015	9.100	9.1

There are now steps the District must take to comply with the California Health and Safety Code (CHSC) Division 104 Section 116555(a)(1), 116431 and Title 22, California Code of Regulations (CCR) Section 64431. It is our understanding that the District blends water from its three wells prior to entering the distribution system. In prior discussions with Roland Sanford, I was told that the District is evaluating two options, blended treatment and the possibility of replacing Well

4, to reduce hexavalent chromium levels to its customers. For the State Board to approve blending treatment, the District needs to submit engineering documents that specify the parameters and monitoring required for blending to be an effective treatment. If the District decides to replace the well, there are design requirements and documents that need to be submitted to the State Board to permit a new source of supply. Either treatment or a new source of supply requires an amendment to the District's water supply permit.

Please note that Senate Bill 385, approved by the Governor on September 4, 2015, authorizes the State Board, at the request of a public water system that prepares and submits a compliance plan, to grant a period of time to achieve compliance with the primary drinking water standard for hexavalent chromium by approving the compliance plan. This bill requires a public water system to provide a specific public notice regarding the compliance plan to the persons served by the public water system and the public water system to send written status reports to the state board. The bill also prohibits a public water system from being deemed in violation of the primary drinking water standard for hexavalent chromium while implementing an approved compliance plan or while state board action on its proposed and submitted compliance plan is pending. Please refer to the bill for the complete language and CHSC 116431 language (attached).

Please let me know **by October 23, 2015**, if the District intends to submit a compliance plan. The compliance plan will need to be submitted by **November 20, 2015**.

If you have any questions regarding this matter, please contact me at (707) 576-2734.

Sincerely,

Sheri K. Miller, P.E.
Mendocino District Engineer
Division of Drinking Water
State Water Resources Control Board

Enclosure: CHSC 116431

cc: Lake County Environmental Health

1710015/Compliance
150928 Cr6 warning letter

(2) The department shall grant a variance pursuant to paragraph (1) only if it determines, after conducting a public hearing in the community served by the public water system, that there is no substantial community opposition to the variance and the variance does not pose an unreasonable risk to health. The public water system shall provide written notification, approved by the department, to all customers which shall contain at least the following information:

(A) The fact that a variance has been requested.

(B) The date, time and location of the public hearing that will be conducted by the department.

(C) The level of fluoride that will be allowed by the requested variance and how this level compares to the maximum contaminant levels prescribed by the state primary drinking water standard, the federal national primary drinking water regulation, and the federal national secondary drinking water regulation.

(D) A discussion of the types of health and dental problems that may occur when the fluoride concentration exceeds the maximum contaminant levels prescribed by the state standard and the federal regulations.

(3) If, at any time after a variance has been granted pursuant to paragraph (1), substantial community concerns arise concerning the level of fluoride present in the water supplied by the public water system, the public water system shall notify the department, conduct a public hearing on the concerns expressed by the community, determine the fluoride level that is acceptable to the community, and apply to the department for an amendment to the variance which reflects that determination.

§116431. Hexavalent Chromium – Effective 9/4/15

(a) At the request of any public water system that prepares and submits a compliance plan to the state board, the state board may grant a period of time to achieve compliance with the primary drinking water standard for hexavalent chromium by the state board's written approval of the compliance plan.

(b)

(1) A compliance plan shall include all of the following:

(A) A compelling reason why it is not feasible for the system to presently comply with the primary drinking water standard for hexavalent chromium.

(B) A summary of the public water system's review of available funding sources, the best available technology or technologies for treatment, and other options to achieve and maintain compliance with the primary drinking water standard for hexavalent chromium by the earliest feasible date.

(C) A description of the actions the public water system is taking and will take by milestone dates to comply with the primary drinking water standard for hexavalent chromium by the earliest feasible date. The actions may include, but are not limited to, planning, designing, permitting, financing, constructing, testing, and activating treatment facilities or other capital improvements. The compliance plan shall include the public water system's best estimate of the funding required for compliance and the actions that the public water system will take to secure the funding. In no event shall the earliest feasible date extend beyond January 1, 2020.

(2) The state board may do either of the following:

(A) Approve a compliance plan.

(B) Provide written comments on the compliance plan to the public water system. The comments may include requiring the public water system's compliance, prior to January 1, 2020, with the primary drinking water standard for hexavalent chromium if the earliest feasible date, based on review of the compliance plan and based on the public water system's specific circumstances identified in the plan, is prior to January 1, 2020. If the state board provides written comments, the public water system may submit a revised compliance plan that the state board may approve if the plan timely and adequately addresses any and all written comments provided by the state board.

(c) The public water system shall provide written notice regarding the compliance plan to the persons served by the public water system at least two times per year. The written notice shall meet the translation requirements provided in subdivision (h) of Section 116450 and shall include notice of all of the following:

(1) That the public water system is implementing the compliance plan that has been approved by the state board and that demonstrates the public water system is taking the needed feasible actions to comply with the primary drinking water standard for hexavalent chromium. The notice shall summarize those actions in a form and manner determined by the state board. For notices after the initial notice, the public water system shall update information demonstrating progress implementing the compliance plan.

(2) That the persons served by the public water system have access to alternative drinking water and that the public water system shall provide information on that drinking water. The notice shall identify where that information may be obtained.

(3) Basic information describing hexavalent chromium, including the level found in drinking water provided by the public water system, the maximum contaminant level for hexavalent chromium, and the possible effects of hexavalent chromium on human health as specified in Appendix 64465-D of Section 64465 of Title 22 of the California Code of Regulations.

(d) Following the state board's approval of the compliance plan, the public water system shall submit a written status report to the state board, at a frequency and by a deadline or deadlines set by the state board, for the state board's approval, that updates the status of actions specified in the state board-approved compliance plan and that specifies any changes to the compliance plan that are needed to achieve compliance with the primary drinking water standard for hexavalent chromium by the earliest feasible date. State board approval of a written status report that includes proposed changes to the compliance plan shall be deemed approval of the proposed changes to the compliance plan and the resulting revised plan.

(e) A public water system shall not be deemed in violation of the primary drinking water standard for hexavalent chromium while implementing an approved compliance plan. A public water system that has submitted a compliance plan for approval shall not be deemed in violation of the primary drinking water standard for hexavalent chromium while state board action on the proposed and submitted compliance plan is pending.

(f)

(1) At any time, the state board may direct revisions to a compliance plan or disapprove a compliance plan if the state board determines that the actions and timelines addressed in the compliance plan are inadequate to achieve compliance by the earliest feasible date. At any time, the state board may disapprove a written status report if the state board determines that the written status report fails to demonstrate that the public water system is complying with the approved compliance plan by the milestone dates. In these instances, the state board shall provide the public water system with written notice specifying the reason for the required revisions or disapproval and the deficiencies that shall be addressed in a resubmitted compliance plan or written status report.

(2) A previously approved compliance plan that the state board requires to be revised, or a written status report that is disapproved by the state board, may be revised and resubmitted by the public water system for state board approval within 60 days of receipt of the notice required by paragraph (1). During the 60 days, a public water system shall not be deemed in violation of the primary drinking water standard for hexavalent chromium. A public water system shall not be granted a period of time to achieve compliance with the primary drinking water standard for hexavalent chromium if the public water system fails to submit a revised compliance plan or revised written status report within 60 days of receiving the notice, or submits a revised compliance plan or revised written status report that is subsequently disapproved.

(3) A compliance plan approved by the state board pursuant to this section shall continue in effect until the earliest feasible compliance date, as specified by the compliance plan, or until the water system fails to retain state board approval of the compliance plan.

(g) The state board may implement, interpret, or make specific the provisions of this section by means of criteria, published on its Internet Web site. This action by the state board shall not be subject to the rulemaking requirements of the Administrative Procedure Act (Chapter 3.5 (commencing with Section 11340) of Part 1 of Division 3 of Title 2 of the Government Code).

(h) This section does not affect the state's requirements for establishing drinking water standards for contaminants in drinking water. This section does not apply to any contaminants other than hexavalent chromium. This section is intended to address the specific circumstance that, for some public water systems, compliance with the state's hexavalent chromium drinking water standard requires the design, financing, and construction of capital improvements. These major compliance actions necessitate a period of time for compliance.

(i) This section shall remain in effect only until January 1, 2020, and as of that date is repealed, unless a later enacted statute, that is enacted before January 1, 2020, deletes or extends that date.

Article 5. Public Notification

§116450. Notification to Department and users.

(a) When any primary drinking water standard specified in the department's regulations is not complied with, when a monitoring requirement specified in the department's regulations is not performed, or when a water purveyor fails to comply with the conditions of any variance or exemption, the person operating the public water system shall notify the department and shall give notice to the users of that fact in the manner prescribed by the department. When a variance or an exemption is granted, the person operating the public water system shall give notice to the users of that fact.

(b) When a person operating a public water system determines that a significant rise in the bacterial count of water has occurred in water he or she supplies, the person shall provide, at his or her expense, a report on the rise in bacterial count of the water, together with the results of an analysis of the water, within 24 hours to the department and, where appropriate, to the local health officer.

(c) When the department receives the information described in subdivision (b) and determines that it constitutes an immediate danger to health, the department shall immediately notify the person operating the public water system to implement the emergency notification plan required by this chapter.

(d) In the case of a failure to comply with any primary drinking water standard that represents an imminent danger to the health of water users, the operator shall notify each of his or her customers as provided in the approved emergency notification plan.

(e) In addition, the same notification requirement shall be required in any instance in which the department or the local health department recommends to the operator that it notify its customers to avoid internal consumption of the water supply and to use bottled water due to a chemical contamination problem that may pose a health risk.

(f) The content of the notices required by this section shall be approved by the department. Notice shall be repeated at intervals, as required by the department, until the department concludes that there is compliance with its standards or requirements. Notices may be given by the department. In any case where public notification is required by this section because a contaminant is present in drinking water at a level in excess of a primary drinking water standard, the notification shall include identification of the contaminant, information on possible effects of the contaminant on human health, and information on specific measures that should be taken by persons or populations who might be more acutely affected than the general population.

(g) Whenever a school or school system, the owner or operator of residential rental property, or the owner or operator of a business property receives a notification from a person operating a public water system under any provision of this section, the school or school system shall notify school employees, students and parents if the students are minors, the owner or operator of a residential rental property shall notify tenants, and the owner or operator of business property shall notify employees of businesses located on the property.

(1) The operator shall provide the customer with a sample notification form that may be used by the customer in complying with this subdivision and that shall indicate the nature of the problem with the water supply and the most appropriate methods for notification that may include, but is not limited to, the sending of a letter to each water user and the posting of a notice at each site where drinking water is dispensed.

(2) The notice required by this subdivision shall be given within 10 days of receipt of notification from the person operating the public water system.

(3) Any person failing to give notice as required by this subdivision shall be civilly liable in an amount not to exceed one thousand dollars ($1,000) for each day of failure to give notice.

(4) If the operator has evidence of noncompliance with this subdivision the operator shall report this information to the local health department and the department.

(h)

(1) Notwithstanding any other provision of law, commencing July 1, 2012, a written Tier 1 public notice given by a public water system pursuant to this section shall comply with the following:

(A) It shall be provided in English, Spanish, and in the language spoken by any non-English-speaking group that exceeds 10 percent of persons served by the public water system, and it shall contain a telephone number or address where residents may contact the public water system for assistance.

(B) For each non-English-speaking group that speaks a language other than Spanish and that exceeds 1,000 residents but is less than 10 percent of the persons served by the public water system described in subparagraph (A), the notice shall contain information regarding the importance of the notice and a telephone number or address where the public water system will provide either a translated copy of the notice or assistance in the appropriate language.

(2)

(A) After July 1, 2012, it shall be presumed that the public water system has determined the appropriate languages for notification pursuant to paragraph (1) if the public water system has made a reasonable attempt to utilize the data available through the American Community Survey of the United States Census Bureau to identify the non-English speaking groups that reside in a city, county, or city and county that encompasses the service area of the public water system.

(B) After July 1, 2012, it shall be presumed that the notice has been correctly translated if the public water system has made a reasonable attempt to obtain either in-house or contracted-for translation services for providing a translated copy of the notice or assistance in the appropriate languages pursuant to paragraph (1) and the translated copy of the notice or assistance has been provided.

(C) After July 1, 2012, if the public water system has made a reasonable attempt to have the notice required by paragraph (1) translated into the appropriate languages, it shall be presumed that a notice translated into languages other than Spanish has been adequately provided if it contains translations in the appropriate languages of all of the following:

(i) Identification of the contaminant.

(ii) Information on the health effects associated with the presence of the contaminant in drinking water at a level in excess of the primary drinking water standard.

(iii) Actions that members of the public should take to protect their health, such as, for example, "Do not drink," "Boil water before using," or "Stop boiling your water."

(3) In addition to nonwritten notification provided for in the public water system's emergency notification plan, the public water system may, and is encouraged to, provide notice through foreign language media outlets.

(4) For purposes of this subdivision, "Tier 1 public notice" means a public notice as defined pursuant to Section 64401.71 of Title 22 of the California Code of Regulations.

(5) Nothing in this subdivision shall require the department to review or approve notices in any language other than English.

§116451. Department effort to ensure notification

If user notification is required pursuant to Section 116450, the department shall make a reasonable effort to ensure that notification is given.

§116455. Notification to local agency of source contamination.

(a) A public water system shall comply with the requirements of this section within 30 days after it is first informed of a confirmed detection of a contaminant found in drinking water delivered by the public water system for human consumption that is in excess of a maximum contaminant level, a notification level, or a response level established by the department.

Hidden Valley Lake
Community Services District

19400 Hartmann Road
Hidden Valley Lake, CA 95467
707.987.9201
707.987.3237 fax
www.hiddenvalleylakecsd.com

Ms. Sheri K. Miller, P.E.
Mendocino District Engineer
Division of Drinking Water
State Water Resources Control Board
50 D Street, Suite 200
Santa Rosa, CA 95404

April 14, 2016

Subject: Hidden Valley Lake Community Services District
Hexavalent Chromium Compliance Plan
System ID# CA1710015

Dear Ms. Miller,

The purpose of this letter is to provide the State Division of Drinking Water (DDW) with a Hexavalent Chromium Compliance Plan (Plan) for Hidden Valley Lake Community Services District (District) in accordance with Section 116431 of the California Health and Safety Code (CHSC) and request a waiver until January 1, 2020 as permitted by Section 116431(e) of the CHSC to achieve compliance in accordance with the Plan described below.

Background

The District's water supply system consists of three active wells (Grange Well-02, Grange Well-03, and Grange Well-04). Per Permit Amendment #5 to the Domestic Water Supply Permit, the permitted production rates for the three wells are as follows:

- Grange Well-02 (PS Code 1710015-002): 715 gallons per minute (gpm)
- Grange Well-03 (PS Code 1710015-003): 500 gpm
- Grange Well-04 (PS Code 1710015-004): 1,260 gpm

On September 28, 2015, the District received a hexavalent chromium Maximum Contaminant Level (MCL) trigger letter (Letter) from DDW. The Letter stated that the MCL, set at 10 parts per billion (ppb), became effective on July 1, 2014. Further, the Letter stated that the District's Grange Well-04 exceeded the rolling four quarter average and due to this exceedance the District is required to prepare a Plan that documents the District's plan to bring the water system into compliance with the recently adopted MCL for hexavalent chromium. Per CHSC Section 116431, the Plan shall identify a schedule that demonstrates compliance by January 1, 2020, as well as public notification of progress status.

Section 116431(b)(1)(A) - Infeasibility

CHSC Section 116431(b)(1)(A) requires that the Plan provide a compelling reason why the District's water system is unable to achieve compliance with the identified MCL. Based on a

rudimentary mass balance analysis using the permitted flows for each well per Permit Amendment #5 and the recent water quality concentrations for the three wells identified in the Letter, the system-wide hexavalent chromium concentration is approximately 15 ppb. The District does not expect that hexavalent chromium concentrations will sufficiently decrease to bring the system into compliance and has determined that it is infeasible to comply with the new water quality goal for hexavalent chromium without changes to the system.

Section 116431(b)(1)(B) – Funding, Options for Treatment, and Schedule

Recognizing that capital improvements are needed to achieve compliance with the MCL, the District has submitted a Drinking Water State Revolving Fund (DWSRF) application to the DDW for funding. More recently, other funding sources, such as Proposition 1 have become available to fund planning, design, and construction of improvements to remove hexavalent chromium treatment from potable water. The DWSRF application is under evaluation as the District moves forward with the Engineering Report (ER). The ER will identify preliminary capital and on-going operation and maintenance costs for each of the four options identified below.

Once the ER is completed and preliminary capital and on-going operation and maintenance costs identified, then the District will evaluate if the existing rate structure can support re-payment of a loan or if a rate adjustment is needed. At the time a funding agreement is executed the District anticipates it will have a rate structure in place to meet the on-going funding requirements stipulated in a funding agreement.

The District has identified several options for compliance. Option 1 consists of construction of new mechanical equipment in the vicinity of Grange Well-04 for treatment of hexavalent chromium.

Option 2 consists of constructing a new well or converting Monitoring Well #2 into a municipal well, and blending the water from this new well with the existing water supply.

Option 3 consists of re-developing Grange Well-03, as this well has the lowest concentration of hexavalent chromium.

Option 4 consists of identifying the zone of highest hexavalent chromium in Grange Well-04 and permanently plugging the screens in the zone.

The District has prepared a preliminary schedule for compliance presuming that blending with a new well will be the highest ranked alternative. More detail on the schedule is provided below in the Proposed Plan of Approach.

Section 116431(b)(1)(C) – Proposed Plan of Approach

The first step of the District's proposed plan is to complete a feasibility study of the options described above. The feasibility study will compare the options evaluating engineering and construction costs, long-term operation & maintenance costs, schedule for completion, potential environmental impacts of each alternative, level of environmental study required, permitting constraints, property acquisition needs, and probability of achieving long-term compliance with the hexavalent chromium standard. The results of the study will be presented to the District Board of Directors.

The attached schedule presumes that blending with a new well will be the highest ranked alternative, likely due to factors such as ease of operation and maintenance, lack of creation of residual waste streams, and lesser overall capital and operational cost.

Further, the District understands that because the District's water system is an existing system and that a new well will provide additional capacity, then Section 64554c redundancy requirements are not applicable to the District.

The next step is to drill a test well in the vicinity of the proposed well to provide data to verify this option can achieve compliance. Preliminary studies indicate that the proposed well will most likely be located north of Putah Creek, with final location to be determined during the engineering phase. In order for this option to provide long-term compliance, the new well must produce at a capacity similar to Grange Well-04, with hexavalent chromium concentrations ranging between 5 and 10 ppb. Evaluation of test well will likely consist of constant rate and step drawdown tests to estimate production rates and water quality testing to estimate hexavalent chromium concentrations.

If the results of the test well verify that blending is a viable option, then the District will move forward with design and construction of the new well, raw water main, and clear well improvements. Concurrently, the District will move forward with any property acquisition for the well and associated improvements and submission of necessary documents to support an amendment to the Water System Permit to add a new well into the system. While the District envisions moving forward with a new well project separately from the raw water main and clear well project, both are expected to be completed prior to the end of calendar year 2019.

Section 116431(c) – Public Notification

The District has notified its customers via mailing or on-line notices regarding the current levels of hexavalent chromium in its potable water supply and the District's plan and schedule for bringing the system into compliance. The District most recently notified its customers in February 2016. An electronic copy of the notification is posted on the District's website (http://www.hiddenvalleylakecsd.com/media/Press%20Release/Public%20Notice%20Mar%202016.pdf). The District will continue to notify its customers at least twice each year and all public notification will include the subject matters identified in Section 116431(c)(1) through Section 116431(c)(3).

The District will also provide a school or school system, the owner or operator of residential rental property, or the owner or operator of a business property with a sample notification form that may be used by the customer and that shall indicate the nature of the problem with the water supply and the most appropriate methods for notification that may include, but is not limited to, the sending of a letter to each water user and the posting of a notice at each site where drinking water is dispensed in accordance with Section 116450(g).

Lastly, the District will translate all notices in accordance with Section 116450(h).

Section 116431(d) – Written Status Reports

Following DDW's approval of the Plan, the District will submit a written status report, at a frequency and by deadlines set by DDW, for DDW's approval, that updates the status of actions specified in the approved Plan and that specifies any changes to the Plan that are needed to achieve compliance with the MCL for hexavalent chromium by the earliest feasible date.

Please feel free to contact me at (707) 987-9201 should you have any questions regarding the contents of this Plan.

Sincerely,

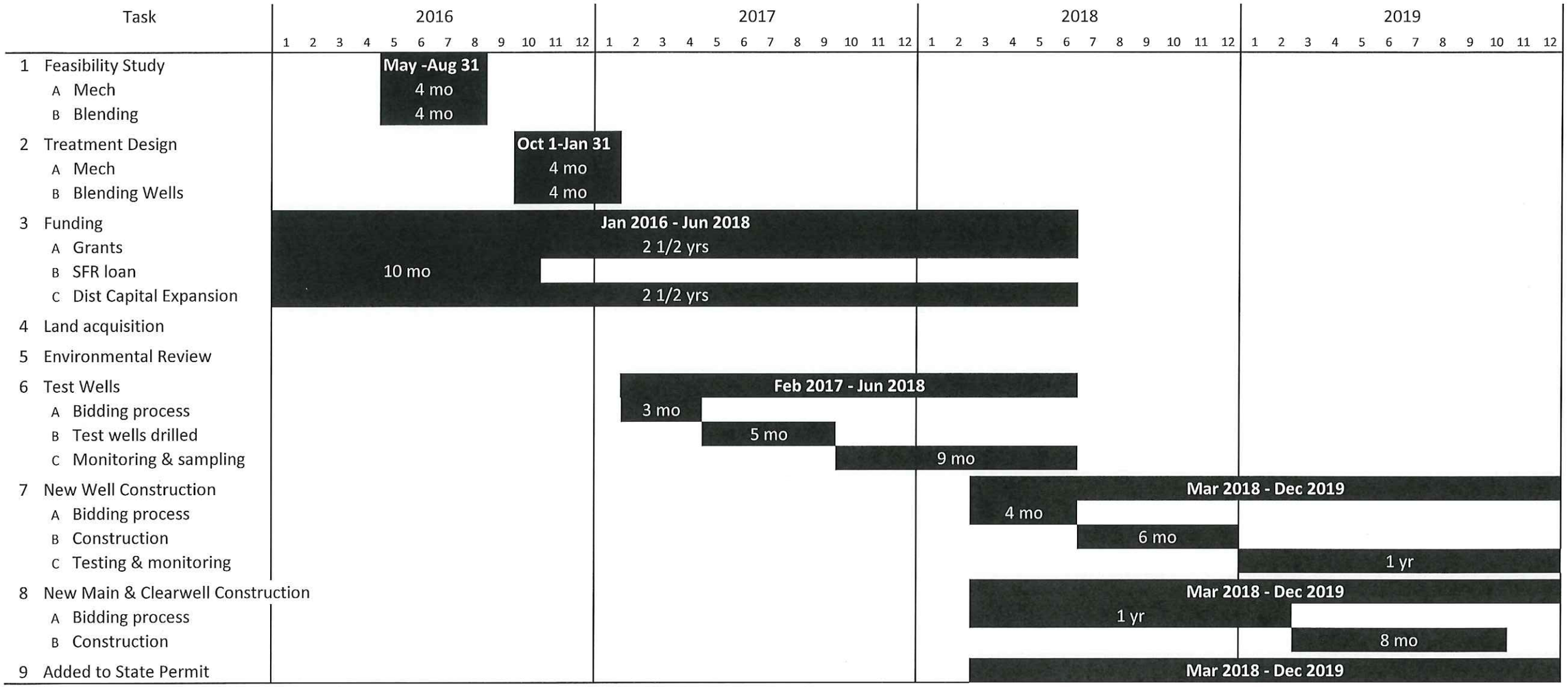
Matthew Bassett
General Manager

Enclosure

Hidden Valley Lake - CSD

Hexavalent Chromium MCL Compliance Schedule

Revised 4/28/2016



CALIFORNIA
Water Boards

EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

State Water Resources Control Board
Division of Drinking Water

May 11, 2016

System No. 1710015

Hidden Valley Lake Community Services District
Matt Bassett, Acting General Manager
19400 Hartmann Road
Hidden Valley Lake, CA 95467

HEXAVALENT CHROMIUM MAXIMUM CONTAMINANT LEVEL (MCL) - COMPLIANCE PLAN APPROVAL

Dear Mr. Bassett,

To comply with the California Health and Safety Code (CHSC) Division 104 Section 116555(a)(1), 116431 and Title 22, California Code of Regulations (CCR) Section 64431, and Senate Bill 385, approved by the Governor on September 4, 2015, the State Water Resources Control Board, Division of Drinking Water (Division) received the Hidden Valley Lake Community Services District's "Hexavalent Chromium Compliance Plan" on April 28, 2016. The Division has reviewed the document and finds it acceptable.

Senate Bill 385 authorizes the Division, at the request of a public water system that prepares and submits a compliance plan, to grant a period of time to achieve compliance with the primary drinking water standard for hexavalent chromium by approving the compliance plan. The bill requires a public water system to provide a specific public notice regarding the compliance plan to the persons served by the public water system and the public water system to send written status reports to the state board.

No later than September 30, 2016, the District shall begin submitting progress reports to the Division regarding compliance with said plan. The District shall then submit a progress report by the last day of March, June, September, and December of each year until the District complies with Section 64431, Title 22, of the CCR.

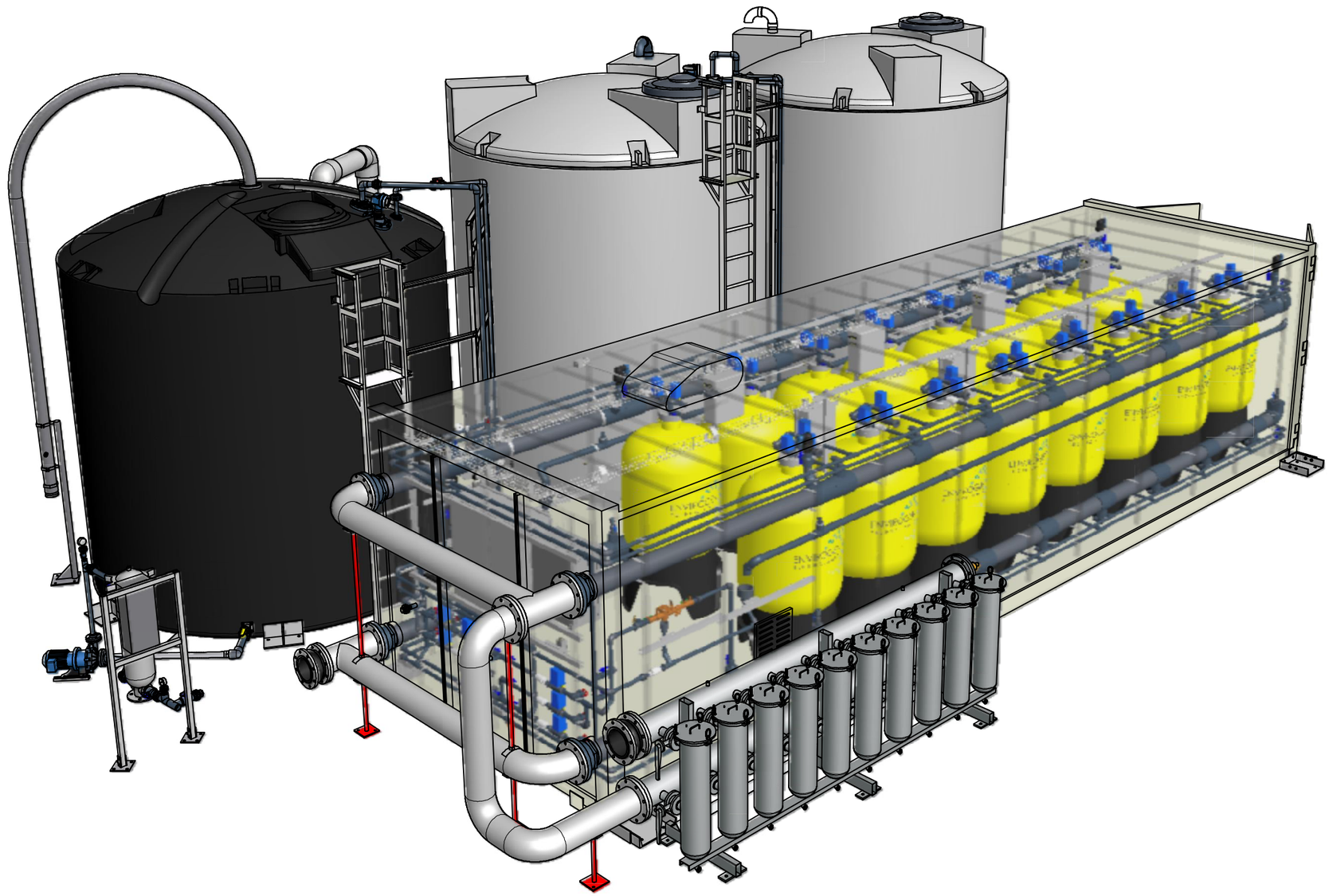
If you have any questions, please contact me at (707) 576-2734.

Sincerely,

Sheri K. Miller, P.E.
Mendocino District Engineer

c: Lake County Environmental Health

1710015/Compliance
160511 - 1710015 compliance plan approval.docx/SKM



ISOMETRIC VIEW

REV	DATE	DESCRIPTION OF REVISION	REVISED BY	CHECKED

ENVIROGEN TECHNOLOGIES
A Lifecycle Performance Company
P.O. BOX 1400
RANCHO CUCAMONGA, CA 91729
A member of The Amplio Group

APPROVED BY:

DRAWING SCALE

DESIGNED BY / DATE

DRAWN BY / DATE
AJN / 11-05-09

CHECKED BY / DATE

TYPICAL 1000 GPM SYSTEM LAYOUT

SHEET SIZE: B
REVISION: NC
SHEET 3 OF 3
DRAWING #: TYP 1000 iX_SYS
REF: TYP 1000 iX_SYS.iam

LAST EDITED: 3/5/2009 by anava
NETWORK PATH: C:\Vault Workspace\Basin\Bids\TYP 1000iX_SYS.iam

drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' National Geodetic Vertical Datum of 1929 (NGVD 29). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 10. The **horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the National Geodetic Vertical Datum of 1929. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

Spatial Reference System Division
National Geodetic Survey, NOAA
Silver Spring Metro Center
1315 East-West Highway
Silver Spring, Maryland 20910
(301) 713-3191

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit its website at http://www.ngs.noaa.gov.

Base map information shown on this FIRM was derived from U.S. Geological Survey Digital Orthophoto Quadrangles produced at a scale of 1:12,000 from photography dated 1997 or later.

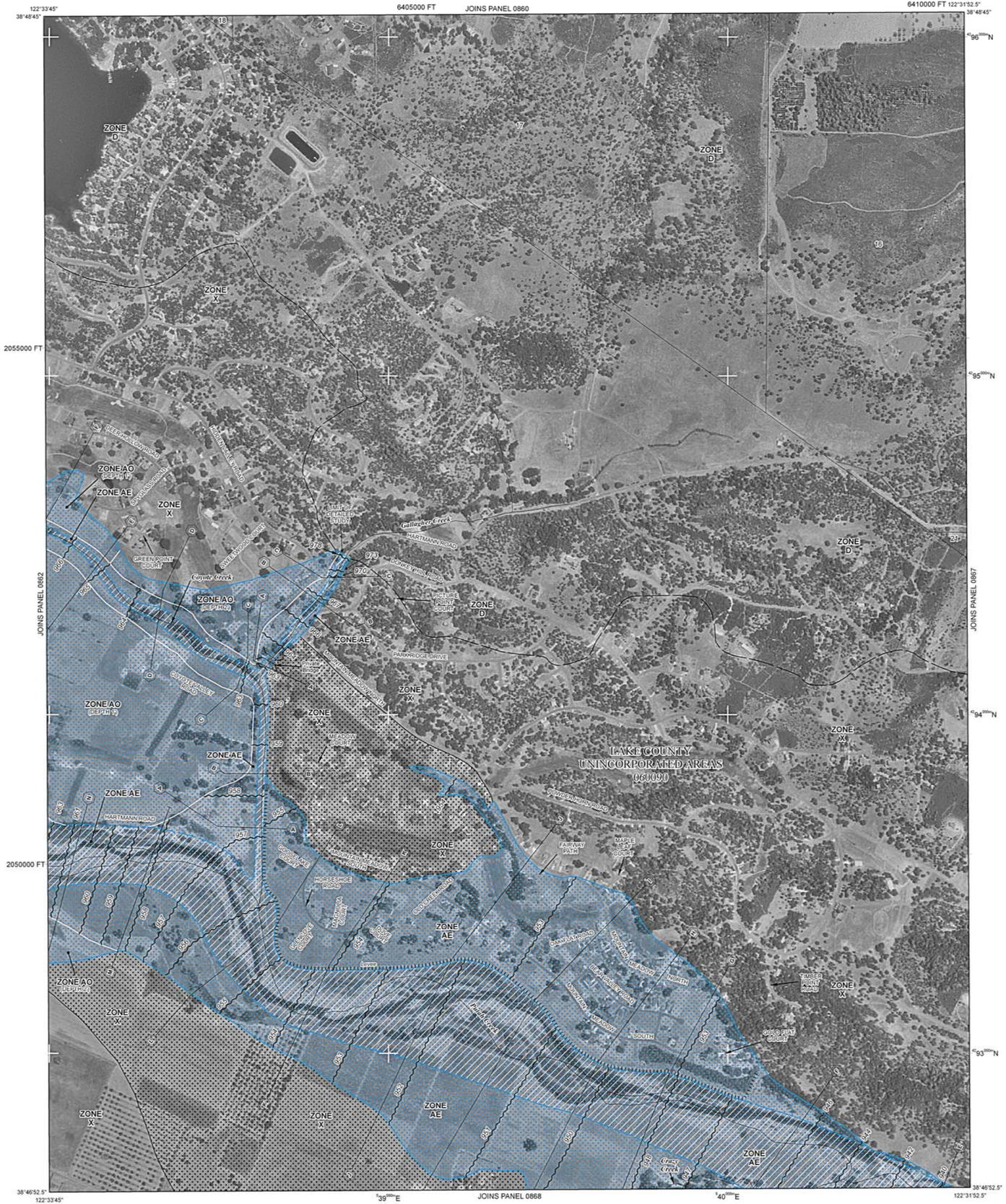
This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to confirm to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at http://www.fema.gov/msc.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov.



The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X — Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the National Geodetic Vertical Datum of 1929

- Cross section line
- Transect line
- 87°07'45", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 4376000mN — 1000-meter Universal Transverse Mercator grid values, zone 10N
- 600000 FT — 5000-foot grid ticks: California State Plane coordinate system, zone II (FIPSZONE 0402), Lambert Conformal Conic projection
- DX5510 x — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP
September 30, 2005

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

250 0 500 1000 FEET

150 0 150 300 METERS

NFIP

PANEL 0866D

FIRM

FLOOD INSURANCE RATE MAP

LAKE COUNTY, CALIFORNIA
AND INCORPORATED AREAS

PANEL 866 OF 1000

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
LAKE COUNTY	060090	0866	D

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
06033C0866D

EFFECTIVE DATE
SEPTEMBER 30, 2005

NATIONAL FLOOD INSURANCE PROGRAM

Hidden Valley Lake CSD

Conceptual Study Engineer's Estimate

Option 1

Project No. 99-3466

April 2017

ITEM NO.	ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	ITEM TOTAL
1	Demo Redwood Tank & Wooden Building	1	LS	$ 25,000	$ 25,000
2	90,000 Gallon Bolted Steel Tank	1	LS	$ 200,000	$ 200,000
3	Generator & Switchgear at Admin Office	1	LS	$ 100,000	$ 100,000
4	New Gate & Fence - Administrative Office	1	LS	$ 10,000	$ 10,000
5	New Gate & Fence - Grange Road Well Access	1	LS	$ 4,000	$ 4,000
6	Generator for Well #4 & Treatment Plant	1	LS	$ 125,000	$ 125,000
7	New Access Road	1	LS	$ 20,000	$ 20,000
8	Mechanical Treatment System	1	LS	$ 750,000	$ 750,000
9	Concrete Foundations	1	LS	$ 50,000	$ 50,000
10	New E&I for Treatment System & Wells	1	LS	$ 200,000	$ 200,000
11	Site Grading	1	LS	$ 10,000	$ 10,000
12	General Piping & Valves	1	LS	$ 25,000	$ 25,000
13	Solids Dewatering System	1	LS	$ 600,000	$ 600,000
14	Backwash Drain Line	1	LS	$ 75,000	$ 75,000
15	Building for Controls and Chemicals	1	LS	$ 200,000	$ 200,000
16	PG&E Improvements	1	LS	$ 50,000	$ 50,000
17	SWPPP	1	LS	$ 49,000	$ 49,000
18	Mobilization	1	LS	$ 125,000	$ 125,000
				Construction Subtotal	$ 2,618,000
				Construction OHP (10%)	$ 262,000
				25% Contingency	$ 720,000
				Construction Total	$ 3,600,000
				Est. Land Acquisition	$ 50,000
				Engineering	$ 720,000
				Pilot Testing	$ 150,000
				ESDC & CM & Inspection	$ 360,000
				CEQA & Legal	$ 108,000
				SRF Application	$ 72,000
				Project Admin	$ 108,000
				Project Grand Total	**$ 5,168,000**

Hidden Valley Lake CSD

Conceptual Study Engineer's Estimate

Option 2a

Project No. 99-3466

April 2017

ITEM NO.	ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	ITEM TOTAL
1	Demo Redwood Tank & Wooden Building	1	LS	$ 25,000	$ 25,000
2	90,000 Gallon Bolted Steel Tank	1	LS	$ 200,000	$ 200,000
3	Generator & Switchgear at Admin Office	1	LS	$ 100,000	$ 100,000
4	New Gate & Fence - Administrative Office	1	LS	$ 10,000	$ 10,000
5	New Gate & Fence - Grange Road Well Access	1	LS	$ 4,000	$ 4,000
6	Generator for New Well	1	LS	$ 75,000	$ 75,000
7	Test Hole	1	LS	$ 150,000	$ 150,000
8	Production Well	1	LS	$ 350,000	$ 350,000
9	10" Water Main to Existing Main	3,500	LF	$ 125	$ 438,000
10	Tie-in to Existing 12" Main	1	LS	$ 15,000	$ 15,000
11	Well Site Improvements	1	LS	$ 75,000	$ 75,000
12	Site Grading/Import	1	LS	$ 100,000	$ 100,000
13	Chemical Treatment System	1	LS	$ 40,000	$ 40,000
14	New E&I for New Well & Existing Wells	1	LS	$ 200,000	$ 200,000
15	Building for Controls and Chemicals	1	LS	$ 200,000	$ 200,000
16	Well Pump & Motor	1	LS	$ 100,000	$ 100,000
17	PG&E Improvements	1	LS	$ 20,000	$ 20,000
18	SWPPP	1	LS	$ 43,000	$ 43,000
19	Mobilization	1	LS	$ 108,000	$ 108,000
				Construction Subtotal	$ 2,253,000
				Construction OHP (10%)	$ 226,000
				25% Contingency	$ 620,000
				Construction Total	$ 3,099,000
				Engineering	$ 465,000
				ESDC & CM & Inspection	$ 248,000
				CEQA & Legal	$ 155,000
				SRF Application	$ 62,000
				Project Admin	$ 93,000
				Project Grand Total	**$ 4,122,000**

Hidden Valley Lake CSD

Conceptual Study Engineer's Estimate

Option 2b

Project No. 99-3466

April 2017

ITEM NO.	ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	ITEM TOTAL
1	Demo Redwood Tank & Wooden Building	1	LS	$ 25,000	$ 25,000
2	90,000 Gallon Bolted Steel Tank	1	LS	$ 200,000	$ 200,000
3	Generator & Switchgear at Admin Office	1	LS	$ 100,000	$ 100,000
4	New Gate & Fence - Administrative Office	1	LS	$ 10,000	$ 10,000
5	New Gate & Fence - Grange Road Well Access	1	LS	$ 4,000	$ 4,000
6	Generator for New Well	1	LS	$ 75,000	$ 75,000
7	Test Hole	1	LS	$ 150,000	$ 150,000
8	Production Well	1	LS	$ 350,000	$ 350,000
9	10" Water Main to Existing Main	500	LF	$ 125	$ 63,000
10	Tie-in to Existing 12" Main	1	LS	$ 15,000	$ 15,000
11	Well Site Improvements	1	LS	$ 75,000	$ 75,000
12	Site Grading/Import	1	LS	$ 75,000	$ 75,000
13	Chemical Treatment System	1	LS	$ 40,000	$ 40,000
14	New E&I for New Well & Existing Wells	1	LS	$ 200,000	$ 200,000
15	Building for Controls and Chemicals	1	LS	$ 200,000	$ 200,000
16	Well Pump & Motor	1	LS	$ 100,000	$ 100,000
17	PG&E Improvements	1	LS	$ 20,000	$ 20,000
18	SWPPP	1	LS	$ 35,000	$ 35,000
19	Mobilization	1	LS	$ 87,000	$ 87,000
				Construction Subtotal	$ 1,824,000
				Construction OHP (10%)	$ 183,000
				25% Contingency	$ 502,000
				Construction Total	$ 2,509,000
				Engineering	$ 377,000
				ESDC & CM & Inspection	$ 251,000
				CEQA & Legal	$ 151,000
				SRF Application	$ 51,000
				Project Admin	$ 76,000
				Project Grand Total	**$ 3,415,000**

Hidden Valley Lake CSD

Conceptual Study Engineer's Estimate

Option 2c

Project No. 99-3466

April 2017

ITEM NO.	ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	ITEM TOTAL
1	Demo Redwood Tank & Wooden Building	1	LS	$ 25,000	$ 25,000
2	90,000 Gallon Bolted Steel Tank	1	LS	$ 200,000	$ 200,000
3	Generator & Switchgear at Admin Office	1	LS	$ 100,000	$ 100,000
4	New Gate & Fence - Administrative Office	1	LS	$ 10,000	$ 10,000
5	New Gate & Fence - Grange Road Well Access	1	LS	$ 4,000	$ 4,000
6	Generator for New Well	1	LS	$ 75,000	$ 75,000
7	Test Hole	1	LS	$ 150,000	$ 150,000
8	Production Well	1	LS	$ 350,000	$ 350,000
9	10" Water Main to Existing Main	250	LF	$ 135	$ 34,000
10	Tie-in to Existing 12" Main	1	LS	$ 15,000	$ 15,000
11	Well Site Improvements	1	LS	$ 75,000	$ 75,000
12	Chemical Treatment System	1	LS	$ 40,000	$ 40,000
13	New E&I for New Well & Existing Wells	1	LS	$ 200,000	$ 200,000
14	Building for Controls and Chemicals	1	LS	$ 200,000	$ 200,000
15	Well Pump & Motor	1	LS	$ 100,000	$ 100,000
16	PG&E Improvements	1	LS	$ 50,000	$ 50,000
17	SWPPP	1	LS	$ 33,000	$ 33,000
18	Mobilization	1	LS	$ 84,000	$ 84,000
				Construction Subtotal	$ 1,745,000
				Construction OHP (10%)	$ 175,000
				25% Contingency	$ 480,000
				Construction Total	$ 2,400,000
				Est. Land Acquisition	$ -
				Engineering	$ 336,000
				ESDC & CM & Inspection	$ 192,000
				CEQA & Legal	$ 96,000
				SRF Application	$ 48,000
				Project Admin	$ 72,000
				Project Grand Total	**$ 3,144,000**

Hidden Valley Lake CSD

Conceptual Study Engineer's Estimate

Option 2d

Project No. 99-3466

April 2017

ITEM NO.	ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	ITEM TOTAL
1	Demo Redwood Tank & Wooden Building	1	LS	$ 25,000	$ 25,000
2	90,000 Gallon Bolted Steel Tank	1	LS	$ 200,000	$ 200,000
3	Generator & Switchgear at Admin Office	1	LS	$ 100,000	$ 100,000
4	New Gate & Fence - Administrative Office	1	LS	$ 10,000	$ 10,000
5	New Gate & Fence - Grange Road Well Access	1	LS	$ 4,000	$ 4,000
6	Generator for New Well	1	LS	$ 75,000	$ 75,000
7	Test Hole	1	LS	$ 150,000	$ 150,000
8	Production Well	1	LS	$ 350,000	$ 350,000
9	New Access Road	1	LS	$ 20,000	$ 20,000
10	Abandon Existing Well	1	LS	$ 10,000	$ 10,000
11	10" Water Main to Existing Main	150	LF	$ 125	$ 19,000
12	Tie-in to Existing 12" Main	1	LS	$ 15,000	$ 15,000
13	New E&I for New Well & Existing Wells	1	LS	$ 200,000	$ 200,000
14	Building for Controls	1	LS	$ 150,000	$ 150,000
15	Well Pump & Motor	1	LS	$ 100,000	$ 100,000
16	PG&E Improvements	1	LS	$ 20,000	$ 20,000
17	SWPPP	1	LS	$ 29,000	$ 29,000
18	Mobilization	1	LS	$ 74,000	$ 74,000
				Construction Subtotal	$ 1,551,000
				Construction OHP (10%)	$ 156,000
				25% Contingency	$ 427,000
				Construction Total	$ 2,134,000
				Est. Land Acquisition	$ 20,000
				Engineering	$ 321,000
				ESDC & CM & Inspection	$ 214,000
				CEQA & Legal	$ 43,000
				SRF Application	$ 65,000
				Project Admin	$ 86,000
				Project Grand Total	**$ 2,883,000**

Hidden Valley Lake CSD

Conceptual Study Engineer's Estimate

Option 3

Project No. 99-3466

April 2017

ITEM NO.	ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	ITEM TOTAL
1	Demo Redwood Tank & Wooden Building	1	LS	$ 25,000	$ 25,000
2	90,000 Gallon Bolted Steel Tank	1	LS	$ 200,000	$ 200,000
3	Generator & Switchgear at Admin Office	1	LS	$ 100,000	$ 100,000
4	New Gate & Fence - Administrative Office	1	LS	$ 10,000	$ 10,000
5	New Gate & Fence - Grange Road Well Access	1	LS	$ 4,000	$ 4,000
6	Generator for Well-03	1	LS	$ 75,000	$ 75,000
7	New Access Road	1	LS	$ 20,000	$ 20,000
8	Re-develop Existing Well-03	1	LS	$ 75,000	$ 75,000
9	New E&I for Existing Wells	1	LS	$ 190,000	$ 190,000
10	Building for Controls	1	LS	$ 150,000	$ 150,000
11	Well Pump & Motor	1	LS	$ 100,000	$ 100,000
12	PG&E Improvements	1	LS	$ 20,000	$ 20,000
13	SWPPP	1	LS	$ 20,000	$ 20,000
14	Mobilization	1	LS	$ 50,000	$ 50,000
				Construction Subtotal	$ 1,039,000
				Construction OHP (10%)	$ 104,000
				25% Contingency	$ 286,000
				Construction Total	$ 1,429,000
				Est. Land Acquisition	$ 20,000
				Engineering	$ 215,000
				ESDC & CM & Inspection	$ 215,000
				CEQA & Legal	$ 29,000
				SRF Application	$ 43,000
				Project Admin	$ 58,000
				Project Grand Total	**$ 2,009,000**

Hidden Valley Lake CSD

Conceptual Study Engineer's Estimate

Option 4

Project No. 99-3466

April 2017

ITEM NO.	ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	ITEM TOTAL
1	Demo Redwood Tank & Wooden Building	1	LS	$ 25,000	$ 25,000
2	90,000 Gallon Bolted Steel Tank	1	LS	$ 200,000	$ 200,000
3	Generator & Switchgear at Admin Office	1	LS	$ 100,000	$ 100,000
4	New Gate & Fence - Administrative Office	1	LS	$ 10,000	$ 10,000
5	New Gate & Fence - Grange Road Well Access	1	LS	$ 4,000	$ 4,000
6	Generator for Well-04	1	LS	$ 75,000	$ 75,000
7	New Access Road	1	LS	$ 20,000	$ 20,000
8	Zone Sampling Well-04	1	LS	$ 30,000	$ 30,000
9	Pump Testing Well-04	1	LS	$ 25,000	$ 25,000
10	Well-04 Modifications	1	LS	$ 80,000	$ 80,000
11	New E&I for Existing Wells	1	LS	$ 190,000	$ 190,000
12	Building for Controls	1	LS	$ 150,000	$ 150,000
13	Well Pump & Motor	1	LS	$ 100,000	$ 100,000
14	PG&E Improvements	1	LS	$ 20,000	$ 20,000
15	SWPPP	1	LS	$ 21,000	$ 21,000
16	Mobilization	1	LS	$ 53,000	$ 53,000
				Construction Subtotal	$ 1,103,000
				Construction OHP (10%)	$ 111,000
				25% Contingency	$ 304,000
				Construction Total	$ 1,518,000
				Est. Land Acquisition	$ 20,000
				Engineering	$ 228,000
				ESDC & CM & Inspection	$ 228,000
				CEQA & Legal	$ 31,000
				SRF Application	$ 46,000
				Project Admin	$ 61,000
				Project Grand Total	**$ 2,132,000**

Hidden Valley Lake CSD

Conceptual Study Engineer's Estimate

Redwood Tank Replacement
Project No. 99-3466
April 2017

ITEM NO.	ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	ITEM TOTAL
	Tank 1 Site				
1	Demo Two Redwood Tanks	1	LS	$ 40,000	$ 40,000
2	500,000 Gallon Welded Steel Tank	1	LS	$ 750,000	$ 750,000
3	Reconnect Piping	1	LS	$ 15,000	$ 15,000
4	New Gate & Fence	1	LS	$ 10,000	$ 10,000
5	Disinfection and Testing	1	LS	$ 10,000	$ 10,000
	Tank 4 Site				
6	Demo Redwood Tank	1	LS	$ 25,000	$ 25,000
7	250,000 Gallon Welded Steel Tank	1	LS	$ 400,000	$ 400,000
8	Reconnect Piping	1	LS	$ 15,000	$ 15,000
9	Cameras (Software & Hardware)	1	LS	$ 25,000	$ 25,000
10	Disinfection and Testing	1	LS	$ 10,000	$ 10,000
	Tank 9 Site				
11	Site Excavation & Misc. Demo	1	LS	$ 40,000	$ 40,000
12	Demo Redwood Tank	1	LS	$ 25,000	$ 25,000
13	Temporary 40K Gallon Storage	1	LS	$ 40,000	$ 40,000
14	500,000 Gallon Welded Steel Tank	1	LS	$ 800,000	$ 800,000
15	Reconnect Piping	1	LS	$ 15,000	$ 15,000
16	Disinfection and Testing	1	LS	$ 10,000	$ 10,000
	OVERALL				
17	SWPPP	1	LS	$ 45,000	$ 45,000
18	Mobilization	1	LS	$ 114,000	$ 114,000
				Construction Subtotal	$ 2,389,000
				Construction OHP (10%)	$ 239,000
				25% Contingency	$ 657,000
				Construction Total	$ 3,285,000
				Engineering	$ 132,000
				ESDC & CM & Inspection	$ 329,000
				CEQA & Legal	$ 33,000
				SRF Application	$ 66,000
				Project Admin	$ 99,000
				Project Grand Total	**$ 3,944,000**

Hidden Valley Lake CSD

Conceptual Study Engineer's Estimate

Option 1

Project No. 99-3466

April 2017

Annual Operation & Maintenance	Unit of Measure	No. of Units	Unit Cost	Total Cost
Labor	hr	780	$ 60	$ 46,800
Replacement Parts	L.S.	1	$ 5,000	$ 5,000
Chemical (not inc. salt)	L.S.	1	$ 5,000	$ 5,000
Chemical (salt)	L.S.	1	$ 2,000	$ 2,000
Permitting	L.S.	1	$ 1,000	$ 1,000
Fuel for Generator	L.S.	1	$ 5,000	$ 5,000
Analytical Testing	L.S.	1	$ 10,400	$ 11,000
Building Maintenance	L.S.	1	$ 5,000	$ 5,000
Backwash Water Disposal	L.S.	1	$ 25,000	$ 25,000
Backwash Solids Disposal	L.S.	1	$ 60,000	$ 60,000
Access Road Maintenance	L.S.	1	$ 250	$ 250
Filter Replacement	L.S.	1	$ 10,600	$ 10,600
Power	kWh	25,000	$ 0.20	$ 5,000
			Subtotal	$ 181,650
			20% Contingency	$ 36,000
			Annual O&M Total	**$ 217,650**

O&M Net Present Worth (20 Years @ 1.2%)	$ 3,850,000

Hidden Valley Lake CSD

Conceptual Study Engineer's Estimate

Option 2A

Project No. 99-3466

April 2017

Annual Operation & Maintenance	Unit of Measure	No. of Units	Unit Cost	Total Cost
Labor	hr	260	$ 60	$ 16,000
Replacement Parts	L.S.	1	$ 2,000	$ 2,000
Chemical	L.S.	1	$ 5,000	$ 5,000
Pump & Motor Maintenance	L.S.	1	$ 2,000	$ 2,000
Permitting	L.S.	1	$ 1,000	$ 1,000
Fuel for Generator	L.S.	1	$ 5,000	$ 5,000
Analytical Testing	L.S.	1	$ 5,200	$ 6,000
Building Maintenance	L.S.	1	$ 5,000	$ 5,000
Access Road Maintenance	L.S.	1	$ 250	$ 250
Pipeline Maintenance	L.S.	1	$ 1,000	$ 1,000
Power	kWh	36,000	$ 0.20	$ 7,200
			Subtotal	$ 50,450
			20% Contingency	$ 10,000
			Annual O&M Total	**$ 60,450**

O&M Net Present Worth (20 Years @ 1.2%)	$ 1,069,000

Hidden Valley Lake CSD

Conceptual Study Engineer's Estimate

Option 2B

Project No. 99-3466

April 2017

Annual Operation & Maintenance	Unit of Measure	No. of Units	Unit Cost	Total Cost
Labor	hr	260	$ 60	$ 16,000
Replacement Parts	L.S.	1	$ 2,000	$ 2,000
Chemical	L.S.	1	$ 5,000	$ 5,000
Pump & Motor Maintenance	L.S.	1	$ 2,000	$ 2,000
Permitting	L.S.	1	$ 1,000	$ 1,000
Fuel for Generator	L.S.	1	$ 5,000	$ 5,000
Analytical Testing	L.S.	1	$ 5,200	$ 6,000
Building Maintenance	L.S.	1	$ 5,000	$ 5,000
Access Road Maintenance	L.S.	1	$ 250	$ 250
Pipeline Maintenance	L.S.	1	$ 1,000	$ 1,000
Power	kWh	36,000	$ 0.20	$ 7,200
			Subtotal	$ 50,450
			20% Contingency	$ 10,000
			Annual O&M Total	**$ 60,450**

O&M Net Present Worth (20 Years @ 1.2%)	$ 1,069,000

Hidden Valley Lake CSD

Conceptual Study Engineer's Estimate

Option 2C

Project No. 99-3466

April 2017

Annual Operation & Maintenance	Unit of Measure	No. of Units	Unit Cost	Total Cost
Labor	hr	260	$ 60	$ 16,000
Replacement Parts	L.S.	1	$ 2,000	$ 2,000
Chemical	L.S.	1	$ 5,000	$ 5,000
Pump & Motor Maintenance	L.S.	1	$ 2,000	$ 2,000
Permitting	L.S.	1	$ 1,000	$ 1,000
Fuel for Generator	L.S.	1	$ 5,000	$ 5,000
Analytical Testing	L.S.	1	$ 5,200	$ 6,000
Building Maintenance	L.S.	1	$ 5,000	$ 5,000
Access Road Maintenance	L.S.	1	$ 250	$ 250
Pipeline Maintenance	L.S.	1	$ 1,000	$ 1,000
Power	kWh	36,000	$ 0.20	$ 7,200
			Subtotal	$ 50,450
			20% Contingency	$ 10,000
			Annual O&M Total	**$ 60,450**

O&M Net Present Worth (20 Years @ 1.2%)	$ 1,069,000

Hidden Valley Lake CSD

Conceptual Study Engineer's Estimate

Option 2D

Project No. 99-3466

April 2017

Annual Operation & Maintenance	Unit of Measure	No. of Units	Unit Cost	Total Cost
Labor	hr	130	$ 60	$ 8,000
Replacement Parts	L.S.	1	$ 2,000	$ 2,000
Chemical	L.S.	1	$ 2,000	$ 2,000
Pump & Motor Maintenance	L.S.	1	$ 2,000	$ 2,000
Permitting	L.S.	1	$ 1,000	$ 1,000
Fuel for Generator	L.S.	1	$ 5,000	$ 5,000
Analytical Testing	L.S.	1	$ 2,600	$ 3,000
Building Maintenance	L.S.	1	$ 5,000	$ 5,000
Access Road Maintenance	L.S.	1	$ 250	$ 250
Pipeline Maintenance	L.S.	1	$ 1,000	$ 1,000
Power	kWh	36,000	$ 0.20	$ 7,200
			Subtotal	$ 36,450
			20% Contingency	$ 7,000
			Annual O&M Total	**$ 43,450**

O&M Net Present Worth (20 Years @ 1.2%)	$ 769,000

Hidden Valley Lake CSD

Conceptual Study Engineer's Estimate

Option 3

Project No. 99-3466

April 2017

Annual Operation & Maintenance	Unit of Measure	No. of Units	Unit Cost	Total Cost
Labor	hr	130	$ 60	$ 8,000
Replacement Parts	L.S.	1	$ 2,000	$ 2,000
Chemical	L.S.	1	$ 2,000	$ 2,000
Pump & Motor Maintenance	L.S.	1	$ 2,000	$ 2,000
Permitting	L.S.	1	$ 1,000	$ 1,000
Fuel for Generator	L.S.	1	$ 5,000	$ 5,000
Analytical Testing	L.S.	1	$ 5,200	$ 6,000
Building Maintenance	L.S.	1	$ 5,000	$ 5,000
Access Road Maintenance	L.S.	1	$ 250	$ 250
Well Maintenance	L.S.	1	$ 4,000	$ 4,000
Power	kWh	36,000	$ 0.20	$ 7,200
			Subtotal	$ 42,450
			20% Contingency	$ 8,000
			Annual O&M Total	**$ 50,450**

O&M Net Present Worth (20 Years @ 1.2%)	$ 892,000

Hidden Valley Lake CSD

Conceptual Study Engineer's Estimate

Option 4

Project No. 99-3466

April 2017

Annual Operation & Maintenance	Unit of Measure	No. of Units	Unit Cost	Total Cost
Labor	hr	130	$ 60	$ 8,000
Replacement Parts	L.S.	1	$ 2,000	$ 2,000
Chemical	L.S.	1	$ 2,000	$ 2,000
Pump & Motor Maintenance	L.S.	1	$ 2,000	$ 2,000
Permitting	L.S.	1	$ 1,000	$ 1,000
Fuel for Generator	L.S.	1	$ 5,000	$ 5,000
Analytical Testing	L.S.	1	$ 5,200	$ 6,000
Building Maintenance	L.S.	1	$ 5,000	$ 5,000
Access Road Maintenance	L.S.	1	$ 250	$ 250
Well Maintenance	L.S.	1	$ 4,000	$ 4,000
Power	kWh	36,000	$ 0.20	$ 7,200
			Subtotal	$ 42,450
			20% Contingency	$ 8,000
			Annual O&M Total	**$ 50,450**

O&M Net Present Worth (20 Years @ 1.2%)	$ 892,000

COASTLAND
CIVIL ENGINEERING - CONSTRUCTION MANAGEMENT - BUILDING DEPARTMENT SERVICES

May 5, 2017 Via email: kcloyd@hiddenvaleylakecsd.com

Mr. Kirk Cloyd
General Manager
Hidden Valley Lake Community Services District
19400 Hartmann Road
Hidden Valley Lake, CA 95467

Subject: Proposal for Professional Engineering Services Associated with Support Services for the Next Steps for the Hexavalent Chromium Project

Dear Kirk:

In response to our discussions on April 19 for the Hexavalent Chromium Project (Project), we have prepared this letter proposal for support services to the Hidden Valley Lake Community Services District (District) regarding the next immediate steps in the Project.

Project Background/Understanding

At the April 18 Board meeting Coastland provided a presentation to the Board of Directors (Board) that summarized the findings from the Final Draft Engineer's Report and identified the five recommended, immediate next steps for the Project. While the agenda item was under presentations and the Board was unable to formally take action, the Board did not express opposition to any of the five recommended, immediate next steps. The five recommended, immediate next steps are as follows:

1. Submit final draft version of Project Engineer's Report (Report) to the Division of Drinking Water (DDW) for comments.
2. Prepare Request for Proposals (RFP) for design services for Option 2c, the recommended option in the Report.
3. Replace all redwood tanks currently in service.
4. Submit applications for funding for the Project.
5. Begin process for rate adjustment.

Our understanding is that in addition to these items, the Board is considering moving forward with a Salary and Compensation Study (Salary Study) and a New Water Cost of Service Study (COS Study). Both of these are integral to the financing of a loan for the Project. Adoption of a rate structure that demonstrates the ability to repay the loan and establish necessary reserves is an essential component to any funding application. The results of the Salary Study and the estimated costs for the Project will feed into the COS Study. The COS Study will identify the necessary rate structure to support annual loan payment and compliance with loan covenants (such as loan reserve requirements) for a loan, either through Drinking Water State Revolving Fund, United States Department of Agriculture – Rural Utilities Services, or California I-bank.

Funding and execution of a loan agreement is of utmost importance, as the Project must be complete and improvements on line no later than December 31, 2019.

Based on the understanding above, the following is our scope of work to assist the District with the next immediate steps in the Project.

SCOPE OF WORK

Task 1 – Project Management and Meetings

We anticipate the following meetings:

- Final Draft Report comment review meeting with District and DDW staff
- Pre-Proposal Review Meeting
- One meeting with District staff
- One meeting with Rate Study consultant

Other work to be completed in this task includes preparation of Project Quarterly Status Reports for Calendar Year 2017.

Task 2 – Support Services

We anticipate the following tasks based on the five recommended next steps discussed in the Background section.

Task 2a – Recommendation #1: Prepare Final Version of Report

Our existing scope of services to prepare the Report includes submission of the Final Draft Version to DDW. This is the sole remaining task in our existing scope of services. At this time, the remaining budget for the existing scope of services is $9,000 (approximately 20% under budget). We will attend a review meeting with DDW (identified in Task 1) and finalize the Report reflective of comments from DDW staff, utilizing the remaining budget for the Report. The Final Report will be utilized by the District in support of the funding application for the Project.

Task 2b – Recommendations #2 & #3: Prepare RFP for Design Services for Option 2c

We will prepare an RFP to obtain proposals from qualified engineering firms for completion of design for Option 2c. This includes a test well, a potable well, equipping the well, and related project improvements, including replacement of the redwood storage tanks with new welded steel tanks as recommended in the Report.

A draft version of the RFP will be provided to District staff for review and comment. We will revise the draft RFP based on comments from the District and implement the procurement process for engineering services. This includes issuing the RFP, conducting a pre-proposal review meeting with interested consultants (covered under Task 1), and receiving proposals.

Under a separate scope of services, we will also review proposals, interview consultants (if necessary), negotiate final scope and fee, and prepare a staff report recommending award of a consulting services agreement in a future scope of work.

Task 2c – Recommendations #4 & #5: Provide Support for Funding Applications and COS Study

As discussed in the Background section, the District will be submitting a funding application for the Project and completing a COS Study. The District will lead the funding application process and the rate study process. We will provide as needed support to the District in completing the funding application and managing the COS Study consultant and rate setting process.

Exceptions to Scope of Services

The following work is not included in our proposal, however, Coastland would be pleased to provide these services if the District desires:

- Surveying
- Potholing for utility conflicts
- Environmental studies
- Geotechnical studies
- Right-of-way determination or preparation of associated documents
- Permitting fees
- Meetings beyond those noted above
- Public outreach
- Design of identified improvements
- Test well and other well investigations

Based on our understanding, we propose to provide our professional services on an hourly wage rate basis for a total not-to-exceed amount of $23,770 for the work as described above.

If the District requests work to be performed outside the scope of work, or if the scope of work changes, we reserve the right to negotiate the cost for the extra work. Please note that the above fee quotation should be considered a negotiable offer. We are prepared to begin this work upon receipt of a Notice to Proceed.

Thank you for the opportunity you have given us to assist the District with this important project. If you have any questions regarding the contents of this proposal, please feel free to call me at (707) 571-8005 or John Griffin at (530) 615-0312.

Sincerely,

John Wanger, P.E.
CEO

John Griffin, P.E.
Supervising Engineer

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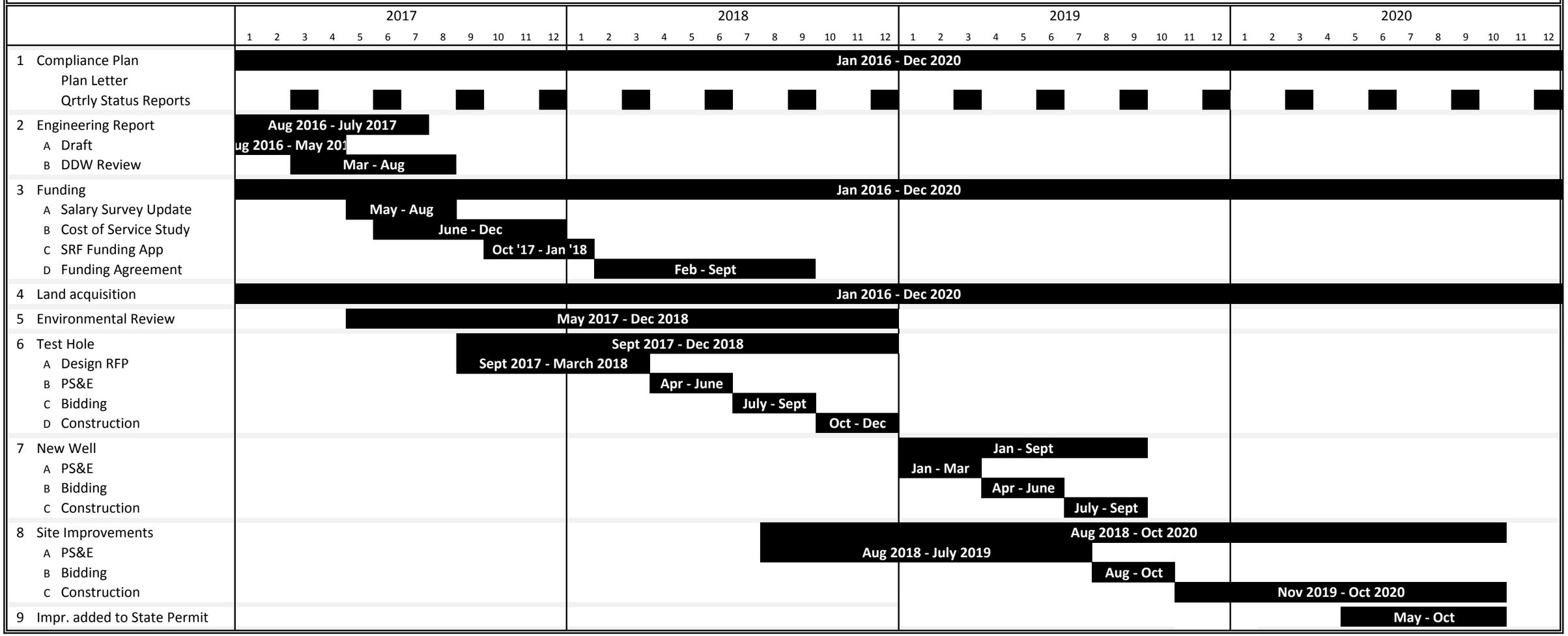
Work Estimate

Proposal for Professional Services Hidden Valley Lake CSD - Engineer's Report Hexavalent Chromium

Task No.	Task Description	Principal Engineer $195	Supervising Engineer $165	Assistant Engineer $130	CAD Designer $120	Clerical $80	Total Hours	Total Cost	Comment
1	Meetings and Project Management								
	Coordination & Reporting to District Staff	1	4	0	0	2	7	$1,015	
	Project Meetings	2	20	12	0	0	34	$5,250	
	Prepare Quarterly Status Reports	2	12	0	0	0	14	$2,370	
	Task Subtotal	5	36	12	0	2	55	$8,635	
2	Support Services								
2a	Recommendation #1	0	0	0	0	0	0	$0	Estimate that this work can be completed under existing contract
2b	Recommendations #2 & #3	2	20	12	2	2	38	$5,650	
2c	Recommendations #4 & #5	4	24	28	4	2	62	$9,020	Estimate only. Actual work will be billed at time and materials.
	Task Subtotal	6	44	40	6	4	100	$14,670	
	Miscellaneous Costs							$465	Reproduction and mileage
	PROJECT TOTAL	11	80	52	6	6	155	$23,770	

Figure 6
Hidden Valley Lake CSD
Hexavalent Chromium MCL Compliance Schedule



COASTLAND
CIVIL ENGINEERING - CONSTRUCTION MANAGEMENT - BUILDING DEPARTMENT SERVICES

May 15, 2017 Via email: kcloyd@hiddenvaleylakecsd.com

Mr. Kirk Cloyd
General Manager
Hidden Valley Lake Community Services District
19400 Hartmann Road
Hidden Valley Lake, CA 95467

Subject: Proposal for Professional Engineering Services Associated with Cost Estimating and Application Support for the District's FEMA Reimbursement Application

Dear Kirk,

Per discussions with Alyssa, we have prepared this letter proposal for the engineering work for preliminary engineering level cost estimates and application assistance in support of the Hidden Valley Lake Community Services District's (District) Federal Emergency Management Agency (FEMA) disaster declaration reimbursement application.

Project Background/Understanding

The District experienced damage to existing infrastructure during the winter storms and emergency costs associated with responding to these winter storms. FEMA identified three major disaster declarations (DR 4301, DR 4305, and DR 4308).

There are a number of projects that the District requests planning level engineering cost estimates, that are either direct impacts from the disaster or projects that mitigate or eliminate future risk. These projects are as follows:

1. Overhaul of all lift stations.
2. Interim treatment process (such as pond aeration) for effluent in reclamation basin that mixed with partially treated influent due to excessive flows into the Wastewater Treatment Plant (WWTP).
3. Expansion of the equalization (EQ) basin to provide storage for diversion of untreated effluent.
4. Repair/reconstruction of access road to the WWTP.
5. Repair/reconstruction of pond levee road around reclamation basin.
6. Evaluation of damage to sewer mains and repair of identified damage.
7. Chlorine contact basin effluent vault and valve repair.
8. Filtration basin effluent vault and valve repair.
9. Chlorine analyzer relocation.
10. Water balance report.
11. Backup water supply source.
12. Flood control detention basin control modifications.

13. Water distribution leak detection.
14. Backup power supply at water distribution system booster pump stations.

Of these fourteen projects, the first ten projects are to repair damage caused by the disasters declared by FEMA earlier this year. Costs incurred by the District to repair damage will be submitted directly to FEMA for public assistance funds. The District is completing the applicable application forms for submission to FEMA and requested only planning level engineering cost estimates for completion of the application.

For the other four projects, funding is eligible under the Hazard Mitigation Grant Program (HMGP) via the California Governor's Office of Emergency Services (Cal OES). Projects that mitigate or eliminate future risk are eligible for funding in the HMGP. The District desires to submit HMGP NOI applications for reimbursement to Cal OES for these four projects.

The first step in this process is to submit HMGP Notice of Interest (NOI) applications to Cal OES. Cal OES reviews the HMGP NOI applications and forwards funding recommendations to FEMA. FEMA has final approval for eligibility and funding of projects. All NOI applications are due to Cal OES no later than midnight on June 15, 2017. These applications include estimates of cost for the project.

The District has also requested Coastland prepare the NOI applications for these four (4) projects, using the Cal OES on-line form. A copy of the on-line form and instructions are included as Attachment A.

Based on understanding above, the following is our scope of work to assist the District with these tasks.

SCOPE OF WORK

Task 1 – Project Management and Meetings

We anticipate the following meetings:

- Kickoff meeting and site visit
- Draft NOI forms and planning level engineering cost estimates review meeting conference call
- HMGP NOI application review meeting with Cal OES staff

Other work to be completed in this task includes identification and review of background information needed to complete the planning level engineering cost estimates and NOI forms for the projects identified in the Project Background/Understanding section.

Task 2 – Cost Estimates

We will prepare planning level engineering cost estimates for each of the 14 projects identified in the Project Background/Understanding section. Costs will reflect standard percentages for engineering, project administration, construction management and inspection, and contingency. Planning level construction cost estimates without detailed information on the specifics of the improvements typically reflect high percentages of contingency.

Task 3 – HMGP NOI Forms

We will prepare draft NOI forms for District review and submit final NOI forms using the Cal OES on-line form for each of the four projects identified in the Project Background/ Understanding section. For the draft submission, one sample form will be completed (Items 1 through 18) and a Word file for Items 19 and 20 with a summary for each of the four projects identified in the Project Background/Understanding section.

Exceptions to Scope of Services

The following work is not included in our proposal; however, Coastland would be pleased to provide these services if the District desires:

- Environmental studies
- Meetings beyond those noted above
- Public outreach
- Assistance with Cal OES HMGP application
- Design of 14 projects identified in the Project Background/Understanding section

Project Schedule

The final HMGP NOI applications must be submitted to Cal OES no later than midnight on June 15, 2017. Based on the described scope of work, we estimate to submit draft NOI forms and planning level cost estimates to the District for review within three weeks of receipt of a Notice to Proceed from the District. Final NOI applications will be submitted within one week of receipt of comments from the District.

Project Fee

Based on our understanding, we propose to provide our professional services on an hourly wage rate basis for a total not-to-exceed amount of $14,935 for the work as described above. Based on the general details of the 14 projects, we have endeavored to accurately and reasonably estimate the level of effort needed to prepare the planning level engineering cost estimates. The scopes of some of the projects may grow as we get into the details of the projects. If this occurs and additional time is needed to prepare the planning level engineering cost estimates, we will notify the District and obtain permission prior to continuing.

If the District requests work to be performed outside the scope of work, or if the scope of work changes, we reserve the right to negotiate the cost for the extra work. Please note that the above fee quotation should be considered a negotiable offer. We are prepared to begin this work upon receipt of a Notice to Proceed.

Thank you for the opportunity you have given us to assist the District with this important project. If you have any questions regarding the contents of this proposal, please feel free to call me at (707) 571-8005 or John Griffin at (530) 615-0312.

Sincerely,

John Wanger, P.E.
CEO

John Griffin, P.E.
Supervising Engineer

Attachments – Cal OES HMGP NOI Form and Instructions

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WORK ESTIMATE

Professional Engineering Services	FEMA Support and Cal OES HMGP NOI Applications	Hidden Valley Lake Community Services District

Task Information		Billing Classification & Rate				Hours & Cost		
	TASK	Principal Engineer	Supervising Engineer	Assistant / Junior Engineer	Admin	TOTAL HOURS	TOTAL FEE	NOTES
		$195	$165	$130	$80			
1	**BACKGROUND INFORMATION AND MEETINGS**							
	Kick off Meeting and Site Visits (1)	3	6			9	$1,575	
	Draft NOI Review Conference Call (1)	2	2			4	$720	
	Review Meeting with Cal OES (1)	6	6			12	$2,160	
	Review Background Information		2	4		6	$850	
	Project Management		2		2	4	$490	
	Subtotal					**35**	**$5,795**	
2	**COST ESTIMATES**							
	Draft and Final Cost Estimates		8	36		44	$6,000	14 projects
	QC Review	3				3	$585	
	Subtotal					**47**	**$6,585**	
3	**HMGP NOI FORMS**							
	Draft and Final NOI Forms		2	12		14	$1,890	4 projects
	QC Review	1				1	$195	
	Subtotal					**15**	**$2,085**	
	Direct Costs (repro, mileage, etc.)						**$470**	
	Total Engineering Costs	**15**	**28**	**52**	**2**	**97**	**$14,935**	

HAZARD MITIGATION GRANT PROGRAM
NOTICE OF INTEREST

Control No:

All fields must be completed with valid input

Click on Links for Help

1. Disaster #: ○ DR-4301 ○ DR-4305 ○ DR-4308

2. Name of Person Completing NOI:

3. NOI Instructions have been received and read: ○ Yes ○ No

4. Federal Information Processing Number (FIPS #): nnn-nnnnn

5. Data Universal Numbering System (DUNS #): nnnnnnnnn

6. Applicant Name:

7. Applicant Address:

City: State: California Zip Code:

Project Location: Select a county

8. Applicant Type: ☐ City ☐ County ☐ State ☐ Private Non-Profit ☐ Special District ☐ Tribal

EIN (For Private Non-Profits):

9. Legislative Districts:

	Applicant	Project Site
State Assembly:		
State Senate:		
U.S. Congressional District:		

10. Authorized Applicant Agent:

First Name: Last Name: Salutation: Mr.

Title:

Address:

City: State: California Zip Code:

Phone: - - Ext:

Fax #: - -

EMail Address:

11. Project Manager/Working Contact:

First Name: Last Name: Salutation: Mr.

Title:

Address:

City: California Zip Code:

State:

Phone: - - Ext:
Fax #: - -
EMail Address:

12. Project Manager/Working Contact (Alternate):

First Name: Last Name: Salutation: Mr.
Title:
Address:
City: California Zip Code:
State:

Phone: - - Ext:
Fax #: - -
EMail Address:

13. ApplicationType: ○ Project ○ Planning ○ 5% Activity

14 Hazard Type: Select Type

15. Activity Type: Select Type

16. Activity Title/Name:

17. Population (Planning Activities Only):

18. Activity Location:

Latitude & Longitude **E.g,34.324862 -120.345677**

19. Describe the problem to be mitigated:

20. Describe the scope of work:

21. Performance Period:

22. Duplicate Programs:

Is this activity eligible for funding from another federal program such as the NRCS Emergency Watershed Protection Act, FEMA Public Assistance Program,
and the US Department of Agriculture/Department of the Interior Healthy Forest Restoration Act of 2002?

○ Yes ◉ No ○ Uncertain

If yes, identify the program and the Disaster Survey Report, Project Worksheet, or application number(s).

23. Activity Costs:

Federal Requested Share: $

Applicant Match: $

Total Activity Cost: $

Source of 25% non-federal match:

24. LHMP Approval Date:

25. Local Hazard Mitigation Plan:

Provide a narrative that identifies how the proposed project activity is in conformance with your FEMA-approved Local Hazard Mitigation Plan (LHMP). Any references to the LHMP must include the page number and/or section.

Electronic Notification of NOI Status, Workshops, and Application Updates

The Hazard Mitigation Grant Program will provide immediate notification of your NOI status following our review. Please provide us with the contact information for 1 of your staff.
(If the contact is the same as entered above, please reenter the information below. This person will receive information about workshops and updates regarding the application process.)

Contact Person:

Name: (Last, First)

Email Address:

Created on 05/08/2017 05:53:19 PM

NOTE: Please print this form before clicking the *Submit NOI* button below.
You will not be able to print the NOI once you have pressed the *Submit NOI* button.

Submit NOI

(FYI: Pressing the Submit NOI button will save and submit your NOI to the Governor's Office of Emergency Services for Approval. Please ensure that you have filled out this form with as much detail as possible.)

CALIFORNIA GOVERNOR'S OFFICE OF EMERGENCY
HAZARD MITIGATION GRANT PROGRAM
PLANNING NOTICE OF INTEREST
DR-4301, 4305 and 4308

Please read the following instructions prior to completing the Notice of Interest (NOI) to participate in the DR-4301-4305 and 4308 Hazard Mitigation Grant Program (HMGP). The NOI can be found at http://www.caloes.ca.gov/cal-oes-divisions/recovery/disaster-mitigation-technical-support/404-hazard-mitigation-grant-program. Accurate and complete answers are required to determine eligibility and expedite review. NOIs must be submitted electronically and each section must be answered in the space provided. Do not send any additional documents, they will not be considered during the NOI eligibility determination process. Please direct any questions regarding completion of the NOI to HMGP@caloes.ca.gov.

Introduction

Federal funding is provided under the Robert T. Stafford Emergency Assistance and Disaster Relief Act (Stafford Act) through the Federal Emergency Management Agency (FEMA) and the California Governor's Office of Emergency (Cal OES). Cal OES is responsible for the review of HMGP NOIs and applications. Cal OES forwards funding recommendations to FEMA based on these reviews. FEMA has final approval for activity eligibility and funding.

FEMA's Hazard Mitigation Assistance (HMA) guidance is available at https://www.fema.gov/hazard-mitigation-assistance-program-guidance. This document provides guidance on applicant and activity eligibility as well as other requirements including performance period, funding limits, cost effectiveness, environmental review, and documentation minimums. Please review eligibility requirements before submitting an NOI.

Cal OES will review each NOI for eligibility and consistency with established DR-4301-4305-4308 priorities. Subgrant applicants submitting an eligible NOI will be notified and allowed to submit an HMGP application for DR-4301-4305-4308 funding.

Notice of Interest Form

All subgrant applicants are required to submit an NOI. The NOI must be received by Cal OES no later than midnight on June 15, 2017. An approved NOI is required for each subgrant application submitted.

The following provides detailed guidance on completing the NOI form:

1. Name of Person Completing NOI: Provide the first and last name of the person completing the NOI.

2. NOI Instructions have been reviewed and read: By selecting yes, the person completing the NOI form certifies that he/she has read the NOI instruction material.

3. FIPS #:	Provide the Federal Identification Processing System number for the subgrant applicant. If the subgrant applicant does not have or know their FIPS number, contact Cal OES.
4. DUNS #:	Provide the Data Universal Numbering System number for the subgrant applicant. If the subgrant applicant does not have or know their DUNS number, call Dunn & Bradstreet at 1-866-705-5711.
5. Applicant Name:	Provide the name of the subgrant applicant applying for grant funds. Subgrant applicant names must be consistent with the FIPS#.
6. Applicant Address:	Provide the mailing address for the subgrant applicant. Include city, county, state and zip code.
7. Applicant Type:	Select one. Eligible subgrant applicants include state and local governments, and special districts. If your entity does not fall into one of these categories, you are not eligible to apply for funding.
8. Legislative Districts:	Provide only the number of the legislative districts listed. If the project site is located in a different district than the subgrant applicant address, please provide both.
9. Authorized Applicant Agent:	The person(s) authorized by the subgrant applicant's governing body to act on behalf of the subgrant applicant to execute an application for the purpose of obtaining federal financial assistance. Provide the name of the person(s) that will serve in this position. Forms used to designate the AA will be provided upon grant approval. The AA will also be required to sign standard assurances to accept grant funds. Provide the first and last name, title, address, phone and fax numbers and e-mail address.
10. Project Manager/Working Contact:	The person Cal OES will contact with questions and/or requests for information. Provide the first and last name, title, address, phone and fax numbers and e-mail address.
11. Project Manager/Working Contact (Alternative):	The person Cal OES will contact with questions and/or requests for information when the primary contact is not available. Provide the first and last name, title, address, phone and fax numbers and e-mail address.
12. Application Type:	Select one. Identify if your application describes a planning or project activity.

13. Hazard Type:	Select one. Use Multi-Hazard for planning activities.
14. Activity Type:	Select one. Cal OES will only accept NOIs describing eligible activities.
15. Activity Title/Name:	Provide a name that clearly reflects the proposed activity. The name selected in the NOI must match the name used if an application is submitted.
16. Population:	Identify the population of the jurisdiction applying for the planning grant using current census data. For multi-jurisdictional plans identify the total population of all jurisdictions covered by the plan and list the name of each jurisdiction. For planning applications only.
17. Activity Location:	Provide the Latitude and Longitude in degrees to six decimal places defining the activity location. If the activity involves more than one location, provide a Latitude and Longitude at the center of the proposed project area and a general description of the project area. For Planning applications identify a central location for the lead agency.
18. Describe the problem to be mitigated:	Describe the need for this activity. The problem statement must include a description of the hazards being addressed, i.e. fire, flood, earthquake, etc.
19. Describe the scope of work:	The scope of work must include the following: 1. State the mitigation goals and objectives of the project. 2. Describe the project, to include: a. Planning area/Multi or Single Jurisdiction Plan b. Planning process. c. Previous mitigation planning. d. Data collection and risk assessment process. e. Plan approval and adoption process.
20. Performance Period:	Indicate the length of time, in months, needed to complete the activity. The performance period cannot exceed 48 months from the declaration date.
21. Duplicate Programs:	Indicate if this activity is eligible for funding from another federal program such as the NRCS Emergency Watershed Protection Act, FEMA Public Assistance Program, or the US Department of Agriculture/Department of the Interior Healthy Forest Reform Act of 2002.
22. Activity Costs:	Federal Share: The requested federal share for HMGP activities is capped at 75% percent of the total activity cost.

	For Local Hazard Mitigation plans, the caps are $150,000 for a single jurisdiction new or updated plan and $250,000 for a multi-jurisdiction new or updated plan. Applicant Match: The applicant must provide a minimum of 25 percent of the total activity cost. The applicant may over match the required 25 percent. The matching funds must be from a non-federal source and must be in place at the time of application submittal. Total Activity Cost: The total activity cost must equal the sum of the federal share and the applicant match. Identify the subgrant applicant's source for the required 25 percent non-federal match.
23. LHMP Approval Date:	Identify the date the any previous subgrant applicant's Local Hazard Mitigation Plan (LHMP) was approved by FEMA.
24. Local Hazard Mitigation Plan:	Not required for planning activities.

Please direct any questions or comments to HMGP@caloes.ca.gov.

CALIFORNIA GOVERNOR'S OFFICE OF EMERGENCY
HAZARD MITIGATION GRANT PROGRAM
NOTICE OF INTEREST
DR-4301, 4305 and 4308

Please read the following instructions prior to completing the Notice of Interest (NOI) to participate in the DR-4301, 4305 or 4308 Hazard Mitigation Grant Program (HMGP). The NOI can be found at http://www.caloes.ca.gov/cal-oes-divisions/recovery/disaster-mitigation-technical-support/404-hazard-mitigation-grant-program. Accurate and complete answers are required to determine eligibility and expedite review. NOIs must be submitted electronically and each section must be answered in the space provided. Do not send any additional documents, they will not be considered during the NOI eligibility determination process. Please direct any questions regarding completion of the NOI to HMGP@caloes.ca.gov.

Introduction

Federal funding is provided under the Robert T. Stafford Emergency Assistance and Disaster Relief Act (Stafford Act) through the Federal Emergency Management Agency (FEMA) and the California Governor's Office of Emergency (Cal OES). Cal OES is responsible for the review of HMGP NOIs and applications. Cal OES forwards funding recommendations to FEMA based on these reviews. FEMA has final approval for activity eligibility and funding.

Hazard mitigation activities are aimed at reducing or eliminating future damages. Subgrant applicants must have a FEMA approved Local Hazard Mitigation Plan (LHMP) to submit an application for a project. Project activities must also be shown to be cost-effective using the FEMA-approved software which is available at: https://www.fema.gov/benefit-cost-analysis.

FEMA's Hazard Mitigation Assistance (HMA) guidance is available at https://www.fema.gov/hazard-mitigation-assistance-program-guidance. This document provides guidance on applicant and activity eligibility as well as other requirements including performance period, funding limits, cost effectiveness, environmental review, and documentation minimums. Please review eligibility requirements before submitting an NOI.

Cal OES will review each NOI to determine if the activity described is eligible under DR-4301, DR-4305, and DR-4308 HMGP. Subgrant applicants submitting an eligible NOI will be notified to submit an HMGP application. Cal OES may hold workshops to provide information and assistance in filling out the application and preparing a benefit/cost analysis using the FEMA-approved software. Only those sub-grant applicants who have received an approved NOI notification will be invited to attend the workshops.

Notice of Interest Form

All subgrant applicants are required to submit an NOI. The NOI must be received by Cal OES no later than midnight on June 15, 2017. NOIs postmarked by June 15, 2017 will be accepted. An approved NOI is required for each subgrant application submitted.

The following provides detailed guidance on completing the NOI form:

1. Name of Person Completing NOI:	Provide the first and last name of the person completing the NOI.
2. NOI Instructions have been reviewed and read:	By selecting yes, the person completing the NOI form certifies that he/she has read the NOI instruction material.
3. FIPS #:	Provide the Federal Identification Processing System number for the subgrant applicant. If the subgrant applicant does not have or know their FIPS number, contact Cal OES.
4. DUNS #:	Provide the Data Universal Numbering System number for the subgrant applicant. If the subgrant applicant does not have or know their DUNS number, call Dunn & Bradstreet at 1-866-705-5711.
5. Applicant Name:	Provide the name of the subgrant applicant applying for grant funds. Subgrant applicant names must be consistent with the FIPS#.
6. Applicant Address:	Provide the mailing address for the subgrant applicant. Include city, county, state and zip code.
7. Applicant Type:	Select one. Eligible subgrant applicants include state and local governments, and special districts. If your entity does not fall into one of these categories, you are not eligible to apply for DR-430, 4305 and 4038 funding.
8. Legislative Districts:	Provide only the number of the legislative districts listed. If the project site is located in a different district than the subgrant applicant address, please provide both.
9. Authorized Applicant Agent:	The person(s) authorized by the subgrant applicant's governing body to act on behalf of the subgrant applicant to execute an application for the purpose of obtaining federal financial assistance. Provide the name of the person(s) that will serve in this position. Forms used to designate the AA will be provided upon grant approval. The AA will also be required to sign standard assurances to accept grant funds. Provide the first and last name, title, address, phone and fax numbers and e-mail address.
10. Project Manager/Working Contact:	The person Cal OES will contact with questions and/or requests for information. Provide the first and last name, title, address, phone and fax numbers and e-mail address.

11. Project Manager/Working Contact (Alternative):	The person Cal OES will contact with questions and/or requests for information when the primary contact is not available. Provide the first and last name, title, address, phone and fax numbers and e-mail address.
12. Application Type:	Select one. Identify if your application describes a planning or project activity. For DR-4301, 4305 and 4308 Cal OES will accept NOIs for project activities only. No planning NOIs will be accepted.
13. Hazard Type: project activities	Select one. Use Multi-Hazard for planning activities. For DR-4301, 4305 and 4308 Cal OES will accept NOIs for only. No planning NOIs will be accepted.
14. Activity Type:	Select one. Cal OES will only accept NOIs describing eligible activities.
15. Activity Title/Name:	Provide a name that clearly reflects the proposed activity. The name selected in the NOI must match the name used if an application is submitted.
16. Population:	For planning applications only. For DR-4301, 4305 and 4308 Cal OES will accept NOIs for project activities only. No planning NOIs will be accepted.
17. Activity Location:	Provide the Latitude and Longitude in degrees to six decimal places defining the activity location. If the activity involves more than one location, provide a Latitude and Longitude at the center of the proposed project area and a general description of the project area.
18. Describe the problem to be mitigated:	Describe the need for this activity. The problem statement must: 1. Include a description of the hazard(s) being addressed, i.e. fire, flood, earthquake, etc. 2. Identify all risks to the facility that the proposed project will mitigate. 3. Refer to any studies or reports that have been prepared analyzing the risks to the facility being protected.
19. Describe the scope of work:	The scope of work must include the following: 1. State the mitigation goals and objectives of the project. 2. Describe the project, to include: a. A statement of the effectiveness or level of protection.

b. The proposed conceptual design, the means of implementation and the basic dimensions of the project and project area.
c. A description of the properties, communities or populations that would directly benefit from the project.
d. A description of any construction/engineering drawings and/or any environmental documents available.
e. Refer to any studies that demonstrate the proposed mitigation measure is feasible and effective.
f. Identify if the project location(s) is in a floodplain.
g. An explanation of how the proposed project will provide a long term and independent solution to the risk being mitigation.
h. A description of the project long-term maintenance requirements.
i. A brief description of all alternatives considered to the proposed project.

20. Performance Period: Indicate the length of time needed to complete the activity in months. The performance period cannot exceed 48 months from the declaration date.

21. Duplicate Programs: Indicate if this activity is eligible for funding from another federal program such as the NRCS Emergency Watershed Protection Act, FEMA Public Assistance Program, or the US Department of Agriculture/Department of the Interior Healthy Forest Reform Act of 2002.

22. Activity Costs: Federal Share: The federal share for HMGP projects cannot exceed 75 percent of the total eligible project cost. For DR-4301, 4305 and 4308 the federal share requested is capped at $3 million.

Applicant Match: The subgrant applicant must provide a minimum of 25 percent of the total project cost. The subgrant applicant may over match the required 25 percent. The matching funds must be from a non-federal source and must be in place at the time of application submittal.

Total Activity Cost: The total activity cost must equal the sum of the federal share and the applicant match.

Identify the subgrant applicant's source for the required 25 percent non-federal match.

23. LHMP Approval Date:	Identify the date the subgrant applicant's Local Hazard Mitigation Plan (LHMP) was approved by FEMA. Subgrant applicants submitting project applications must have a FEMA-approved LHMP.
24. Local Hazard Mitigation Plan:	Provide a narrative that identifies how the proposed activity is consistent with the subgrant applicant's FEMA approved LHMP. Be specific; identify the page number and /or section number from your plan. Also include a narrative that quantifies the criticality of the project with respect to the overall population of the community.

Subgrant applicants receiving notification that their NOI was approved may be invited to attend the workshops. Please direct any questions or comments to HMGP@caloes.ca.gov.