



## REPORT TO CITY COUNCIL

Approved by:

Daniel Foss, Public Works Director

Arnaldo Rodriguez, City Manager

Council Meeting of: April 6, 2022

Agenda Number: D-4

### SUBJECT:

Contract Award for Groundwater Monitoring Well Installation services for the Wastewater Treatment Plant

### RECOMMENDATION:

Adopt a Resolution approving the contract award for Groundwater Monitoring Well Installation services, WWTP Project No. 20-01, in the amount of \$234,000 to Maggiora Brothers Drilling, Inc.

### SUMMARY:

City staff wishes to enter a contract for groundwater monitoring well drilling services at the Wastewater Treatment Plant in compliance with State issued Waste Discharge requirements. Maggiora Brothers Drilling Inc. (Maggiora) submitted the lowest bid of \$234,000, approximately 28 percent below the Engineer's Cost Estimate of \$323,000. Maggiora meets all the requirements necessary to be awarded the construction contract. The project funding is included in the current 2021/22 Capital Projects Budget under WWTP 20-01.

### DISCUSSION:

The City's Wastewater Treatment Plant (WWTP) operates under Waste Discharge Requirement No. 95-046 which was last updated in 1995. To incorporate new WWTP upgrades that have occurred in 2006 and 2019, staff is submitting a new Report of Waste Discharge (RoWD) to the Regional Board to renew the waste discharge permit. Completion of the Permit renewal will allow the plant to increase volume waste flow rates from the current 7.0 MGD limit to 10.1 MGD.

In 2018, the City contracted with Stantec Consulting Services, Inc. (Stantec) for Professional Engineering Consulting Services for the Update of the Waste Discharge Permit for the WWTP. Stantec's scope of work included preparation of a Report of Waste Discharge report (RoWD), preparation of engineering documents, and to help the City obtain a new WWTP discharge

permit.

On August 19, 2019, during discussions with the City concerning Permit upgrades, the Regional Board requested additional information including:

- Hydrogeologic groundwater information
- A groundwater anti-degradation analysis
- An updated water balance, and
- A treatment capacity assessment

Stantec developed a proposed work plan which provided the requested information and the workplan was subsequently approved by the Board on December 20, 2019. Implementation of this work plan requires an assortment of work delivery items including the need to install 5 new groundwater monitoring wells since 7 of the 8 existing monitoring wells are dry due to drought conditions. The lack of groundwater information results in insufficient data to provide an appropriate anti-degradation evaluation. As such, new monitoring wells are required before any of the follow-up evaluation can take place. Once the wells are installed and groundwater sampling data analyzed, the City can respond to the Regional Boards request for information.

The Regional Board requested a description of the hydrogeologic conditions (groundwater information), an evaluation on impacts to groundwater (anti- degradation analysis), an updated water balance, and a WWTP treatment capacity assessment to receive a discharge permit for flow rates over 7 MGD.

On September 18, 2019, the City responded to the Regional Board's request with a proposed work plan schedule to meet the requested information (the Regional Board approved the Workplan on December 20, 2019). On December 16, 2020, Amendment No. 1 to the Agreement with Stantec was approved by City Council. The Scope of Work included all additional services identified above and required Stantec to seek bids from licensed Well Drilling firms on behalf of the City for the installation of the new groundwater monitoring wells at the WWTP.

Plans and specifications were distributed by Stantec and were made available to contractors and sub-contractors. On December 16, 2021, two bids were received and are listed in Table 1.

<b>Table 1: Bid Overview</b>	
<i>Bidder</i>	<i>Bid</i>
Maggiora Brothers Drilling Inc.	\$234,000
Nor-Cal Pump & Drilling, Inc.	\$353,014
<i>Engineer's Opinion of Cost</i>	<i>\$323,000</i>

All bids were checked for accuracy via our consultant for the job, Stantec. The validity of contracting licenses and bid security were also checked. It has been determined that Maggiora Brothers Drilling, Inc. has submitted the lowest responsive and responsible bid that meets all the contract requirements.

**FINANCIAL IMPACT:**

There is no fiscal impact to the City's General Fund. The cost of Groundwater Monitoring Well Installation Services in the amount of \$323,000 is budgeted under CIP Project WWTP 20-01 in the Sewer Enterprise Fund.

**CONSISTENCY WITH THE VISION MADERA 2025 PLAN:**

This project is consistent with the Vision Madera 2025 Plan. Abundant Natural Resources - provide adequate sewage capacity to accommodate community growth and improve the quality of the water discharged from the facility.

**ALTERNATIVES:**

Although the population growth in the last decade averaged only 0.8 percent in the City, planned future developments could result in a higher growth rate if some speculative projects move forward. Consequently, the WWTP is projected to potentially treat wastewater flow rates higher than 7-MGD within 20-years. Should Council not approve this amendment, the City's Wastewater Treatment Facilities would be limited the current 7.0 million gallons per day treatment and disposal capacity.

**ATTACHMENTS:**

1. Resolution
2. Exhibit A – Contractor Services Agreement

RESOLUTION NO. 22-\_\_\_\_\_

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MADERA,  
CALIFORNIA, APPROVING THE AWARD OF THE CONTRACT FOR THE  
CONSTRUCTION OF GROUNDWATER MONITORING WELLS AT THE  
WASTEWATER TREATMENT PLANT PROJECT NO. 20-01 TO MAGGIORA  
BROTHERS DRILLING INC., IN THE AMOUNT OF \$234,000 AND  
AUTHORIZING CONSTRUCTION CONTINGENCIES RELATING TO THE  
CONTRACT**

**WHEREAS** the Construction of Groundwater Monitoring Wells at the WWTP– Project WWTP 20-01 (the Project) was advertised for bid proposals through the City’s consultant Stantec; and

**WHEREAS** bids for the Project were duly submitted and reviewed by personnel in the Engineering Division; and

**WHEREAS** funding for the Project is included in the Capital Improvement Projects Budget under WWTP 20-01 for Fiscal Year 2021/22.

**NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF MADERA HEREBY** finds, orders, and resolves as follows:

1. The above recitals are true and correct.
2. The City Council (Council) has reviewed and considered all the information presented including the report to Council from the Engineering Department.
3. The City finds that Maggiora Brothers Drilling Inc. was the lowest responsible and responsive bidder for the Project.
4. The contract for the Project in the amount of \$234,000 to Maggiora Brothers Drilling Inc., a copy of which is attached hereto as Exhibit 1 and referred to for particulars is approved.
5. This Resolution is effective immediately upon adoption.

\* \* \* \* \*

## EXHIBIT A

## CONSTRUCTION SERVICES AGREEMENT

**THIS AGREEMENT**, made this 6<sup>th</sup> day of April, 2022, between the City of Madera, hereinafter called "**OWNER**", and **Maggiara Brothers Well Drilling Inc.**, a corporation, hereinafter called "**CONTRACTOR**".

**WITNESSETH:** That for and in consideration of the payments and agreements hereinafter mentioned:

1. The **CONTRACTOR** shall commence and complete all **WORK** specified in Sections 2.1 through 2.4 required for the "**Groundwater Monitoring Well Installation Workplan, WDRs Order No. 91-192 by Stantec Consulting Service Inc., Project WWTP 20-01**"
2. The **CONTRACTOR** shall furnish all of the material, supplies, tools, equipment, labor, and other services necessary for the construction and completion of the **WORK** described herein.
3. The **CONTRACTOR** shall commence the **WORK** required by the **CONTRACT DOCUMENTS** within 10 calendar days after the date of the **NOTICE TO PROCEED** and will complete the same within the time period set forth in the **CONTRACT DOCUMENTS**. The **CONTRACTOR** shall submit a Payment Bond and Performance Bond in the amount of \$234,000.00, each and Insurance Certificates as specified in the **CONTRACT DOCUMENTS** prior to commencing any **WORK**.
4. The **CONTRACTOR** agrees to perform all of the **WORK** described in the **DOCUMENTS** for the unit and lump sum prices set forth in the Bid Schedule.
5. The term "**CONTRACT DOCUMENTS**" means and includes the following:
  - (A) Advertisement for Bids
  - (B) Groundwater Monitoring Well Installation Workplan, WDRs Order No. 91-192 by Stantec Consulting Service Inc., Project WWTP 20-01"
  - (C) Bid Proposal - Maggiara Brothers Drilling Inc. Bid, dated December 16, 2021 included as Attachment A.
  - (D) Bid Bond
  - (E) Agreement
  - (F) Payment Bond
  - (G) Performance Bond
  - (H) Insurance Requirements – included as Attachment B.
  - (I) General Conditions
  - (J) Special Conditions
  - (K) City of Madera Standard Specifications and Drawings - "Groundwater Monitoring Well Installation Workplan, WDRs Order No. 91-192 by Stantec Consulting Service Inc., Project WWTP 20-01" dated March 23, 2021 included as Attachment C.

Addenda Nos. \_\_\_\_\_, dated \_\_\_\_\_

Addenda Nos. \_\_\_\_\_, dated \_\_\_\_\_

Addenda Nos. \_\_\_\_\_, dated \_\_\_\_\_

6. In the event the **CONTRACTOR** does not complete the **WORK** within the time limit specified herein or within such further time as authorized, the **CONTRACTOR** shall pay to the **OWNER** liquidated damages in the amount of **One Hundred Dollars (\$100.00)** per day for each and every calendar day delay in finishing the **WORK** beyond the completion date so specified.

7. The **OWNER** will pay to the **CONTRACTOR** in the manner and at such times as set forth in the General Conditions such amounts as required by the **CONTRACT DOCUMENTS**. For any moneys earned by the **CONTRACTOR** and withheld by the **OWNER** to ensure the performance of the Contract, the **CONTRACTOR** may, at his request and expense, substitute securities equivalent to the amount withheld in the form and manner and subject to the conditions provided in Division 2, Part 5, Section 22300 of the Public Contract Code of the State of California.

8. In the event of a dispute between the **OWNER** and the **CONTRACTOR** as to an interpretation of any of the specifications or as to the quality or sufficiency of material or workmanship, the decision of the **OWNER** shall for the time being prevail and the **CONTRACTOR**, without delaying the job, shall proceed as directed by the **OWNER** without prejudice to a final determination by negotiation, arbitration by mutual consent or litigation, and should the **CONTRACTOR** be finally determined to be either wholly or partially correct, the **OWNER** shall reimburse him for any added costs he may have incurred by reason of work done or material supplied beyond the terms of the contract as a result of complying with the **OWNER'S** directions as aforesaid. In the event the **CONTRACTOR** shall neglect to prosecute the work properly or fail to perform any provisions of the **CONTRACT**, the **OWNER**, after three days written notice to the **CONTRACTOR**, may, without prejudice to any other remedy it may have, make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due to the **CONTRACTOR**, subject to final settlement between the parties as in this paragraph herein above provided.

#### 8A. CLAIMS RESOLUTION PROCESS FOR DISPUTES.

It is the intent of this Contract that disputes regarding the Contract be resolved promptly and fairly between the Contractor and the Owner. However, it is recognized that some disputes will require detailed investigation and review by one or both parties before a determination and resolution can be reached. For the protection of the rights of both the Contractor and the Owner, the following provisions are provided for the resolution of disputes which cannot be resolved by the Owner and the Contractor within three business days after either party gives verbal notice of dispute or potential dispute to the other's attention and prior to the commencement of such work.

The following provisions are intended by Contractor and Owner to comply with Public Contract Code Sections 9204 and 20104 *et. seq.*

##### A. Claims:

The term "claim" refers to a separate demand by Contractor sent by registered mail or certified mail with return receipt requested, for one or more of the following:

- (1) A time extension, including, without limitation, for relief from damages or penalties for delay assessed by Owner under this Contract.

- (2) Payment by the Owner of money or damages arising from work done by, or on behalf of, the Contractor pursuant to the Contract and payment for which is not otherwise expressly provided or to which the Contractor is not otherwise entitled.
- (3) Payment of an amount that is disputed by the Owner.

B. The Claim Must Be Timely and in Writing:

For all claims the claim must be in writing and include the documents necessary to substantiate the claim. A notice of potential claim must be filed within five (5) business days of Contractor's completion of work that is a potential claim. Notice of an actual claim must be filed on or before the date of final payment.

C. Receipt of Claim by Owner:

Upon receipt of a claim pursuant to this section, the Owner will conduct a reasonable review of the claim and, within a period not to exceed 45 days from the date of receipt, will provide the Contractor with a written statement identifying what portion of the claim is disputed and what portion is undisputed. Upon receipt of a claim, Owner and Contractor may, by mutual agreement, extend the time period provided in this section.

The Contractor shall furnish reasonable documentation to support the claim. If additional information is thereafter required, it shall be requested and provided upon mutual agreement by the Owner and the Contractor. The District's written response to the claim, as further documented, shall be submitted to the claimant within 30 days after receipt of the further documentation, or within a period of time no greater than that taken by the Contractor in producing the additional information or requested documentation.

D. City Council Approval:

If the Owner needs approval from the City Council to provide the Contractor a written statement identifying the disputed portion and the undisputed portion of the claim, and the City Council does not meet within the 45 days or within the mutually agreed to extension of time following receipt of a claim sent by registered mail or certified mail, return receipt requested, the Owner shall have up to three days following the next duly publicly noticed regular meeting of the City Council after the 45-day period or extension expires to provide the Contractor a written statement identifying the disputed portion and the undisputed portion.

E. Payment of Claim:

Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the Owner issues its written statement. If the Owner fails to issue a written statement, paragraph F below shall apply.

F. Meet and Confer:



If the Contractor disputes the Owner's written response, or if the Owner fails to respond to a claim issued pursuant to this section within the time prescribed, the Contractor may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the Owner shall schedule a meet and confer conference within 30 days for settlement of the dispute.

Within 10 business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the Owner shall provide the Contractor a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the Owner issues its written statement. Any disputed portion of the claim, as identified by the contractor in writing, shall be submitted to nonbinding mediation, with the Owner and the Contractor sharing the associated costs equally. The Owner and Contractor shall mutually agree to a mediator within 10 business days after the disputed portion of the claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject to applicable procedures outside this section.

Under this Contract, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.

Unless otherwise agreed to by the Owner and the Contractor in writing, the mediation conducted pursuant to this section shall excuse any further obligation under Public Contract Code Section 20104.4 to mediate after litigation has been commenced.

If mediation as set forth above does not resolve the parties' dispute, the parties will proceed to arbitration of disputes under private arbitration or the Public Works Contract Arbitration Program.

G. Filing a Government Code Written Claim Notice:

Following the meet and confer conference, if the claim or any portion remains in dispute, the Contractor may file a claim under the Torts Claims Act as provided in Chapter 1 (commencing with Section 900) and Chapter 2 commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code Section 900.

H. Owner's Failure to Respond to Claim:

Failure by the Owner to respond to a claim from Contractor within the time periods described above or to otherwise meet the time requirements set forth above shall result in the

claim being deemed rejected in its entirety. A claim that is denied by reason of the Owner's failure to have responded to a claim, or its failure to otherwise meet the time requirements of this section, shall not constitute an adverse finding with regard to the merits of the claim or the responsibility or qualifications of the Contractor.

I. Interest:

Amounts not paid in a timely manner as required by this section shall bear interest at 7 percent per annum.

J. Subcontractor Claims:

If a subcontractor or a lower tier subcontractor lacks legal standing to assert a claim against Owner because privity of contract does not exist, the Contractor may present to the Owner a claim on behalf of a subcontractor or lower tier subcontractor. For purposes of this paragraph, the term "subcontractor" means any type of subcontractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who either is in direct contract with the Contractor or is a lower tier subcontractor. A subcontractor may request in writing, either on his or her own behalf or on behalf of a lower tier subcontractor, that the Contractor present a claim for work which was performed by the subcontractor or by a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the claim be presented to the Owner shall furnish reasonable documentation to support the claim. Within 45 days of receipt of this written request, the Contractor shall notify the subcontractor in writing as to whether the contractor presented the claim to the Owner and, if the original contractor did not present the claim, provide the subcontractor with a statement of the reasons for not having done so.

K. Filing of Action on Unresolved Claims:

The parties shall follow the procedures set forth in Public Contracts Code Section 20104.4 if an action is filed to resolve claims under the foregoing provisions. Any action shall be filed in Madera County.

9. Attention is directed to Section 1735 of the Labor Code, which reads as follows:

"No discrimination shall be made in the employment of persons upon public works because of the race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical conditions, marital status, or sex of such persons except as provided in Section 12940 of the Government Code, and every contractor for public works violating this section is subject to all the penalties imposed for by violation of this chapter".

10. In accordance with the provisions of Article 5, Chapter I, Part 7, Division 2 (commencing with Section 1860) and Chapter 4, Part I, Division 4 (commencing with Section 3700) of the Labor Code of the State of California, the **CONTRACTOR** is required to secure the payment of compensation to his employees and shall for that purpose obtain and keep in effect adequate Worker's Compensation Insurance.

The undersigned **CONTRACTOR** is aware of the provisions of Section 3700 of the Labor Code which requires every employer to be insured against Liability for Worker's Compensation or to undertake self-insurance in accordance with the provisions before commencing the performance of the **WORK** of this Agreement.

11. The **CONTRACTOR** shall comply with Part 7, Chapter I, Article 2, Section 1775 of the Labor Code of the State of California. The **CONTRACTOR** shall, as a penalty to the **OWNER**, forfeit fifty dollars (\$50.00) for each calendar day, or portion thereof, for each worker paid less than the prevailing rates for such work or craft in which such worker is employed for any public work done under the Contract by him or by any **SUBCONTRACTOR** under him. The difference between such prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than a prevailing wage rate, shall be paid to each worker by the **CONTRACTOR**.

12. The **CONTRACTOR** shall comply with Part 7, Chapter I, Article 2, Section 1776 of the Labor Code of the State of California. The **CONTRACTOR** shall keep and require that all **SUBCONTRACTORS** keep accurate payroll records showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice worker or other employee employed by him in connection with public work. Such payroll records shall be certified and shall be available for inspection at all reasonable hours at the principal office of the **CONTRACTOR** by the **OWNER**, its officers, and agents and to the representatives of the Division of Labor Law Enforcement of the State Department of Industrial Relations. In the event of non-compliance with the requirements of Section 1776, the **CONTRACTOR** shall have 10 days in which to comply subsequent to receipt of written notice specifying in what respects the **CONTRACTOR** must comply. Should non-compliance still be evident after the ten (10) day period, the **CONTRACTOR** shall, as a penalty to the **OWNER** forfeit twenty-five dollars (\$25.00) for each calendar day, or portion thereof, for each worker until strict compliance is effectuated. Upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, these penalties shall be withheld from progress payments then due.

13. Attention is directed to the provisions in Sections 1777.5 and 1777.6 of the Labor Code concerning the employment of apprentices by the **CONTRACTOR** or any **SUBCONTRACTOR** under him. It is the **CONTRACTOR'S** responsibility to ensure compliance by both itself and all **SUBCONTRACTORS**.

Section 1777.5 provides, in part, as follows:

The **CONTRACTOR** or **SUBCONTRACTOR**, if he is covered by this section, upon the issuance of the approval certificate, or if he has been previously approved in the craft or trade, shall employ the number of apprentices or the ratio of apprentices to journeyman stipulated in the apprenticeship standards. Upon proper showing by the **CONTRACTOR** that he employs apprentices in the craft or trade in the State on all of his/her contracts on an annual average of not less than one hour of apprentice work for every five hours of labor performed by a journeyman, or in the land surveyor classification, one apprentice for each five journeyman, the Division of Apprenticeship Standards may grant a certification exempting the **CONTRACTOR** from the one (1) to five (5) hourly ratio as set forth in this section. This section shall not apply to contracts of general **CONTRACTORS** or to contracts of specialty contractors not bidding for work through a general or prime **CONTRACTOR**, when the contracts of general **CONTRACTORS**, or those specialty **CONTRACTORS** involve less than thirty thousand dollars (\$30,000). Any work performed by a journeyman in excess of eight hours per day or forty (40) hours per week shall not be used to calculate the hourly ratio required by this section.

Apprenticeable craft or trade, as used in this section, shall mean a craft or trade determined as an apprenticeable occupation in accordance with rules and regulations prescribed by the Apprenticeship Council. The joint apprenticeship committee shall have the discretion to grant a certificate, which shall be subject to the approval of the Administrator of Apprenticeship, exempting a **CONTRACTOR** from the 1 to 5 ratio set forth in this section when it finds that any one of the following conditions is met:

- (a) In the event unemployment for the previous three-month period in such area exceeds an average of 15 percent, or
- (b) In the event the number of apprentices in training in such area exceeds a ratio of 1 to 5, or
- (c) If there is a showing that the apprenticeable craft or trade is replacing at least one-thirtieth of its journeymen annually through apprenticeship training, either (1) on a statewide basis, or (2) on a local basis, or
- (d) If assignment of an apprentice to any work performed under a public works contract would create a condition which should jeopardize his life or the life, safety, or property of fellow employees, or the public at large or if the specific task to which the apprentice is to be assigned is of a nature that training cannot be provided by a journeyman.

When such exemptions are granted to an organization which represents **CONTRACTORS** in a specific trade from the 1 to 5 ratio on a local or statewide basis the member **CONTRACTORS** will not be required to submit individual applications for approval to local joint apprenticeship committees, provided they are already covered by the local apprenticeship standards.

The **CONTRACTOR** is required to make contributions to funds established for the administration of apprenticeship programs if he employs registered apprentices or journeymen in apprenticeable trade on such contracts and if other **CONTRACTORS** on the public work site are making such contributions. The **CONTRACTOR**, and any **SUBCONTRACTOR** under him, shall comply with the requirements of Sections 1777.5 and 1777.6 of the Labor Code in the employment of apprentices. Information relative to number of apprentices, identifications, wages, hours of employment and standards of working conditions shall be obtained from the Division of Apprenticeship Standards. Consult the white pages of your telephone directory under California, State of, Industrial Relations, Apprenticeship Standards, for the telephone number and address of the nearest office. Willful failure by the **CONTRACTOR** to comply with the provisions of Sections 1777.5 will subject the **CONTRACTOR** to the penalties set forth in Section 1777.7 of the Labor Code.

14. Pursuant to California Labor Code Section 1813, eight hours in any one calendar day and forty (40) hours in any calendar week shall be the maximum hours any worker is required or permitted to work, except in cases of extraordinary emergency caused by fires, flood, or danger to life and property. The **CONTRACTOR** doing the work, or his duly authorized agent, shall file with **OWNER** a report, verified by his oath, setting forth the nature of the said emergency, which report shall contain the name of said worker and the hours worked by him on the said day, and the **CONTRACTOR** and each **SUBCONTRACTOR** shall also keep an accurate record showing the names and actual hours worked of all workers employed by him in connection with the work contemplated by this Agreement, which record shall be open at all reasonable hours to the inspection of the **OWNER**, or its officer or agents and to the Chief of all Division of Labor Statistics and Law Enforcement of the Department of Industrial Relations, his deputies or agents;

and it is hereby further agreed that said **CONTRACTOR** shall forfeit as a penalty to the **OWNER** the sum of Twenty-Five Dollars (\$25.00) for each laborer, workman or any **SUBCONTRACTOR** under him for each calendar day during which such laborer, workman or mechanic is required or permitted to labor more than eight (8) hours in violation of this stipulation.

Overtime and shift work may be established as a regular procedure by the **CONTRACTOR** with reasonable notice and written permission of the **OWNER**. No work other than overtime and shift work established as a regular procedure shall be performed between the hours of 6:00 P.M. and 7:00 A.M. nor on Saturdays, Sundays or holidays except such work as is necessary for the proper care and protection of the work already performed or in case of an emergency.

**CONTRACTOR** agrees to pay the costs of overtime inspection except those occurring as a result of overtime and shift work established as a regular procedure. Overtime inspection shall include inspection required during holidays, Saturdays, Sundays, and weekdays. Costs of overtime inspection will cover engineering, inspection, general supervision, and overhead expenses which are directly chargeable to the overtime work. **CONTRACTOR** agrees that **OWNER** shall deduct such charges from payments due the **CONTRACTOR**.

15. The **CONTRACTOR** shall comply with Division 2, Chapter 4, Part 1 of the Public Contract Code relating to subletting and subcontracting, specifically included but not limited to Sections 4104, 4106, and 4110, which by this reference are incorporated into this Agreement as though fully set forth herein.

16. The **CONTRACTOR** and the **OWNER** agree that changes in this Agreement or in the work to be done under this Agreement shall become effective only when written in the form of a supplemental agreement or change order and approved and signed by the **OWNER** and the **CONTRACTOR**. It is specifically agreed that the **OWNER** shall have the right to request any alterations, deviations, reductions or additions to the contract or the plans and specifications or any of them, and the amount of the cost thereof shall be added to or deducted from the amount of the contract price aforesaid by fair and reasonable valuations thereof.

This contract shall be held to be completed when the work is finished in accordance with the original plans and specifications as amended by such changes. No such change or modification shall release or exonerate any surety upon any guaranty or bond given in connection with this contract.

17. **Contractor** shall indemnify, defend with legal counsel approved by City, and hold harmless City, its officers, officials, employees, and volunteers from and against all liability, loss, damage, expense, and cost (including without limitation reasonable legal counsel fees, expert fees and all other costs and fees of litigation) of every nature arising out of or in connection with **Contractor's** negligence, recklessness, or willful misconduct in the performance of work hereunder, or its failure to comply with any of its obligations contained in this AGREEMENT, except such loss or damage caused by the sole active negligence or willful misconduct of the City. Should conflict of interest principles preclude a single legal counsel from representing both City and **Contractor**, or should City otherwise find **Contractor's** legal counsel unacceptable, then **Contractor** shall reimburse the City its costs of defense, including without limitation, reasonable legal counsel fees, expert fees, and all other costs and fees of litigation. The **Contractor** shall promptly pay any final judgment rendered against the City (and its officers, officials, employees, and volunteers) with respect to claims determined by a trier of fact to have been the result of the **Contractor's** negligent, reckless, or wrongful performance. It is expressly understood and agreed that

the foregoing provisions are intended to be as broad and inclusive as is permitted by the law of the State of California and will survive termination of this Agreement.

**Contractor** obligations under this section apply regardless of whether or not such claim, charge, damage, demand, action, proceeding, loss, stop notice, cost, expense, judgment, civil fine or penalty, or liability was caused in part or contributed to by an Indemnitee. However, without affecting the rights of City under any provision of this agreement, **Contractor** shall not be required to indemnify and hold harmless City for liability attributable to the active negligence of City, provided such active negligence is determined by agreement between the parties or by the findings of a court of competent jurisdiction. In instances where City is shown to have been actively negligent and where City's active negligence accounts for only a percentage of the liability involved, the obligation of **Contractor** will be for that entire portion or percentage of liability not attributable to the active negligence of City.

**Contractor** agrees to obtain or cause to be obtained executed defense and indemnity agreements with provisions identical to those set forth in this Section from each and every Subcontractor and Subconsultant, of every Tier. In the event the **Contractor** fails to do so, **Contractor** agrees to be fully responsible to provide such defense and indemnification according to the terms of this Section.

18. **Contractor** must comply with the insurance requirements as described in Attachment B of this Contract.

19. Amendments. Any changes to this Agreement requested by either City or Maggiora Brothers Drilling Inc. may only be effected if mutually agreed upon in writing by duly authorized representatives of the parties hereto. This Agreement shall not be modified or amended or any rights of a party to it waived except by such writing.

20. Termination.

A. This Agreement may be terminated at any time by either party upon fifteen (15) calendar days written notice. In the event the Agreement is terminated by either party, Maggiora Brothers Drilling Inc. shall be compensated for services performed to the date of termination based upon the compensation rates and subject to the maximum amounts payable agreed to together with such additional services performed after termination which are authorized in writing by the City representative to wind up the work performed to date of termination.

B. City may immediately suspend or terminate this Agreement in whole or in part by written notice where, if in the determination of City, there is:

1. An illegal use of funds by Maggiora Brothers Drilling Inc.;
2. A failure by Maggiora Brothers Drilling Inc. to comply with any material term of this Agreement;
3. A substantially incorrect or incomplete report submitted by to City.

In no event shall any payment by City or acceptance by Maggiora Brothers Drilling Inc. constitute a waiver by such party of any breach of this Agreement or any default which may then exist on the part of either party. Neither shall such payment impair or prejudice any remedy available to either party with respect to such breach or default. City shall have the right to demand of Maggiora Brothers Drilling Inc. the repayment to City of any funds disbursed to Maggiora Brothers Drilling Inc. under this Agreement which, as determined by the appropriate court or arbitrator, were not expended in accordance with the terms of this Agreement.

Notice of termination shall be mailed to the City:

City of Madera  
Public Works Department  
1030 S. Gateway Drive  
Madera, CA 93637

Notice of Termination shall be mailed to the Contractor: Maggiora Brothers Drilling Inc.

All notices and communications from Maggiora Brothers Drilling Inc. shall be to City's designated Project Manager or Principal-In-Charge. Verbal communications shall be confirmed in writing. All written notices shall be provided and addressed as soon as possible, but not later than thirty (30) days after termination.

21. Compliance with Laws. City shall comply with all Federal, State, and local laws, ordinances, regulations, and provisions applicable in the performance of City's services.

Wherever reference is made in this Agreement to standards or codes in accordance with which work is to be performed or tested, the edition or revision of the standards or codes current on the effective date of this Agreement shall apply, unless otherwise expressly stated.

22. Attorneys' Fees/Venue. In the event that any action is brought to enforce the terms of this Agreement, the party found by the court to be in default agrees to pay reasonable attorneys' fees to the successful party in an amount to be fixed by the Court. The venue for any claim being brought for breach of this Agreement shall be in Madera County or as appropriate in the U.S. District Court for the Eastern District of California, located in the City of Madera.

23. Governing Law. The laws of the State of California shall govern the rights and obligations of the parties under the Agreement, including the interpretation of the Agreement. If any part of the Agreement is adjudged to be invalid or unenforceable, such invalidity shall not affect the full force and effect of the remainder of the Agreement.

24. City's Authority. Each individual executing or attesting to this Agreement on behalf of the City hereby covenants and represents: (i) that he or she is duly authorized to execute or attest and deliver this Agreement on behalf of such corporation in accordance with a duly adopted resolution of the corporation's articles of incorporation or charter and bylaws; (ii) that this Agreement is binding upon such corporation; and (iii) that Contractor is a duly organized and legally existing municipal corporation in good standing in the State of California.

25. Contractor's Legal Authority. Each individual executing or attesting this Agreement on behalf of Maggiora Brothers Drilling Inc. hereby covenants and represents: (i) that he or she is duly authorized to execute or attest and deliver this Agreement on behalf of such corporation in accordance with such corporation's articles of incorporation or charter and by-laws; (ii) that this Agreement is binding upon such corporation; and (iii) that Maggiora Brothers Drilling Inc. is a duly organized and legally existing corporation in good standing in the State of California.

26. Remedies for Default. Failure by a party to perform any term, condition or covenant required of the party under this Agreement shall constitute a "default" of the offending party under this Agreement. In the event that a default remains uncured for more than ten (10) days following receipt of written notice of default from the other party, a "breach" shall be deemed to have occurred. Any failure

or delay by a party in asserting any of its rights and remedies as to any default shall not operate as a waiver of any default or of any rights or remedies associated with a default.

27. Independent Contractor. In performance of the work, duties, and obligations assumed by the Contractor under this Agreement, it is mutually understood and agreed that the City, including any and all of City's officers, agents and employees will, at all times, be acting and performing as an independent contractor, and shall act in an independent capacity and not as an officer, agent, servant, employee, joint venturer, partner, or associate of **City**. Furthermore, **City** shall have no right to control or supervise or direct the manner or method by which City shall perform its work and functions. The City shall comply with all applicable provisions of law and the rules and regulations, if any, of governmental authorities having jurisdiction over the subject matter hereof.

Because of its status as an independent contractor, City shall have absolutely no right to employment rights and benefits available to **City** employees. City shall be solely liable and responsible for providing to, or on behalf of, its employees all legally required employee benefits. In addition, City shall be solely responsible and hold **City** harmless from all matters relating to payment of City's employees, including compliance with Social Security, withholding and all other regulations governing such matters. It is acknowledged that during the term of this Agreement, City may be providing services to others unrelated to **City** or to this Agreement.

28 Sole Agreement. This instrument constitutes the sole and only Agreement between City and Maggiora Brothers Drilling Inc. in connection to the Project and correctly sets forth the obligations of the City and Maggiora Brothers Drilling Inc. to each other as of its date. Any Agreements or representations in connection with the Project, not expressly set forth in this instrument are null and void.

27. Assignment-Neither the Maggiora Brothers Drilling Inc. nor City will assign its interest in this Agreement without the written consent of the other.

28. Caltrans is required by 23 code of Federal Regulations (CFR), part 200, Section 200.9 (b)(7) to conduct reviews of sub-recipients (Local Agencies) of federal-aid to ensure compliance with Title VI of the Civil Rights Act of 1964 and the related statues (Title VI) through the requirements under the Federal Highway Administration (FHWA), the U.S. Department of Transportation (USDOT), and the U.S. Department of Justice (USDOJ) regulations and guidance materials related to the implementation of Title VI.

The scope of the process reviews conducted by Caltrans focuses on the Local Agency's adherence to the FHWA's Title VI Program (Race, Color and National Origin) and the related statues protecting additional classes as required under

- Federal-Aid Highway Act of 1973 (Sex)
- The Age Discrimination Act of 1975 (Age), and
- The Americans with Disabilities Act of 1990 (ADA)(Disability) and Section 504 of the Rehabilitation Act of 1973 (Disability).

29 Binding Agreement. This Agreement shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.



**IN WITNESS WHEREOF** the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement in THREE copies, each of which shall be deemed an original on the date first above written.

**CITY OF MADERA**

By: \_\_\_\_\_  
Santos Garcia, Mayor

Date: \_\_\_\_\_

APPROVED AS TO FORM:

\_\_\_\_\_  
Hilda Cantú Montoy, City Attorney

ATTEST:

\_\_\_\_\_  
Alicia Gonzales, City Clerk

**MAGGIORA BROTHERS WELL DRILLING INC.**

BY: \_\_\_\_\_  
Michael Maggiora, Corporate Secretary

Date: \_\_\_\_\_

\_\_\_\_\_  
Federal Tax I.D. No.

\_\_\_\_\_  
Contractor License Number

\_\_\_\_\_  
DIR Registration Number

NOTE: This Notary Acknowledgment on the following page is required for verification of Contractor's signature.

**Acknowledgment**

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California

County of \_\_\_\_\_ )

On \_\_\_\_\_, 2022 before me, \_\_\_\_\_  
(insert name and title of officer)

Personally appeared \_\_\_\_\_, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature \_\_\_\_\_ (Seal)

# Attachment A

Bid Proposal

# MAGGIORA BROTHERS DRILLING INC.

PHONE: 831 724-1338  
 FAX: 831 724-3228

DRILLING SPECIFICATION, UNIT COSTS,  
 AND ESTIMATED PRICE  
 License # C-57-249957

595 Airport Blvd.  
 Watsonville, CA 95076

Date: **16-Dec-21**

Proposal #

Customer: <b>Stantec</b> Mail address: City, ST, Zip Owner of property/Add:	Contact: <b>Tom Butler</b> Phone No: <b>925-699-8012</b> Mobile No. Fax No.
TYPE OF WELL: <b>Exploratory borehole</b> Site Location: <b>ADD &amp; CITY</b> <b>Madera County</b>	Assessors parcel:

The following are the complete specifications and costs of the drilling project. The final invoice will reflect the actual quantities used to complete the drilling project. "Owner" indicates that the Customer will furnish the item at no expense to the Contractor or pay a reasonable extra amount if unable to do so.

Item #	Drilling & Casing:	Diam. (in.)	Max. (ft.)	Min. (ft.)	Est. (ft.)	Unit Price	Per	Estimated Item Price
1	Mobilization/demobilization (one charge per drilling rig)					\$ 27,500.00	ea.	\$ 27,500.00
2	Drilling permit:	<b>Madera - 5 EACH</b>			County	\$ 800.00	ea.	\$ 4,000.00
3	Exploratory drilling:							
	Type: <b>MUD</b>	10	1300	1000	1100	\$ 45.00	ft.	\$ 49,500.00
4	Hardrock hammer drill:				0	\$ -	ft.	\$ -
5	Electric resistivity log:				5	\$ 3,000.00	ea.	\$ 15,000.00
6	Conductor casing:	0	Inch		0	\$ -	ft.	\$ -
7	Borehole reaming:				0	\$ -	ft.	\$ -
8	Well casing installed:							
	Type: <b>PVC Casing</b>	4"	1040	840	950	\$ 16.00	ft.	\$ 15,200.00
9								
	Type: <b>PVC Screen</b>	4"	260	160	160	\$ 22.00	ft.	\$ 3,520.00
10	Gravel pack installed:							
	Type: <b>Sand</b>	Max Tons		15	850	\$ 25.00	ft.	\$ 21,250.00
11	Sanitary seal:	Max Yards			250	\$ 60.00	ft.	\$ 15,000.00

12	Water Fluid & Drill Cuttings Hauling Cost:		0	Loads	\$ 3,500.00	ea.	\$ -
13	Water truck rental:		0	Hours	\$ -	hr.	\$ -
14	Well development: Type: <b>Airlift</b>		40	Hours	\$ 500.00	hr.	\$ 20,000.00
15	Test Pump Install & Removal:				\$ -	ea.	\$ -
16	Test Pump Operation:		0	Hours	\$ 250.00	hr.	\$ -
17	Well pad with steel stove pipe		5	Each	\$ 2,500.00	ea.	\$ 12,500.00
18	Well disinfection (per treatment):				\$ -	ea.	\$ -
19	Well Destructions		6	Ea.	\$ 6,000.00	lf.	\$ 36,000.00
20	Stand-by time:			Hours	\$ 450.00	hr.	\$ -
21	Hourly drilling rate (penetration rate < 8 ft./hr. for 2 hours)				\$ 500.00	hr.	\$ -
22	Mud shaker Rental		5	Each	\$ 500.00	ea.	\$ 2,500.00
23	Bentonite mud for drilling:		50	Bags	\$ 18.00	bag	\$ 900.00
24	Traffic Control		3	Each	\$ 1,800.00	ea.	\$ 5,400.00
25	Performance and Payment bonds		1	Each	\$ 5,730.00	ea.	\$ 5,730.00

Drill cuttings and fluids to remain on site and shall become owner's responsibility.  
**Drilling will not start until county has issued a permit for the project.**  
**Price subject to county requirements and site conditions.**

<p><b>PUMP QUOTE</b>                  can be given AFTER                  the well is test pumped                  in order to quote the correct                  pump for your needs.</p>	<p style="text-align: center;"><b>Total ESTIMATED cash price per well</b></p> <p style="text-align: center;"><b>Less down payment due prior to start of TEST HOLE :</b> \$ -</p> <p style="text-align: center;"><b>Less down payment due prior to start of Drill :</b> \$ -</p> <hr style="border: 1px solid black;"/> <p style="text-align: center;"><b>ESTIMATED balance due on completion :</b> <b>\$ 234,000.00</b></p> <hr style="border: 1px solid black;"/> <p style="text-align: right;">Minimum charge due after move-in : \$ 1,000.00</p>
--	---

**I HAVE READ AND AGREE TO THESE TERMS AND INITIAL AT RIGHT TO ACCEPT \_\_\_\_\_ INITIALS**

# Attachment B

## Insurance Requirements

## **INSURANCE REQUIREMENTS FOR CONTRACTORS**

Without limiting Contractor's indemnification of City, and prior to commencement of Work, Contractor shall obtain, provide, and continuously maintain at its own expense during the term of the Agreement, and shall require any and all Subcontractors and Subconsultants of every Tier to obtain and maintain, policies of insurance of the type and amounts described below and in form satisfactory to the City.

### Minimum Scope and Limits of Insurance

1. Contractor shall maintain limits no less than: \$2,000,000 **General Liability** (including operations, products and completed operations) per occurrence, \$4,000,000 general aggregate, for bodily injury, personal injury and property damage, including without limitation, blanket contractual liability. Coverage shall be at least as broad as Insurance Services Office (ISO) Commercial General Liability coverage form CG 00 01. General liability policies shall be endorsed using ISO forms CG 20 10 and CG 20 37 to provide that the City and its officers, officials, employees and agents shall be additional insureds under such policies.
2. \$2,000,000 **Automobile Liability** combined single limit per accident for bodily injury or property damage at least as broad as ISO Form CA 00 01 for all activities of Contractor arising out of or in connection with Work to be performed under this Agreement, including coverage for any owned, hired, non-owned or rented vehicles. Automobile Liability policies shall be endorsed to provide that the City and its officers, officials, employees and agents shall be additional insureds under such policies.
3. **Worker's Compensation** as required by the State of California and \$1,000,000 **Employer's Liability** per accident for bodily injury or disease. Contractor shall submit to the City, along with the certificate of insurance, a Waiver of Subrogation endorsement in favor of the City, its officers, agents, employees, and volunteers.

### Maintenance of Coverage

Contractor shall procure and maintain, for the duration of the contract, insurance against claims for injuries to persons or damages to property, which may arise from or in connection with the performance of the Work hereunder by Contractor, his agents, representatives, employees, subcontractors or subconsultants as specified in this Agreement.

### Proof of Insurance

Contractor shall provide to the City certificates of insurance and endorsements, as required, as evidence of the insurance coverage required herein, along with a waiver of subrogation endorsement for workers' compensation. Insurance certificates and endorsements must be approved by the City prior to commencement of performance. Current evidence of insurance shall be kept on file with the City at all times during the term of this Agreement. Agency reserves the right to require complete, certified copies of all required insurance policies, at any time.

### Acceptable Insurers

All insurance policies shall be issued by an insurance company currently authorized by the Insurance commissioner to transact business of insurance in the State of California, with an assigned policyholders' Rating of A- (or higher) and a Financial Size Category Class VII (or larger), in accordance with the latest edition of Best's Key Rating Guide.

#### Waiver of Subrogation

All insurance coverage maintained or procured pursuant to this agreement shall be endorsed to waive subrogation against the City, its elected or appointed officers, agents, officials, employees, and volunteers, or shall specifically allow Contractor, or others providing insurance evidence in compliance with these specifications, to waive their right of recovery prior to a loss. Contractor hereby waives its own right of recovery against the City and shall require similar written express waivers and insurance clauses from each of its subconsultants or subcontractors.

#### Enforcement of Contract Provisions (non estoppel)

Contractor acknowledges and agrees that any actual or alleged failure on the part of the Agency to inform Contractor of non-compliance with any requirement imposes no additional obligations on the City, nor does it waive any rights hereunder.

#### Specifications not Limiting

Requirements of specific coverage features or limits contained in this Section are not intended as a limitation on coverage, limits or other requirements, or a waiver of any coverage normally provided by any insurance. Specific reference to a given coverage feature is for purposes of clarification only as it pertains to a given issue and is not intended by any party or insured to be all inclusive, or to the exclusion of other coverage, or a waiver of any type. If Contractor maintains higher limits than the minimums required above, the entity shall be entitled to coverage at the higher limits maintained by Contractor.

#### Notice of Cancellation

Contractor agrees to oblige its insurance agent or broker and insurers to provide to the City with thirty (30) calendar days notice of cancellation (except for nonpayment for which ten (10) calendar days notice is required) or nonrenewal of coverage for each required coverage.

#### Self-insured Retentions

Any self-insured retentions must be declared to and approved by the City. The City reserves the right to require that self-insured retentions be eliminated, lowered or replaced by a deductible. Self-insurance will not be considered to comply with these specifications unless approved by the City's Risk Manager.

#### Timely Notice of Claims

Contractor shall give the City prompt and timely notice of claims made or suits instituted that arise out of or result from Contractor's performance under this Agreement, and that involve or may involve coverage under any of the required liability policies.

#### Additional Insurance

Contractor shall also procure and maintain, at its own cost and expense, any additional kinds of insurance, which in its own judgement may be necessary for its proper protection and prosecution of the Work.

# Attachment C

Standard Specifications -  
Groundwater Monitoring Well Installation Workplan



March 23, 2021

Mr. Daniel Benas  
Central Valley Regional Water Quality Control Board  
1685 E Street  
Fresno, CA 93706-2020

184030099

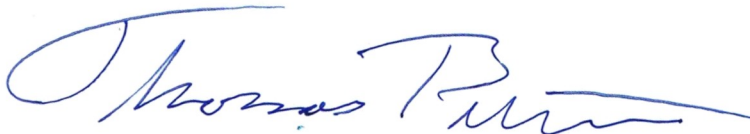
RE: City of Madera – Groundwater Monitoring Well Installation Workplan, WDRs Order No. 91-192

Mr. Benas:

On behalf of the City of Madera, we are submitting the attached Groundwater Monitoring Well Installation Workplan pursuant to the scheduled outlined in the City's February 16, 2021 letter titled *City of Madera WWTF Report of Waste Discharge, WDR 95-046*.

Please contact me if you have any questions regarding the content of this report.

Sincerely,  
STANTEC

A handwritten signature in blue ink, appearing to read "Thomas Butler II", with a stylized flourish at the end.

Thomas W. Butler II, PG, CHG, CEG  
Senior Hydrogeologist/Geochemist

Attachment – Groundwater Monitoring Well Installation Workplan

cc: Daniel Foss, City of Madera Interim Public Works Director (e-copy)  
Humberto Molina, City of Madera Operations Manager (e-copy)  
Beth Cohen, Stantec Consulting Services Inc. (e-copy)



## **Groundwater Monitoring Well Installation Workplan**

March 23, 2021

Prepared for:

City of Madera

Prepared by:

Stantec Consulting Service Inc.

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# GROUNDWATER MONITORING WELL INSTALLATION WORKPLAN

Introduction

## 1.0 INTRODUCTION

### 1.1 OVERVIEW

The City of Madera (City) owns and operates the Madera Wastewater Treatment Plant (WWTP) located at 13048 Road 21 ½, in Madera, California. The WWTP is regulated by the Central Valley Regional Water Quality Control Board (Regional Board) through Waste Discharge Requirements (WDRs) Order No. 95-046. The plant treats an existing flow rate of 5 Mgal/d, a permitted capacity 7 Mgal/d, and has a design capacity of 10.1 Mgal/d, to accommodate future growth. The sanitary sewer collection system delivers wastewater to the plant, where it is comingled with septage receiving station effluent, processed by two mechanical screens, and pumped to grit chambers and primary clarifiers. Primary effluent is pumped to oxidation ditches and secondary clarifiers, before being discharged into evaporation/percolation disposal ponds. Scum and waste sludge are sent to anaerobic digesters and centrifuges, which produce Class B biosolids that are hauled off site for disposal.

The WWTP is required by its WDRs to monitor groundwater and has historically had eight monitoring wells at and around the WWTP (MW-1 through MW-8). Of these wells, only monitoring well MW-1 is reported to be in good condition and consistently produces water. Monitoring well MW-2 can no longer be located as it was destroyed by landowner during preparation of the field for the planting of almond trees. Monitoring wells MW-3, MW-4, and MW-5A are generally either dry or do not contain sufficient water to allow sampling. Monitoring MW-6, MW-7, and MW-8 typically pump dry and are slow to recharge. Most of the wells sanitary features are failing and allow storm water runoff and sediment to enter them during wet periods. It is therefore the intent of this workplan to reconstruct the monitoring network to address its lack of available water as well as eliminate monitoring wells on properties not controlled by the WWTP. The revised monitoring network will be used to collect comprehensive water quality and elevation data to support the sites antidegradation analysis.

### 1.2 SITE HYDROGEOLOGY AND SOILS

#### 1.2.1 Geology and Soil

The WWTP is located within the Great Valley geomorphic province of California San Joaquin Groundwater Basin, Madera Subbasin. According to the California Department of Water Resources Bulletin 118, the San Joaquin Valley is bounded to the west by the Coast Ranges, on the south by the San Emigdio and Tehachapi Mountains, on the east by the Sierra Nevada, and on the north by the Sacramento-San Joaquin Delta and Sacramento Valley. The San Joaquin Valley is a structural trough that is around 200 miles long and 70 miles wide, filled with up to 32,000 feet of marine and continental sediments deposited during periodic inundation by the Pacific Ocean and by erosion by the surrounding mountains. The Madera Subbasin is bounded on the south by the San Joaquin River, on the west by the eastern boundary of the Columbia Canal Service area, on the north by the Chowilla Subbasin, and on the east by crystalline bedrock of the Sierra Nevada foothills. Hydrogeologic units in the Madera Subbasin consist of unconsolidated deposits of Pleistocene and Holocene age. Review of geophysical logs for

# GROUNDWATER MONITORING WELL INSTALLATION WORKPLAN

## Introduction

wells near the WWTP suggests that groundwater measured in the monitoring wells may be in sediment that is locally unsaturated and/or perched and occurring at depths around 140 to 160 feet below ground surface. Review of past groundwater monitoring reports for the facility suggest that groundwater in this zone is not spatially consistent and likely occurs where relatively thin zones of lower permeability are locally present, restricting the downward movement of recharged water. By contrast, the static depth to groundwater measured at nearby production wells suggest that the static water table is around 190 feet, which corresponds to the depth of saturated sand deposits encountered during the drilling of the facility's production well.

### 1.2.2 Groundwater Flow Direction

Review of historical groundwater elevations from site monitoring wells have generally indicated that local groundwater flow at the WWTP is generally radial from the disposal ponds. Figure 1 illustrates "typical" groundwater flow vectors based on measuring water in the sites existing groundwater monitoring wells. As previously stated, these data may be misleading due to the sporadic presence of water in many of the sites monitoring wells and the likely perched nature of water when it is available. Furthermore, historic monitoring reports commonly reference surface water entering site monitoring wells due to poor sanitary features at the wellhead.

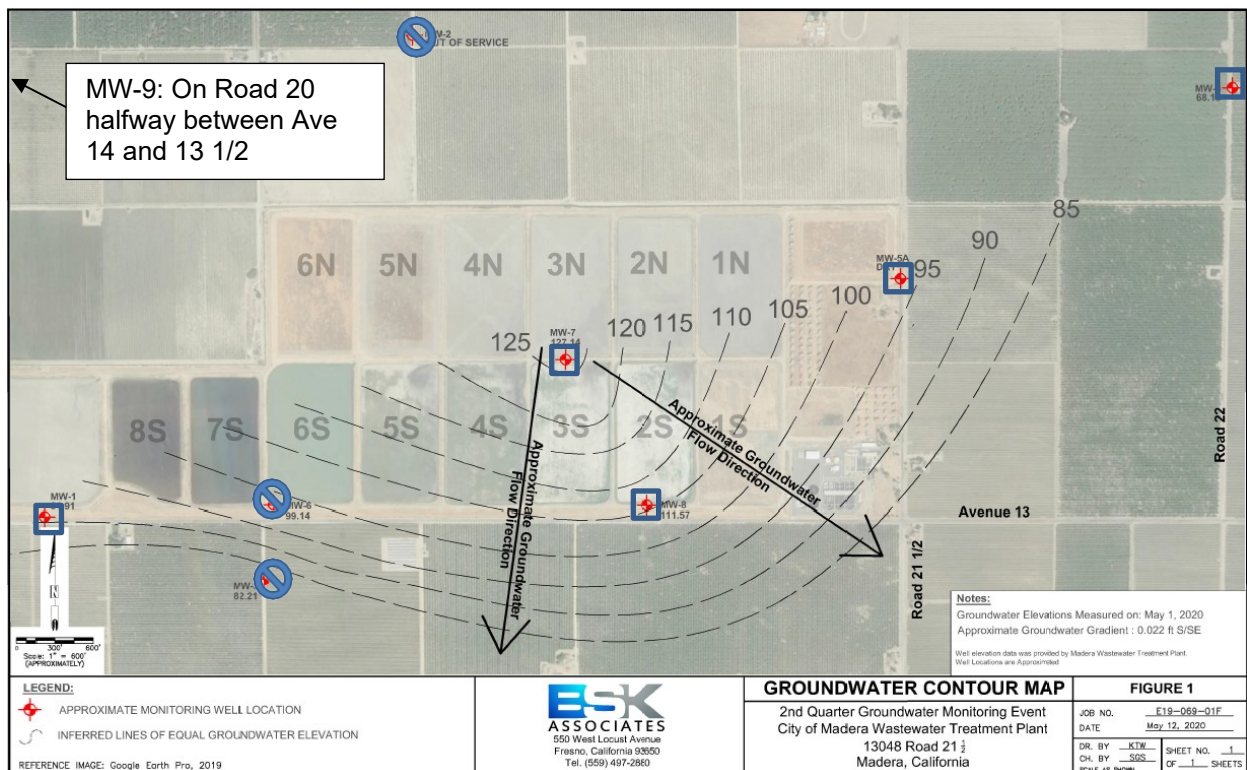


Figure 1 Groundwater Elevation Contour Map (Prepared by BSK Associates)

# GROUNDWATER MONITORING WELL INSTALLATION WORKPLAN

## Groundwater Monitoring Well Installation

## 2.0 GROUNDWATER MONITORING WELL INSTALLATION

### 2.1 PROPOSED MONITORING WELL LOCATION AND RATIONALE

The purpose of groundwater monitoring is to provide a measure of compliance with regards to the State Antidegradation Policy. Currently, the existing monitoring network is generally not sufficient to consistently assess groundwater elevations and water quality. Accordingly, a revised groundwater monitoring network is therefore proposed, designed to assess static groundwater elevations and quality more consistently. Accordingly, four of the WWTP wells are proposed to be deepened and into the first saturated aquifer. These wells include MW-4, MW-5A, MW-7, and MW-8 (Figure 1). One additional well is proposed to assess ambient water quality (MW-9) and is located halfway between Avenue 13 ½ and 14 on Road 20. Monitoring well MW-1 will remain, while monitoring wells MW-3 and MW-6 will be destroyed by pressure grouting, or as otherwise directed by Madera County Environmental Health. Note monitoring well MW-2 cannot be located and is assumed to have been destroyed by farming operations (on land not under the control of the City). Following the installation of the proposed monitoring wells, detailed water chemistry, including MRP required constituents and general mineral chemistry will be assessed for a period of one year.

### 2.2 MONITORING WELL SPECIFICATIONS

The monitoring wells will be drilled to the target depth using either sonic drilling method, or alternative approved method, with a minimum nominal borehole diameter of 10 inches. For the purpose of site characterization, we propose drilling each borehole to the first saturate water bearing formation anticipated to be a depth of up to approximately 220 ft. bgs. The depth may however be reduced based on site-specific conditions encountered during drilling. Soil samples will be collected from the borings every five (5) feet and logged in accordance with the Unified Soil Classification System. To accommodate overdraft in the region, each well will be designed with a 30-foot screen. The location of the screen section will be based on site specific lithology and field conditions and all attempts will be made to have 5 feet of the screen installed above the top of the water bearing strata. Additionally, the monitoring wells will be designed and installed according to the California Well Standards and permit conditions of the Madera County Department of Environmental Resources with the following details:

**Minimum Borehole Diameter** – Nominal 10-inch.

**Borehole Depth** – Estimated to be up to approximately 220 feet below ground surface. Final borehole depths will be based on the lithology encountered during drilling and may be subsequently modified.

**Well Depth** – Estimated to be up to approximately 220 feet bgs. Well depths are intended to allow for normal fluctuations of the groundwater table. Final well depths will be based on the lithology encountered during drilling.

**Casing Nominal Diameter** – 4-inches.

## GROUNDWATER MONITORING WELL INSTALLATION WORKPLAN

### Groundwater Monitoring Well Installation

**Casing Materials** – ASTM F480 Schedule 40 flush threaded PVC blank casing. Top of casing shall be approximately two feet above ground surface or slightly below grade in traffic rated Christy boxes.

**Well Screen** – Factory slotted ASTM F480 Schedule 40 PVC well screens. Approximately 30 linear feet of flush threaded well screen will be placed in the boreholes.

**Slot Aperture Width** – The well screens will be installed with a 0.020-inch aperture width. The gradation is based on the initial selection of the filter pack and is sized to retain, at a minimum, 90% of the filter pack.

**Filter Pack** – The filter pack proposed is a 2/12 type (12 x 20 mesh) Monterey Silica Sand, or equivalent. The proposed monitoring wells are intended for sensitive water quality determinations; therefore, all filter pack materials shall be handled to avoid contact with contaminants as discussed in Section 11 of the California Well Standards. The filter pack will extend five feet above the top of the screened interval of the wells.

**Transition Seal** – Approximately one to two feet of bentonite chips or pellets will be placed on top of the filter pack providing a transitional seal from the filter pack to the sanitary surface seal.

**Surface Seal** – The sanitary surface seal shall consist of a minimum of 50 feet of neat cement, cement grout, or high solids bentonite grout and extend from ground surface the top of the bentonite transition seal.

**Protective Surface Casing** – Six linear feet of nominal 8-inch diameter ¼-inch wall steel casing, or 8 x 8-inch square tubing, equipped with a lockable, removable cap will provide the protective surface casing for above grade completions. This casing will be cemented in place from approximately two feet above ground surface to a depth of four feet. The surface completion shall consist of a 4' x 4' x 4" thick or 3.5'-diameter x 4" thick concrete slab, surrounding the well head. Should a well be installed in a public road or right-of-way, or otherwise require an at-grade completion, it will be completed with a traffic rated Christy Box, cemented in place with a concrete apron designed to shed water away from the well.

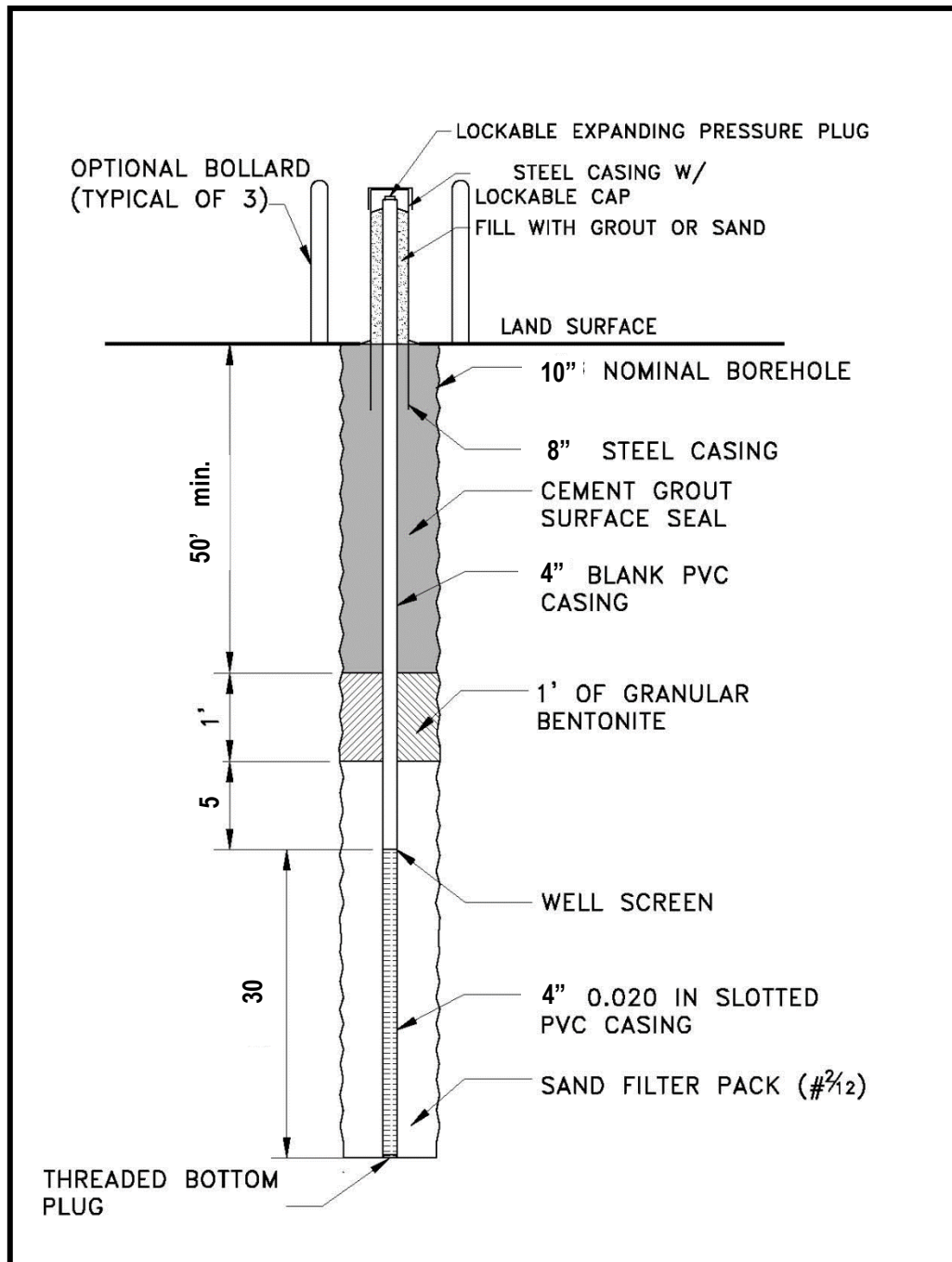
**Well Cap** – 4-inch diameter expandable, lockable pressure plug.

The locations of the new groundwater monitoring wells are illustrated in Figure 1. Additionally, at a minimum, equipment decontamination will consist of a hot water pressure wash of the drilling equipment immediately prior to the start of drilling each well. Figures 2 and 3 depict the typical monitoring well completion details anticipated for the site.

# GROUNDWATER MONITORING WELL INSTALLATION WORKPLAN

## Groundwater Monitoring Well Installation

Figure 2 Typical Monitoring Well Details

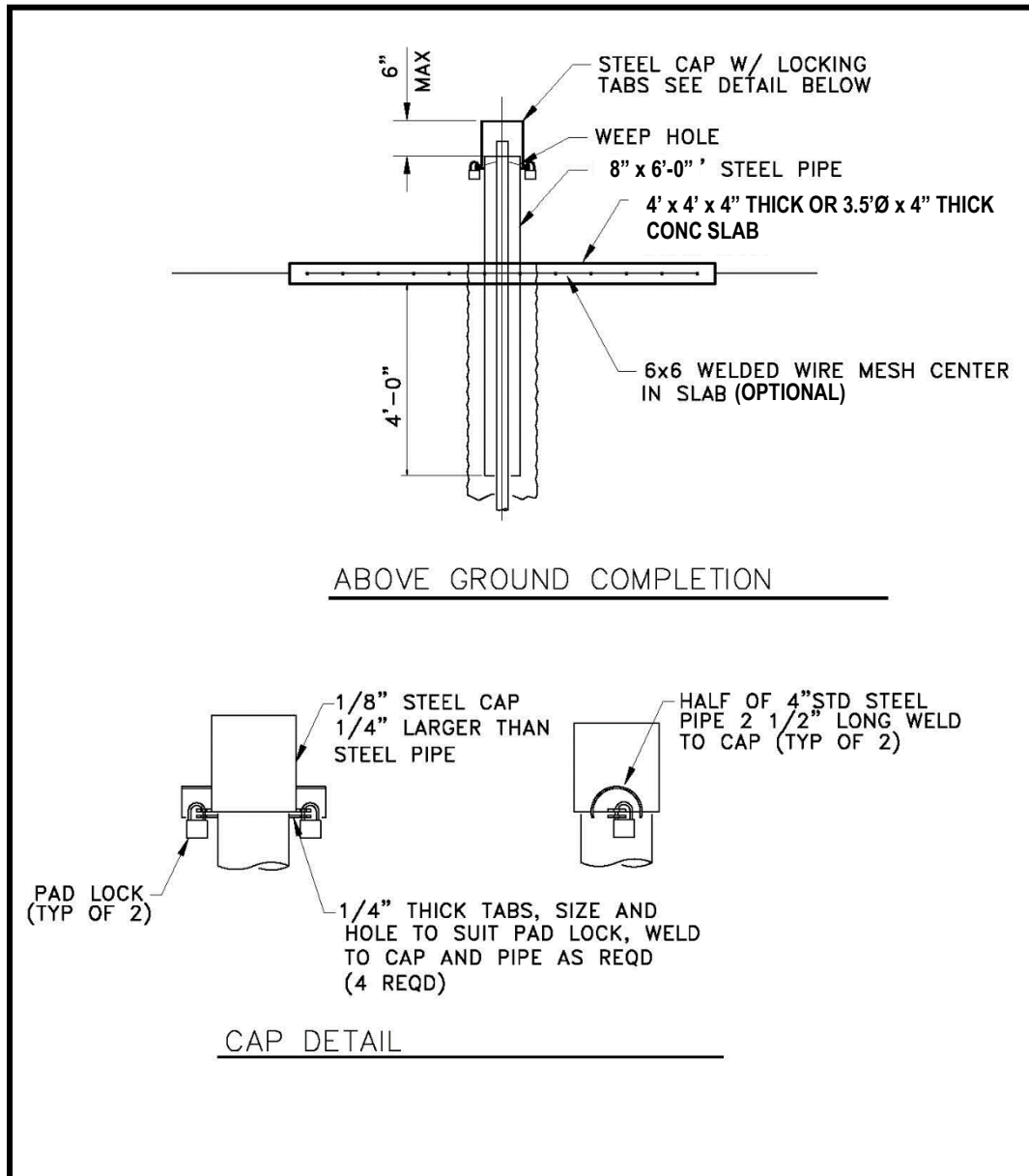




# GROUNDWATER MONITORING WELL INSTALLATION WORKPLAN

## Groundwater Monitoring Well Installation

Figure 3 Monitoring Well Typical Surface Completion Details



# GROUNDWATER MONITORING WELL INSTALLATION WORKPLAN

## Groundwater Monitoring Well Installation

### 2.3 WELL DEVELOPMENT

The drilling contractor will develop the wells using a combination of methods. Where practicable and where formations stability permits, well development by gently swabbing the well with a surge block will be initiated before the installation of the bentonite transitional seal or neat cement/cement grout sanitary seal to ensure settling of the filter pack prior to sealing the annulus. Once the seal has been installed and sets up for no less than 12 hours, further development by vigorously swabbing the well with a surge block and manual bailing will continue until the concentration of suspended solids in the water bailed from the well is sufficiently low to permit pumping with a portable submersible pump or by air lifting. Accumulated fill shall be removed from the bottom of the well screen.

Development will continue until the discharge water runs clear to the unaided eye and/or field measured turbidity is 5 n.t.u., or less. During the pumping phase of well development, the pump/isolation tool will be moved up and down the entire length of well screen, maximizing the removal of accumulated fines.

Water generated from the well during development will be discharged directly to land.

### 2.4 WELL DISSINFECTION

It has been our experience that the effectiveness of well disinfection procedures vary. As such, the proposed monitoring well will not be disinfected unless monitoring results indicate persistently elevated densities of coliform organisms over several consecutive quarters of groundwater monitoring. Should coliform fail to decline over time, well disinfection may be conducted in accordance with ANSI/AWWA Standard C654-03, Disinfection of Wells (2003).

### 2.5 SURVEYING

Once installed, the new and existing monitoring wells will be surveyed by a qualified California licensed land surveyor. These wells will be located with regards to both the California State Plane and Geographic Coordinate Systems, relative the North American Datum, 1983 (NAD83). The elevation of the north quadrant of each PVC well casing will be surveyed to within 1/100<sup>th</sup> of a foot accuracy, relative to the National Geodetic Vertical Datum 1929 (NAVD 29) and reported as feet above mean sea level, consistent with other monitored wells at the site.

Care shall be exercised during surveying to avoid introduction of foreign material into the well. Rod or receiver bottoms shall be wiped with a chlorine solution prior to setting on well casing for each well.

### 2.6 SOIL SAMPLING

No soil samples will be collected at the site other than those used to classify the geologic materials penetrated by the boreholes.

Spoils from drilling will be dispersed to land at the site.

# GROUNDWATER MONITORING WELL INSTALLATION WORKPLAN

## Groundwater Monitoring Well Installation

## 2.7 WELL WATER MONITORING

### 2.7.1 Water Level Measurements

Depth to water measurement will be completed and recorded for all wells prior to initiating purging and sampling at any groundwater monitoring location. Additionally, the well compression cap should be initially removed from all wells allowing a minimum of 15 to 30 minutes to elapse so that groundwater levels stabilize prior to measurement. It should be noted that more or less time may be required for groundwater depths to stabilize, based on site specific hydrogeologic factors. Water-level measurements will then be taken with an electronic tape (sounder) and the same sounder will be used at all monitoring locations, assuring reproducibility of the results. Water levels will be recorded to the nearest 0.01 foot and will be referenced to the surveyed datum (north quadrant of the PVC well casing). Depth to groundwater measurements will then be converted to groundwater elevations and used to develop a groundwater elevation contour map, in order to identify possible groundwater flow direction and gradient.

### 2.7.2 Purging

A minimum of three well volumes will be purged from the well prior to sampling. Purging will be accomplished by pumping with a portable pump or by manually bailing. Field water quality parameters (temperature, pH, and electrical conductivity) will be collected at the beginning of purging and after each well volume has been removed. This information shall be recorded on a well -specific field data form.

Well Volume (WV) = water column height<sub>ft</sub> \*  $\pi r^2$  \* 7.48 gal/ft<sup>3</sup>, r<sub>ft</sub> = radius of well in feet

Minimum Purge Volume = 3\*WV;

Purging will continue until at least three well volumes have been removed, and the monitored field parameters pH, temperature, and conductivity vary by less than 10% of the previous well volume recording. Data will be recorded on well-specific data sheets.

### 2.7.3 Sample Collection

Groundwater samples will be collected from the new wells as part of the next regularly scheduled groundwater monitoring event and include general mineral chemistry and the stable isotopes of water.

### 2.7.4 Quality Assurance/Quality Control

All data collection will be in accordance with proper sampling and field measurement procedures as outlined below. The QA/QC program components for the field include:

- Decontamination of field sampling equipment;
- Calibration of all field measuring equipment;
- Sample logging and chain of custody procedures;
- Sample labeling; and,

## GROUNDWATER MONITORING WELL INSTALLATION WORKPLAN

### Groundwater Monitoring Well Installation

- Ensuring that all samples are obtained, maintained, and shipped according to QA/QC procedures.

All equipment used to obtain field measurements (pH meter, specific conductance meter, *etc.*) will be calibrated according to manufacturer's directions. Calibration will be performed prior to the beginning of the sampling event.

#### 2.7.5 Decontamination

Non-dedicated sampling equipment will be cleaned by hand and on polyethylene sheeting or in contained bins. Cleaning will include:

- If necessary, removing adhering soil particles by scrubbing with a hand brush in solution of potable water and a non-phosphate detergent (Alconox);
- Rinsing with free-flowing potable, deionized, or distilled water; and,
- Rinsing with chlorine solution prepared with potable, deionized, or distilled water.

Dedicated hand bailers will be rinsed with potable water. If this does not result in an acceptable cleansing of the bailer (e.g. soil particles adhere to the bailer), decontamination will follow that of non-dedicated equipment.

#### 2.7.6 Field Forms and Sampling

All field forms for activities conducted during the field program will be maintained. Information concerning sample collection procedures, sample identification, and any other pertinent information or observations will be recorded on the field forms. Copies of the field forms will become part of the project file for further reference.

Should samples be collected, a sample identification system will be used to identify each sample location and sample type collected from the facility. This will provide a tracking system to allow for retrieval of information and to ensure that each sample is uniquely numbered. The sample identification will consist of the following minimum information:

- Site identification;
- Date and time sampled; and,
- Sample location.

All samples collected for analytical testing will be delivered to an approved analytical laboratory within 48 hours of collection, or within method holding time, whichever is shortest. During sample shipment, samples will be kept on ice or synthetic substitute (e.g. "blue ice") in an insulated container at a maximum temperature of 4°C.

A chain of custody record, which documents possession of samples from time of collection to laboratory analysis, will be maintained. Each person who has possession of the samples will complete applicable

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sections of the form when samples are received or relinquished and when sample possession is transferred.

The chain of custody form will be sent in the shipping container along with the samples. The sample collector will have the receiving personnel of the laboratory sign the chain of custody form to complete documentation of sample possession from time of collection to delivery to the laboratory. The laboratory will provide a photocopy of this form for the sample collector's records.

#### **2.7.7 New Well Proposed Monitoring**

The newly constructed monitoring wells will be monitored for both MRP required constituents as well as general mineral chemistry and the stable isotopes of water for a period of four (4) quarters, with the purpose of establishing a geochemical signature for water quality at these new locations. Following the initial four quarters of monitoring the wells will revert to the MRP required monitoring program.

# GROUNDWATER MONITORING WELL INSTALLATION WORKPLAN

Health and Safety Plan

## 3.0 HEALTH AND SAFETY PLAN

### 3.1.1 Personal Protective Equipment

Risk of exposure to hazardous chemical or biological agents is minimal. Although the exposure risk is small, the work crew shall avoid skin contact with the soils and splash with fluid from the boring or completed monitoring well. The practice of good personal hygiene by crew is warranted and will further reduce the exposure risk. Affected areas of the body shall be washed with clean soapy water followed by a clean water rinse.

Level D personal protection equipment comprising of a standard work uniform (coveralls, hard hat, steel-toed boots, safety glasses, hearing protection, etc.) shall be in practice during work at the site.

### 3.1.2 Emergency Procedures/Contacts

The telephone numbers of the appropriate entities to be contacted in case of emergency are as follows:

<b>Madera Police Department:</b>	Emergency 911; Non-emergency (559) 675-4200
<b>Fire Department:</b>	Emergency 911; Non-emergency (559) 661-5499

The nearest trauma center or **emergency medical facility** is:

Madera Community Hospital  
1250 E Almond Avenue  
Madera, CA 93637  
Phone: (559) 675-5555

### 3.1.3 Regulatory Permits

Prior to drilling, permits will be obtained for well construction from the Madera County Environmental Health Department located at:

**Merced County Environmental Health Department**  
200 W 4<sup>th</sup> St.  
Madera, CA 93637  
Phone: (559) 675-7823

# GROUNDWATER MONITORING WELL INSTALLATION WORKPLAN

Professional Seals and Certifications

## 4.0 PROFESSIONAL SEALS AND CERTIFICATIONS

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



Thomas W. Butler, PG, CHG, CEG  
Senior Hydrogeologist/Geochemist