

# Attachment 5. Work Plan

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The following tasks describe in detail the methodologies and anticipated requirements to complete each component of the project. Each task presents a costs and deliverables. Detailed budget and schedule information are included in Attachments 6 and 7 of this application.

## **Task 1 – CEQA Documentation, Permitting, and Access**

This task provides CEQA compliance, and acquires the appropriate permits for installation of the monitoring well and other project activities. CEQA compliance and County permits are essential for project execution, because they are required by law.

### **Task 1.1 CEQA Exemption Documentation**

CEQA requires that the project work tasks be evaluated for their impacts to the environment. The proposed project is anticipated to qualify for an Article 19 Categorical Exemption 15306 - Information Collection. As such, Lassen County will submit documentation to support this assertion for public review prior to initiating drilling activities, maintain documentation for the life of the project and file documentation with the California state clearinghouse.

#### ***Deliverable:***

- One set of CEQA exemption documents

#### ***Cost Assumptions***

- CEQA exemption documents will require six days of staff time to prepare and review
- There are no direct costs expected.

### **Task 1.2 Well Drilling and Encroachment Permits**

A well permit will be completed and submitted to the Lassen County Department of Planning and Building Services for approval prior to initiating drilling activities for the proposed monitoring well. As part of obtaining the well permit, a well construction work plan will be prepared as required by California Department of Water Resource Standards (DWR, 1981, 1991). The work plan will include the anticipated well designs and will be reviewed by County staff. The drilling work plan will be prepared to support the application and document the proposed well installation and development program.

The anticipated drilling locations will be sited on a public right of way providing access as identified in Task 4, Data Gap Analysis. Access documentation and encroachment permits will be completed and maintain by the Lassen County for the life of the wells.

#### ***Deliverables:***

- One set of applicable permit applications to install monitoring wells (including the Well Construction Work Plan).

#### ***Cost Assumptions***

- Permits will require three days of staff time to prepare and review and will be submitted within 30 days of receiving grant funding authorization.
- Lassen County Department of Planning and Building Services will charge \$140 per completion, three completions planned for a total of \$420 for necessary well permit. Permit

costs estimated from current Lassen County Department of Planning and Building fee list (dated December 11, 2011) included in Attachment A.

- This task is anticipated to be completed within 60 days of funding authorization.
- Total estimated cost for this task is \$7,991.

## **Task 2 – Public Outreach**

Public outreach is an essential component of the BMO development process. Communication with the public through newsprint, internet announcements, and other means will be essential to reach as many potential monitoring partners for the California Statewide Groundwater Elevation Monitoring program (CASGEM) enhancement program. Public outreach will be focused on providing project information to the broadest section of the public possible.

### **Task 2.1- Develop Public Outreach Plan**

The County will develop and implement a public outreach plan associated with the CASGEM enhancement project. The objective of the outreach plan is to detail the process of public notification and participation in the monitoring program and to describe how the outreach will be performed. The outreach plan will also discuss how the County will inform and involve other public entities whose service area overlies groundwater basins, both within and external to the County, including the State of Nevada.

#### ***Deliverables:***

One Public Outreach Plan. The Public Outreach Plan will describe the number and timing of public meetings, stakeholder meetings, public announcements, outreach flyers, and internet outreach activities to be undertaken during the project.

#### ***Cost Assumptions***

- Developing the Public Outreach Plan will require 5 days of staff time to prepare and review. It is anticipated to submit the Public Outreach Plan within 60 days of funding authorization.
- Total estimated cost for this task is \$4,982.

### **Task 2.2- Implement Public Outreach Plan**

Following completion of the outreach plan, the County will implement activities described in the outreach plan. Outreach efforts will focus on public notification and participation and interaction with public entities whose service areas overlay groundwater basins. Two presentations to the Board of Supervisors will be performed. The first will introduce the Board to the project, and the second will seek Board approval and adoption of the updated CASGEM Monitoring Plan. Two presentations to the Basin Management Objective (BMO) Groundwater Committee will be used to gain approval from committee members and to utilize the member's influence in the community to improve responses to requests for permission to publish well information. This first meeting allows the Groundwater Committee to assist the project in locating and contacting existing monitoring well owners for acquiring permissions during Task 3. The second BMO meeting will assist the project in locating and contacting existing well owners with inquiries about their willingness to be monitoring wells during Task 5. A project website will be developed to disseminate project information to the public.

#### ***Deliverables:***

Public outreach activities will include at a minimum:

- Two presentations to the Lassen County Board of Supervisors during open session. These are anticipated to occur within the following month after the Outreach Plan is completed. The

other meeting is planned at the end of the project after the CASGEM Monitoring Plan is updated.

- Two presentations to the Lassen County Basin Management Objective (BMO) Groundwater Committee. One presentation is planned to be held the month following the first Lassen County Board of Supervisors meeting. The second meeting is planned to occur after the Data Gap Analysis TM (Task 4.3) is completed.
- Development of a project website will be hosted by a commercial provider for the project duration.
- Development and distribution of an estimated 50 - one-page, 11x17 color, one side flyers to local stakeholders

### ***Cost Assumptions***

- Each presentation will require 3 days of staff time to prepare and perform.
- The project website will require 5 days of staff time to prepare and update throughout the life of the project.
- Flyers will require 2 days of staff time to develop and distribute.
- The website will require \$300 in hosting fees.
- Total estimated cost for this task is \$18,913.

## **Task 3 – Update Current Monitoring Grid Owner Permission**

The current monitoring grid in Lassen County utilizes 104 private wells, shown in Figure 1. Under the CASGEM program, monitoring wells are required to list construction and location information. This information can only be shown in the CASGEM program with well owner permission. Currently, none of the 104 wells monitored in Lassen County have well owner permission. This task works to acquire consent to publicize well information from current monitoring well owner, receive permissions from well owners, update CASGEM with the owner's permission, and document the work performed.

### **Task 3.1 Contact Current Monitoring Well Owners**

This task will contact the 104 current well owners to request permission to make their well construction information public. Contact will be made by mail initially, with an additional letter and phone calls to follow up with well owners who do not reply. Signed permission forms will be submitted to DWR. Well owners who are responsive will be asked if their well construction information may be posted in the CASGEM system. Additionally well owners will be asked to confirm well construction information on their wells.

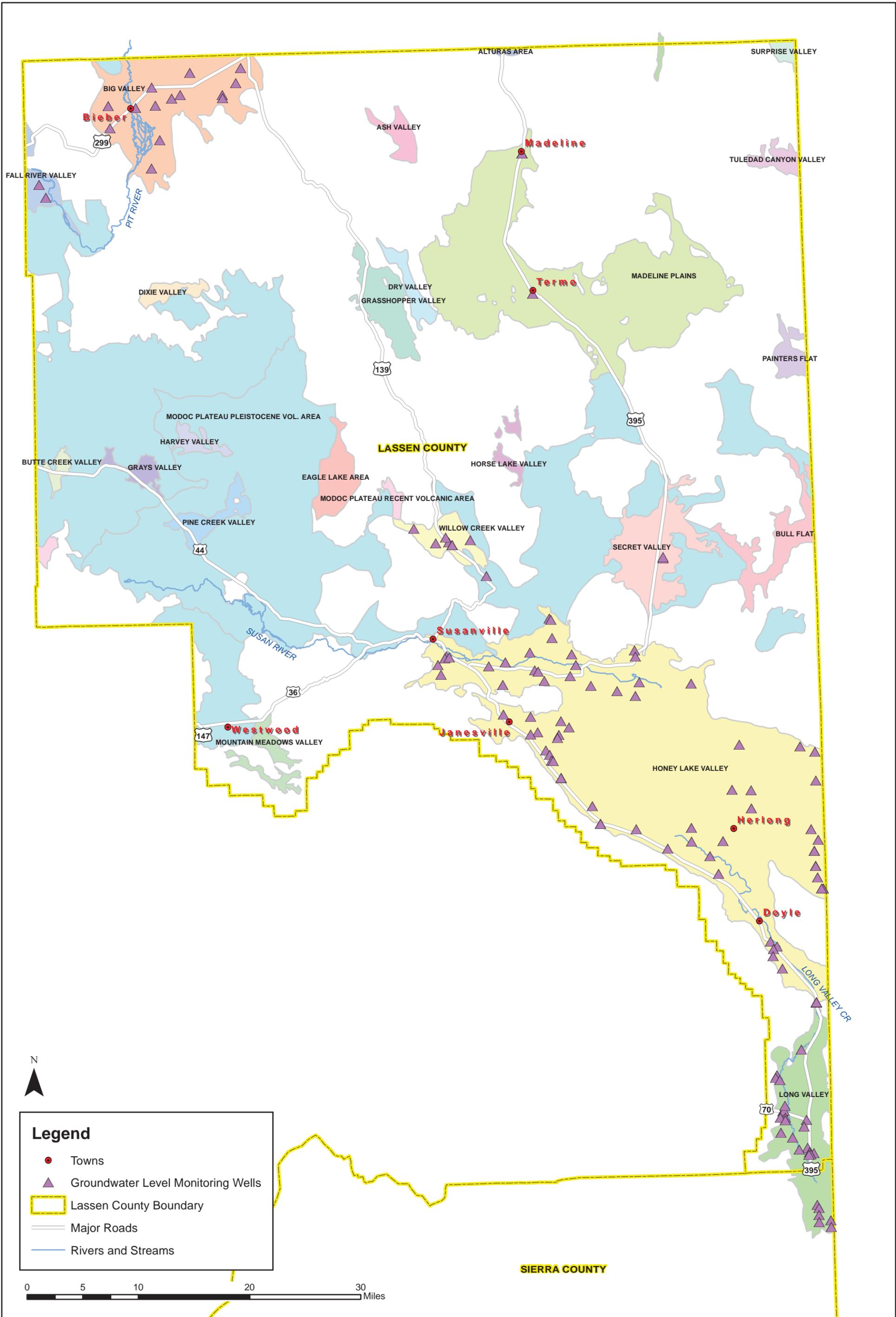
Based on outreach experience gained during the implementation of Lassen County's Basin Management Objective (BMO) program, it is expected that less than half of the current well owners will be able to be reached, communicated with, and convinced to allow their well information to be public.

### ***Deliverables:***

- Signed permission forms from willing landowners.

### ***Cost Assumptions***

- Contacting the 104 well owners by mail twice will require seven days of staff time.



- Contacting remaining well owners who do not reply to mail by phone will require ten days of staff time.
- Mailing costs are estimated to be \$100.
- This task will begin once the Outreach Plan is completed and presented to the Lassen County Board of Supervisors. It may take up to 4 months to complete.
- Total estimated cost for this task is \$11,920.

### **Task 3.2 Update CASGEM System**

Wells that receive permission from well owners will be updated in DWR's CASGEM system as having owner permission. Each well is anticipated to be updated manually in the browser based system.

#### ***Deliverables:***

- Updated CASGEM system entries for Lassen County's monitoring wells reflecting the permissions granted in Task 3.1.

#### ***Cost Assumptions***

- Updating CASGEM manually will require 3 days of staff time.
- Total estimated cost for this task is \$2,467.

## **Task 4 – Data Gap Analysis**

After current monitoring well owners have signed permission forms, the remaining monitoring grid will be evaluated for its adequacy to provide long term regional scale monitoring for Lassen County groundwater basins. Lassen County is a diverse county containing whole or portions of 24 different groundwater basins. Currently groundwater level monitoring occurs in seven of the 23 groundwater basins. The number of basins monitored may be reduced after well owner permissions are granted or denied by well owners. Because the remaining CASGEM compliant monitoring wells are likely to be insufficient to provide long term regional scale monitoring, a data gap analysis will be conducted to identify the best areas to increase monitoring in Lassen groundwater basins. Relying on the completion of Task 3 to be complete, Task 4 will begin immediately thereafter and may take up to 2 months to complete.

### **Task 4.1 Review Monitoring Information**

This task will review information about wells that have consent to be publicly posted to CASGEM by Task 3.2. The updated CASGEM compliant monitoring wells will be evaluated for spatial distribution, groundwater basin coverage, and depth (screened interval) distribution (if well construction information is available). If construction information is not immediately available, a search of DWR's well log database will be conducted to find additional information.

#### ***Deliverables:***

- The results from this task will be utilized in Task 4.2.

#### ***Cost Assumptions***

- Review of monitoring information will require 4 days of staff time, including DWR well log review.
- Total estimated cost for this task is \$3,645.

### **Task 4.2 Identify Areas in Need of Increased Monitoring**

This task will identify regions and specific targeted areas that will benefit from increased groundwater level monitoring, and are areas where existing wells exist to utilize as new monitoring wells. This task will compare the existing CASGEM compliant monitoring identified in Task 4.1 to DWR's well log database for Lassen County, and DWR Bulletin 118 descriptions of Lassen County groundwater basins, as well as land use information to identify areas and groundwater depths that would benefit from increased groundwater level monitoring and have existing wells to monitor.

To assist in this evaluation well logs will be collected from DWR that are located in Lassen County groundwater basins. These well logs will be located utilizing township, range, and section information to identify which groundwater basin they fall in. For each groundwater basin, a cumulative frequency curve showing the number of wells and their depths will be developed. The cumulative frequency curve will be compared with existing monitoring and used to help identify the depth intervals that are used by local wells, which are the depth intervals that would benefit from increased monitoring.

Lastly, this task will identify areas that would benefit from dedicated monitoring well installation. Several areas in Lassen County may require additional monitoring, but do not have existing wells in the area. These areas would benefit from installation of new dedicated monitoring wells. This task will identify these areas, and in addition identify one location to install a new dedicated multi-completion groundwater monitoring well as part of this project. The new well location will be on public right of way to ensure access for installation.

#### ***Deliverables:***

- The results from this task will be summarized in Task 4.3

#### ***Cost Assumptions***

- Identification of areas in need of increased monitoring will require 12 days of staff time, including DWR well log review and may take up to 2 months to complete.
- Total estimated cost for this task is \$10,491.

### **Task 4.3 Technical Memorandum**

After completion of Tasks 4.1 and 4.2, a TM will be prepared summarizing the methods used and results of the data gap analysis. The report will be finalized after review by County staff and will include recommended areas, well depths and potential screen intervals.

#### ***Deliverables:***

- One Data Gap Analysis TM that documents the results of Task 3.

#### ***Cost Assumptions***

- The Data Gap Analysis TM will require five days of staff time to prepare.
- Total estimated cost for this task is \$4,455.

## **Task 5 – Identify, Contact, and Acquire Permission to Use New Monitoring Wells**

This task will select new existing wells and work to verify well information and receive permission from well owners for each well's inclusion in Lassen County's CASGEM monitoring program. The task will begin once the Data Gap Analysis TM has been completed and may take up to 6 months to complete. It is planned to occur during the winter season of 2013/2014 such that drilling may begin in the spring of 2014.

### **Task 5.1 Identify New Monitoring Wells and Investigate for CASGEM Inclusion**

This task will utilize the well logs collected in Task 4.2 to identify wells that are of appropriate depth and spatial distribution to enhance Lassen County's CASGEM monitoring grid. Using contact information from DWR's well completion log database, property APN plots, and internet based research tools, identified well owners will be contacted and their participation in the CASGEM monitoring program will be requested. If well owner permission is granted, a site visit will be conducted to verify well location utilizing Global Positioning System (GPS), collect well access information, photos of the well, and collect information necessary for the well to be added to the CASGEM monitoring grid.

The goal of this task is to add more wells to the CASGEM monitoring grid than are expected to be lost during the efforts to collect permissions on the existing grid to be performed in Task 3, which is approximately 50 wells.

#### ***Deliverables:***

- The results from this task will be summarized in Task 5.3.

#### ***Cost Assumptions***

- 50 new wells will be added to Lassen County's CASGEM monitoring program.
- Identifying new wells for inclusion and contacting well owners to gain permission to include in CASGEM will require 10 days of staff time and up to 5 months to complete.
- Conducting site visits will require 4 hours per site visited, with 50 sites anticipated.
- Mailing costs are estimated to be \$100.
- Site visits will require travel further than 50 miles from project headquarters. Vehicle costs (mileage and travel time) to reach locations throughout Lassen County are estimated to be \$3,000.
- Total estimated cost for this task is \$30,286.

### **Task 5.2 Update CASGEM System**

New wells that receive permission from well owners will be updated in DWR's CASGEM system as having owner permission. Each well is anticipated to be updated manually in the browser based system.

#### ***Deliverables:***

- Updated CASGEM system entries for Lassen County's monitoring wells reflecting the new wells added with permissions granted in Task 5.1

#### ***Cost Assumptions***

- Updating CASGEM manually will require 3 days of staff time.
- Total estimated cost for this task is \$2,365.

### **Task 5.3 Technical Memorandum**

After completion of Tasks 5.1 and 5.2, a TM will be prepared summarizing the methods used and results of the work performed to include new wells in the Lassen CASGEM program. The report will be finalized after review by County staff and will include a detailed listing of wells added to the CASGEM program.

#### ***Deliverables:***

- One New CASGEM Well TM that documents the results of Task 5.

### **Cost Assumptions**

- The New CASGEM Well TM will require five days of staff time to prepare.
- Total estimated cost for this task is \$4,455.

## **Task 6 – Installation of Groundwater Monitoring Well**

This task involves the installation of one triple completion monitoring well. The location of this well will be determined by the data gap analysis described in Task 3. Monitoring well installation and analysis provides detailed geologic logs and information with identification of formation contacts for assessment of water bearing units and aquifers. This well will be added to the California Statewide Groundwater Elevation Monitoring (CASGEM) system to provide water level data. This task will take approximately 2 months to complete. Once permission from the well owners (Task 5.1) is secured, contracting the well driller, and surveyor will begin and likely before the completion of the CASGEM update (Task 5.3).

### **Task 6.1 Drill Multi Completion Monitoring Well**

Prior to drilling, the Underground Service Alert (USA) will be contacted for clearance of underground utilities.

It is anticipated that the multiple completion monitoring well will be completed to an approximate depth of 500 feet below ground surface (bgs). Lassen County will contract with a Consultant that has extensive experience overseeing the drilling of wells to similar depths, construction of multi-completion monitoring wells, and ability to develop protocol for identifying geologic formation contacts from lithologic samples. The drilling method used will be selected based on the ability to provide depth-discrete lithologic samples and to complete wells to depths up to 500 feet bgs with borehole diameters up to 12-inches. Drill cuttings and groundwater produced during development will be contained and disposed properly at an offsite location. Drilling of the monitoring well will be performed by a valid C-57 license contractor.

During drilling of the pilot boring, the lithology will be recorded on a geologic boring log from the cuttings collected during drilling. If requested, portions of the bulk samples will be provided to State and local agencies. Lithologic samples will be logged by a California Professional Geologist proficient in the methods described in ASTM D2488-84 and geologic formation contacts identified in the area. After completion of the pilot boring, the hole will be conditioned and prepared for completion of a downhole geophysical log. Methods used for the downhole geophysical logging will include resistivity, spontaneous potential, spectral gamma, and caliper logs.

### **Deliverables:**

- Data collected during this task will be included in the TM described in Task 2.4

### **Cost Assumptions**

- Drilling and logging of samples will require seven days of staff time to provide oversight to drilling operations.
- Oversight will be performed for 10 hours per day of drilling.
- The drilling of the pilot boring for the monitoring well will cost \$46,130 based on an estimate provided by Eaton Drilling, included as Attachment B.
- Total estimated cost for this task is \$52,716.
- Drilling will be performed using mud rotary techniques.

### **Task 6.2 Construct Multi Completion Monitoring Well**

Using the information collected during Task 2.1 during the drilling of the pilot boring, a California Certified Hydrogeologist will develop the final well design to include screen intervals, slot size, and gravel pack size and gradation. Prior to construction, the finalized well design will be reviewed by Lassen County staff.

After the final well design has been approved, the pilot boring will be enlarged to 12 inches. Once the desired depth of the borehole has been obtained, well installation methods will be consistent with Chapter 6.28 of the Sacramento County Code and Section 13801 of the California Water Code. Well casing (blank and screen) is anticipated to consist of 2.5-inch diameter (outside diameter), schedule 80 PVC. Triple completion well screens and casing will be located in the borehole using centralizers. Gravel pack will be placed at each screen interval and the well surged to settle the gravel pack around the well screen and continue until the gravel pack stops settling (preliminary development). Additional gravel pack will then be added to the desired depth. A bentonite seal at least 2-feet thick will be placed immediately above the gravel pack. A volume calculation will be conducted to estimate the volume of a bentonite based grout needed to place between the lower screen and upper screen. Fine mesh sand will then be placed to 1 foot below the next screen interval and the process for placement of gravel pack and bentonite seal repeated as discussed above for the remaining completions. The upper most annular space will then be grouted with a bentonite or cement grout to approximately 2-feet bgs. A wellhead completion will then be placed over the well for security and protection. After completion, the well will be surveyed by a California licensed surveyor.

#### ***Deliverables:***

- Data collected during this task will be included in the TM described in Task 2.4

#### ***Cost Assumptions***

- Well construction will require two days of continuous 24 hour per day oversight.
- The monitoring well will cost \$20,095 to construct based on an estimate provided by Eaton Drilling, included as Attachment B.
- Surveying of well elevations are estimated to cost \$2,500.
- Total estimated cost for this task is \$28,600.

### **Task 6.3 Develop Monitoring Wells**

No earlier than 24-hours after the grout placement, the well will be developed using one or more of these methods: surging, air lifting, over pumping, and bailing. Generally, the well will be developed until it is free of suspended sediment and turbidity values are less than 10 NTU.

#### ***Deliverables:***

- Data collected during this task will be included in the TM described in Task 2.4

#### ***Cost Assumptions***

- Well development will require four days of staff oversight.
- The monitoring well will cost \$1,520 to develop based on an estimate provided by Eaton Drilling, included as Attachment B.

### **Task 6.4 Technical Memorandum**

After completion of the well installation and development program, a Field Investigation Technical Memorandum (TM) will be prepared summarizing the methods used and results of the program. The report will be finalized after review by Lassen County staff and will include an inspection and certification by a California Professional Engineer or Hydrogeologist that the project has been

completed in accordance with submitted final plans and specifications in accordance with the contract.

***Deliverables:***

- One Field Investigation TM that describes monitoring well installation activities. The TM will include a boring log, DWR required well completion report, well construction as-built diagram, records of well development, and surveyor's map with coordinates and elevation of the ground surface and top of casings.

***Cost Assumptions***

- The Field Investigation TM will require seven days of staff time to prepare and review.
- Total estimated cost for this task is \$4,624.

## **Task 7 – Update Lassen County Monitoring Plan**

This task will update the existing Lassen County CASGEM compliant Monitoring Plan with the new monitoring wells identified and installed by this project. The updated CASGEM plan will include updated maps of monitoring well locations, and rationale for remaining unmonitored basins. The updated Monitoring Plan will ensure full compliance by Lassen County as a monitoring agency under CASGEM. After development of the Monitoring Plan, adoption of the updated Monitoring Plan will be sought with the Lassen County Board of Supervisors. The meeting for the adoption hearing is included under Task 2.2 outreach activities. Finally, the updated Monitoring Plan will be submitted to DWR via the CASGEM online system once the Well Installation TM has been completed.

***Deliverables:***

- One updated CASGEM Monitoring Plan. The Monitoring Plan will describe the monitoring rationale, cooperating agencies, monitoring network and schedule, and will provide field methods.

***Cost Assumptions***

- The CASGEM Monitoring Plan will require seven days of staff time to update.
- Total estimated cost for this task is \$6,596.

## **Task 8 – Project Management**

Project management will include activities such as project team coordination, budget and schedule tracking, quarterly reports, and other efforts as needed to complete the project scope of work on schedule and budget. This task is assumed to start once funding is authorized, April 2013 and will exist for the entire life of the project, estimated to end in July 2014.

### **Task 8.1 Quarterly Reporting**

The reporting for this project will include quarterly reporting to provide progress reports and final TMs for Monitoring Well Installation, water quality sampling, and groundwater modeling results. Each quarterly report will summarize the results of each task performed during the quarter. These reports will serve to inform the public, technical advisory committee, and DWR of the progress made during the study and provide accountability for the budget used throughout the life of the project.

The quarterly reports are intended to provide regular updates on the progress of the project and milestones met in accordance to budget utilization. These reports will be submitted to DWR for

support for budget allocation. These reports will also serve to inform interested parties and will be posted on the project website for the life of the project and will be made available for public review.

***Deliverables:***

- Five quarterly reports

***Cost Assumptions***

- Each quarterly report will require three days of staff time to prepare and review.
- Total estimated cost for this task is \$12,410.

**Task 8.2 Final Report**

The Final TM will be prepared at the end of the project. It will include discussions of the all project components, and will include the TM's developed during project implementation.

***Deliverables:***

- Five quarterly reports

***Cost Assumptions***

- The final report will require four days of staff time to prepare and review.
- Total estimated cost for this task is \$4,656.

**Task 8.3 Quality Control and Quality Assurance**

This task provides Quality Assurance and Quality Control (QA/QC) activities. QA/QC activities will consist of reviews of TMs, reviews of well designs by senior hydrogeologists, and reviews of modeling efforts. QA/QC reviews will be documented in the quarterly reports.

***Deliverables:***

- Results of QA/QC efforts will be included in other project deliverables

***Cost Assumptions***

- QA/QC activities will require six days of staff time spread out over the life of the project.
- Total estimated cost for this task is \$7,730.

## **Attachment A**

# **Lassen County Department of Planning and Building Well Permit Fee Schedule**

**Lassen County Code**

<b>Up</b>	<b>Previous</b>	<b>Next</b>	<b>Main</b>	<b>Search</b>	<b>Print</b>	<b>No Frames</b>
<u>Title 3 REVENUE AND FINANCE</u>						
<u>Chapter 3.18 FEES AND REVENUES</u>						

**3.18.090 Building permit fees.**

Notwithstanding anything contained in this code to the contrary, fees in connection with the application for issuance of permits required by this title shall be as follows:

a. Building. As provided in the most current edition of the California Building Code, Fee Table #1-A with the exception that the re-inspection fee is established at fifty-two dollars;

1. For construction of all building occupancies, the valuation of the proposed construction shall be established as per the building industry's most current Building Valuation Table with the following exceptions;
2. For remodeling where no structural alterations are proposed which would effect the supporting structural members of the building, the valuation of the proposed project shall be established by multiplying the number of square feet to be remodeled by the value established for new construction for that occupancy and type in the Building Valuation Table, then multiplying that figure by 0.4;
3. For garages, shops and agricultural buildings of steel construction, the valuation of the proposed construction shall be established by multiplying the number of square feet to be built by the value established for garages in the Building Valuation Table, then multiplying that figure by 0.6;
4. For covered decks, the valuation of the proposed construction shall be established by multiplying the number of square feet to be built by the value established for garages in the Building Valuation Table, then multiplying that figure by 0.75; however, the minimum fee for a covered deck including plan check, shall be two hundred ten dollars;
5. For uncovered decks, the valuation of the proposed construction shall be established by multiplying the number of square feet to be built by the value established for garages in the Building Valuation Table, then multiplying that figure by 0.51; however, the minimum fee for an uncovered deck including plan check, shall be one hundred fifty dollars;
6. For carports, the valuation of the proposed construction shall be established by multiplying the number of square feet to be built by the value established for garages in the Building Valuation Table, then multiplying that figure by 0.68; however, the minimum fee for a carport including plan check, shall be two hundred ten dollars;
7. For perimeter foundations for existing structure retrofits or moved in structures such as manufactured/mobile homes, the valuation of the proposed construction shall be established by multiplying the number of lineal feet of foundation to be built by sixty dollars;
8. The fee for re-roofing an existing building shall be one hundred thirty dollars;
9. The fee for re-siding an existing building shall be seventy-five dollars;
10. The fee for re-framing and installing new windows in an existing building shall be one hundred thirty dollars;
11. For manufactured/mobile homes, the valuation shall be established by multiplying the number of square feet by the value established for wood frame dwellings in the Building Valuation Table, then multiplying that figure by 0.5; however, the minimum fee for a manufactured/mobile home not including plan check, electrical, plumbing or mechanical fees shall be five hundred dollars;
12. For mini-storage units, the valuation of the proposed construction shall be established by multiplying the number of square feet to be built by the value established for low hazard storage buildings in the Building Valuation Table, then multiplying that figure by 0.89;

13. For the demolition of existing structures, the minimum fee shall be seventy-five dollars;
14. The building official may adjust the valuation of construction based on the construction contract amount.
  - b. Mechanical. As provided in the 1998 California Mechanical Code, Chapter 1, Table 1-A with the exception that the re-inspection fee is established at fifty-two dollars;
    1. The fee for LPG stove and fuel tank combinations shall be one hundred dollars; the fee for oil stoves and tanks shall be seventy-five dollars;
    2. The minimum fee for air conditioning including HVAC units shall be one hundred dollars.
  - c. Plumbing. As provided in the 1998 California Plumbing Code, Chapter 1, Table 1-1 with the exception that the re-inspection fee is established at fifty-two dollars;
    - ~~1. The fee for well permits shall be one hundred forty dollars;~~
    2. The fee for septic system permits shall be one hundred forty dollars.
  - d. Electrical. As provided in the Electrical Code, Chapter 3, Table 3-A with the following exceptions:
    1. The fee for electric service installations, upgrades or repairs permits/inspection shall be one hundred dollars;
    2. The fee for temporary construction power pole or pedestal permits/inspections shall be one hundred dollars;
    3. The fee for re-inspections shall be fifty-two dollars.
  - e. Swimming Pools, Spas and Hot Tubs. As provided in the Uniform Swimming Pool, Spa and Hot Tub Code:
    1. The fee for re-inspections shall be fifty-two dollars.
  - f. Grading. As provided in the most current edition of the California Building Code, Fee Table A-33-A with the exception that the re-inspection fee is established at fifty-two dollars;
    1. The minimum fee for grading shall be seventy-five dollars.
    - g. The minimum fee for any permit issued by the County of Lassen building division shall be fifty dollars.
    - h. Permits issued for less than one hundred dollars shall be assessed a re-inspection fee for each inspection or re-inspection when such portion of work for which inspection is requested, is incomplete or otherwise not approved.
      - i. A fee for the filing and recording of a state housing and community development form 433(A), establishing a manufactured/mobile home as real property, shall be charged in the amount of fifty dollars.
      - j. A fee for the recording of a notice of cancellation, indicating that the building violation for which a notice of non-compliance was recorded has been rectified, shall be charged in the amount of two hundred fifty dollars. This shall not include the recording fee which shall be paid to the county recorder by the property owner.
      - k. A "seismic hazard mapping fee" shall be charged as required by Public Resources Code Section 2705(a) and as set forth in the most current State Department of Conservation Strong-Motion Instrumentation and Seismic Hazard Mapping Fee Schedule.
        1. The fee for the retention of public records, (building plans and specifications, permits, inspection records and certificate of occupancy) shall be charged. The fee for permit record retention for permits not requiring plans shall be collected in the amount of five dollars. The minimum fee for permits requiring plans shall be collected in the amount of twenty-five dollars. In addition, a fee of one dollar and fifteen cents per page shall be collected for each page that a set of plans are in excess of seven pages in length.
      - m. The administration fee for the withdraw of a project prior to permit issuance shall be twenty-five dollars.
      - n. For permits which have expired, the building official may levy a permit reactivation fee of fifty dollars,

## **Attachment B**

# **Drilling Cost Estimate**

Lassen CASGEM Enhancement Program  
Lassen County LGA Grant Application 2012

**Break Down of Drilling Contractor Costs for Monitoring Well**

Drilling Activities	Cost Per Unit	500 Ft Well	
		# of Each Unit	500 Foot Well Price Estimate
Mobilization	\$ 8,500	1	\$ 8,500
Test Hole Drilling	\$ 23	500	\$ 11,500
Geophysical logging	\$ 2,500	1	\$ 2,500
bore hole reaming	\$ 26	150	\$ 3,900
bore hole reaming	\$ 29	370	\$ 10,730
Containment and Disposal	\$ 8,000	1	\$ 8,000
Water Supply	\$ 1,000	1	\$ 1,000
<b>Drilling Total:</b>			<b>\$ 46,130</b>
2.5" o.d. SCH 80 PVC Blank Casing	\$ 7	990	\$ 6,435
2.5" o.d. SCH 80 PVC Screen	\$ 9	60	\$ 510
#8 SRI Sand	\$ 10	100	\$ 1,000
Bentonite Chips	\$ 15	320	\$ 4,800
Sanitary Seal	\$ 50	100	\$ 5,000
Grout Pumper	\$ 750	1	\$ 750
Well Pad	\$ 1,600	1	\$ 1,600
<b>Construction Total:</b>			<b>\$ 20,095</b>
<b>Development</b>	\$ 190	8	\$ 1,520
<b>Grand Total:</b>			<b>\$ 67,745</b>



Conventional & Reverse Circulation Water Well Drilling  
 Domestic • Agricultural • Industrial • Test Holes • Monitor Wells

Contractor's License #133783-C57A

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**Triple Completion Monitoring Well Construction Proposal  
 Brown & Caldwell - North Highlands Project**

**9-Jul-12**

Item Number	Description	Units	Amount	Unit Price	Total
1a.)	Mobilization	Lump	1	\$ 8,500.00	\$ 8,500.00
1b.)	Site to Site Mobilization	Lump	0	\$ 6,500.00	\$ -
2.)	Test Hole Drilling	Foot	500	\$ 23.00	\$ 11,500.00
3.)	Geophysical Logging - SP, 16N, 64N, PR	Lump	1	\$ 2,500.00	\$ 2,500.00
4a.)	Bore Hole Reaming/Wiper Pass (8")	Foot	150	\$ 26.00	\$ 3,900.00
4b.)	Bore Hole Reaming/Wiper Pass (12")	Foot	370	\$ 29.00	\$ 10,730.00
5.)	Borehole Abandonment	Foot	0	\$ 20.00	\$ -
6.)	2.5" o.d. SCH 80 PVC Blank Casing	Foot	990	\$ 6.50	\$ 6,435.00
7.)	2.5" o.d. SCH 80 PVC Well Screen (0.030 slot)	Foot	60	\$ 8.50	\$ 510.00
8.)	#8 SRI Sand	Foot	100	\$ 10.00	\$ 1,000.00
9.)	Bentonite Chips	Foot	320	\$ 15.00	\$ 4,800.00
10.)	Sanitary Seal	Foot	100	\$ 50.00	\$ 5,000.00
11.)	Grout Pumper	Lump	1	\$ 750.00	\$ 750.00
12.)	Monitoring Well Development	Hour	8	\$ 190.00	\$ 1,520.00
13.)	Well Pad w/Above Ground Vault and 4 Bollards	Each	1	\$ 1,600.00	\$ 1,600.00
14.)	Containment & Disposal - Drill Cuttings & Fluids - 15% markup upon receipt - \$95 hourly rate per EDC Laborer	Lump	1	\$ 8,000.00	\$ 8,000.00
15.)	Construction Water Supply - 15% markup upon receipt - \$95 hourly rate per EDC Laborer	Lump	1	\$ 1,000.00	\$ 1,000.00
16.)	Stand-by Time	Hour	0	\$ 275.00	\$ -
<b>Total to Complete Well as Proposed (Items 1 thru 16)</b>					<b>\$ 67,745.00</b>

## Terms & Conditions

- Proposal / Estimate is subject to change after 30 days.
- Payment terms are "Net Due Upon Receipt of Invoice."
- A finance charge of 0.83% per month will be charged on all past due balances in excess of 30 days.
- Cash, check, cashier's check and credit card are acceptable forms of payment.
- Prices are based on normal drilling conditions and do not include drilling rates with rock bit or extensive circulation loss.
- Contractor will obtain well construction permit from the County prior to construction. Well Owner to provide any other Local, State and Federal project specific permits.
- Pricing assumes 24 hour operation without sound control.
- Pricing assumes 5 days on / 2 days off operation schedule
- Pricing assumes adequate site accessibility and pad.
- Pricing does not include bid, payment or performance bonds.