



**Oil and Gas Data Communication and
Data Sharing Plan for the
State Water Resources Control Board and
Division of Oil, Gas and Geothermal Resources**

June 1, 2016

**STATE WATER RESOURCES CONTROL
BOARD**

INTRODUCTION

This document outlines the plan for data and information sharing between the State Water Resources Control Board (State Water Board) and Regional Water Quality Control Boards (collectively the Water Boards) and the Division of Oil, Gas and Geothermal Resources (DOGGR). Effective sharing of oilfield related data and information will help streamline regulatory efforts, avoid duplicity of collection and submittal requirements, facilitate data submittal processes for oil and gas operators (operators), and help provide the public easy access to the information.

This document has been developed in response to one of the goals of the performance measures for effective implementation of the Model Criteria for Groundwater Monitoring in Areas of Oil and Gas Well Stimulation (Model Criteria). Goal number one of the performance measures is “transparency and availability of online information and documentation”. Strategies to reach this goal include creating a data communication and sharing plan to optimize data and information sharing between the Water Boards, DOGGR, and other agencies, as appropriate.

California Water Code section 10783 (Senate Bill 4, Pavley, statutes of 2013) required the State Water Board to develop the Model Criteria, which were adopted on July 7, 2015 (Resolution No. 2015-0047). The Water Board directed staff to collaborate with stakeholders and develop performance measures for the evaluation of the Model Criteria. A summary of goals, strategies, proposed performance measures, and plans for implementation (performance measures) was presented to the Water Board members on March 1, 2016. Model Criteria and performance measures documents are available in Oil and Gas Monitoring webpage at: http://www.waterboards.ca.gov/water_issues/programs/groundwater/sb4/index.shtml.

A description of the current Water Boards and DOGGR oil and gas data systems, current data sharing efforts between the agencies, and strategies to improve future communication and data sharing efforts is provided below. Oil and gas related activities and data systems include well stimulation, Class II underground injection control (UIC), aquifer exemption reviews, and produced water ponds.

CURRENT WATER BOARDS AND DOGGR OIL AND GAS DATA SYSTEMS

This section presents the existing Water Boards and DOGGR data systems used to manage information associated with oil and gas activities.

Water Boards Data Systems

The Oil and Gas Monitoring Program uses two internet-based data systems, GeoTracker, and California Integrated Water Quality System (CIWQS).

- **GeoTracker** <http://geotracker.waterboards.ca.gov/>

GeoTracker is the Water Boards' data management system for sites that impact groundwater or have the potential to impact groundwater. GeoTracker public and secure portals retrieve records and integrated data sets from multiple State Water Board programs and other agencies through an easy-to-use Google maps Global Information System (GIS) interface. It allows users to view data in relationship to streets/roads, water supply wells, satellite imagery, and terrain map views as well as other sites that have the potential to affect groundwater quality.

GeoTracker makes public records for a site available to the public through its Document Manager Module, including regulatory communication with responsible parties, regulatory actions such as records of decision documents, and all data and documents submitted by the responsible party.

GeoTracker is the primary data system that the Oil and Gas Monitoring Program uses to manage information and data. Table 1 provides a description of the function of each oil and gas component and the type of data being managed in GeoTracker.

- **CIWQS** http://www.waterboards.ca.gov/water_issues/programs/ciwqs/index.shtml

CIWQS is a web-based relational database that stores core regulatory data for use by staff, management, and the public. It also allows the regulated community to submit certain types of information to the Water Boards in compliance with adopted orders.

Currently, information regarding produced water ponds including Waste Discharge Requirements (WDR), facility information and enforcement actions is managed in the CIWQS data system mainly for billing purposes. The State Water Board is working to include CIWQS produced water ponds information in GeoTracker.

Table 1 – How oil and gas information is currently managed in GeoTracker

| Program Activity | Description | Type of Data |
|---|---|---|
| Well Stimulation Groundwater Monitoring | Operators upload groundwater monitoring plans, addenda to plans, water quality data, and monitoring reports. Water Board staff review and manage the information. | <ul style="list-style-type: none"> - Groundwater monitoring plans - Geolocation of project area(s) and monitoring network - Information on proposed wells to be stimulated - Correspondence between regulatory agencies and the operator - Groundwater monitoring data - Groundwater monitoring reports |
| Well Stimulation Exclusions From Groundwater Monitoring | Operators upload requests for exclusion from groundwater monitoring, and addenda. Water Board staff review and manage the information. | <ul style="list-style-type: none"> - Request for exclusion from groundwater monitoring - Geolocation of exclusion area(s) - Information on proposed wells to be stimulated - Correspondence between regulatory agencies and the operator |
| Property Owner Requested Sampling ¹ | Designated samplers upload water quality information where a property owner within 1500 feet of a well to be stimulated requests their water to be sampled | <ul style="list-style-type: none"> - Water quality information - Geolocation of sample point |
| Underground Injection Control (UIC) Project | Water Boards caseworker uploads UIC application and supporting documents to GeoTracker. | <ul style="list-style-type: none"> - Information on proposed injection project |
| Produced Water Ponds | Regional Boards create produced water pond sites in GeoTracker | <ul style="list-style-type: none"> - Waste discharge requirements |
| Aquifer Exemption ¹ | Water Boards upload draft aquifer exemption proposals to GeoTracker. | <ul style="list-style-type: none"> - Information on proposed aquifer exemptions |

¹ Currently not available to public

DOGGR Data Systems

Currently DOGGR utilizes several web applications for regulatory management of their oil and gas information, and to share data with other agencies and the public. DOGGR is currently in the process of developing its WellSTAR system, which will be a single data repository available for regulators and public.

A description of DOGGR's current data systems is provided below. In addition, a description of WellSTAR which is currently under development is included.

- **Well Finder:** <http://www.conservation.ca.gov/dog/Pages/WellFinder.aspx>
This web application lets users locate a well by street address, American Petroleum Institute (API) number, latitude/longitude, Public Land Survey System coordinates (township/range/section), or by oil/gas field. It also allows a user to utilize or exclude a variety of data layers, including various boundaries, types of wells, and interim notices and permits, including the use of hydraulic fracturing or acid matrix stimulation. Once the user has determined the parameters he or she wants to view, clicking on an individual well symbol provides a variety of data, including a link to the well record and, if applicable, a link to the interim well stimulation notice submitted to DOGGR.
- **Well Search:** <https://secure.conservation.ca.gov/WellSearch/>
This web application allows the viewing of oil and gas well monthly production and injection information from 1977 to present. The Well Search will allow you to search by Address, City, and ZIP Code. You can also search by API number, District, County, Field, Operator and Lease. Once you select a well, you can view the well information, well records, production data, Injection data, production charts, and injection charts as applicable. The information can be viewed by well, or totaled by lease, operator, or field. The information can be printed or exported into an Excel spreadsheet for further analysis. Complete scanned well records can also be viewed through this application.
- **WST Disclosure Website:** <https://secure.conservation.ca.gov/WSTDisclosure>
In accordance with California Code of Regulations Title 14, Section 1788, the Division of Oil, Gas and Geothermal Resources receives information "disclosed" by oil and gas operators regarding well stimulation treatment (WST). The WST Disclosure Website provides the public the opportunity to view and search well stimulation data. Data for specific WST jobs can be accessed by clicking on the corresponding permit number. Individual WST jobs can be searched by permit number and API Number. The list of WST jobs can be filtered by start/end dates, oil field, county, operator and well stimulation type. In addition, WST jobs using a specific chemical constituent or trade name additive can be searched for with the aid of chemical and additive "pick lists". The website site also allows the more sophisticated user to download all WST disclosure data into a SQL database backup file.

- **CalStim'D:** <http://maps.conservation.ca.gov/calstimd/>
California Stimulation Disclosure (CalStim'D) is a web based, mapping utility used as an interface for locating stimulation disclosure and other stimulation information throughout California. The features in CalStim'D allow the user to search by address, latitude/longitude and API number using a 1,500 foot buffer. A downloadable list of wells resulting from a given search can also be generated.
- **WellSTAR:**
The WellSTAR system will provide access to the general public to data that DOGGR is required to disclose. The operators will also have a portal available to them to access their well data, as well as update, edit, and enter new data. Users internal to DOGGR or within the Natural Resources Agency will be given access to WellSTAR data based on defined permissions as documented in the requirements. The Division is in the process of architecting a data warehouse that will reside outside of the transactional database within WellSTAR that will collect regular data updates from the WellSTAR database. The objective of this data warehouse is to allow data collection not only from WellSTAR but other external data sources (e.g., water board data) that will support the use of the graphical and visualization tools for more intensive data analytics and reporting.

CURRENT COMMUNICATION AND DATA SHARING

The data sharing and communication process that the Water Boards and DOGGR are currently utilizing for work associated with oil and gas activities are summarized in Table 2.

Table 2 – Current data and information sharing between Water Boards, DOGGR, and the public

| Program Component | Responsible Agency | Data and information sharing process |
|--|--|--|
| Well Stimulation Treatment (WST) Permit Application | DOGGR with review by Water Boards and other agencies | <ul style="list-style-type: none"> • DOGGR shares draft WST permit applications (or some portion thereof as agreed upon) through online file sharing system to the Water Boards who assist DOGGR in identifying the types of information that are relevant to regulating water quality. • DOGGR notifies the Water Boards of, and provides through an online file sharing system, any additional information that DOGGR receives during the application review process that the Water Boards determine is relevant to regulating water quality. Upon determining that DOGGR received a complete application for a WST permit, DOGGR notifies the Water Boards in writing and makes the complete application (or some portion thereof agreed upon) available to the Water Boards for review. Except where the parties agreed to a more expedited review, the Water Boards have 14 days to provide comments to DOGGR regarding the application, including, but not limited to, any water management plan or waste disposal method. The Water Boards may request in writing, with a courtesy copy to the WST permit applicant, additional time to review and comment on the application (up to 45 days total review). |
| Well Stimulation Groundwater Monitoring Plan and Exclusion from Monitoring | State Water Board/ Regional Water Board | <ul style="list-style-type: none"> • Operators upload groundwater monitoring plans or requests for exclusion from monitoring to GeoTracker (submittals). • Final Water Boards approval of a groundwater monitoring plan does not occur prior to DOGGR approving the Axial Dimensional Stimulation Area as part of the WST permit review. • The Water Boards works with the operator in reviewing the submittals. • The approval or disapproval of a groundwater monitoring plan or request for exclusion from monitoring is mailed and emailed to the operator and DOGGR. • These written correspondences, the submittals, and approval or disapproval letters are made available to the public in GeoTracker. |

Table 2 (continued) – Current data and information sharing between Water Boards, DOGGR, and the public

| Program Component | Responsible Agency | Data and information sharing process |
|---|-----------------------------------|---|
| Well Stimulation 72-hour notice | DOGGR | <ul style="list-style-type: none"> • Operators are required to notify DOGGR within 72-hours of a planned well stimulation. • Upon receiving the 72-hour notice from an operator DOGGR: (1) relays the notice to the Water Boards via email; and (2) verifies that the operator has an approved groundwater monitoring plan or exclusion from monitoring associated with the well to be stimulated. |
| Neighbor Notification and Property Owner Requested Water Sampling | DOGGR and State Water Board | <ul style="list-style-type: none"> • Prior to performing well stimulation treatment, operators are required to hire an independent third party to identify property owners or tenants of property located within a 1500 foot radius of the wellhead or within 500 feet of the surface representation of the horizontal path of the subsurface parts of the well. • DOGGR is responsible to provide the Neighbor Notification Forms to operators (available on DOGGR webpage) and track that operators have sent the notification forms. • The State Water Board is responsible for providing a list of designated samplers on their website that property owners can access to request that their water be sampled. • The designated samplers are required to upload the water quality data to GeoTracker where it is made available to the public. |
| UIC Project | DOGGR with review by Water Boards | <ul style="list-style-type: none"> • State Water Board receives the UIC project package from DOGGR via email • Water Boards review the package for completeness and upload the project to GeoTracker for tracking and information purposes. All information uploaded is available to the public. • Water Boards review the project • State Water Board mails approval or disapproval letter to DOGGR and posts the letter to GeoTracker |
| Produced Water Ponds | Regional Water Boards | <ul style="list-style-type: none"> • Regional Water Board caseworker uploads data to GeoTracker and links sites to waste discharge permits in CIWQS. All information uploaded is available to the public. |

Table 2 (continued) – Current data and information sharing between Water Boards, DOGGR, and the public

| Program Component | Responsible Agency | Data and information sharing process |
|-------------------|-----------------------------------|--|
| Aquifer Exemption | DOGGR with review by Water Boards | <ul style="list-style-type: none"> • State Water Board receives hard copy and electronic copy from DOGGR district. • State Water Board uploads data to GeoTracker for tracking and information purposes. Draft information is currently not available to the public. • Water Boards review the package • State Water Boards mail concurrence or non-concurrence letter to DOGGR headquarters • Water Boards and DOGGR hold a public meeting to address public comments • If DOGGR and State Water Board concur, then DOGGR submits final Aquifer Exemption proposal to United States Environmental Protection Agency (EPA), Region 9 |

STRATEGIES FOR FUTURE DATA SHARING

The State Water Board and DOGGR will work closely together to improve data and information sharing as data systems are expanded or developed within the Oil and Gas Monitoring Program. Strategies that will be considered to meet this goal are presented below.

Understanding existing data systems

The Water Boards, DOGGR, and other applicable agencies will develop and continue internal data sharing meetings to better understand what data and information is available in existing data systems. The agencies will share information on existing data systems, future planned data systems or tools, and potential data sharing activities. Information that is shared between the agencies will include data dictionaries and maps of current and potential data systems, data models, data sharing needs for each agency and the public, and data sharing processes that can be utilized or optimized.

Optimization of data sharing

The Water Boards, DOGGR, and other applicable agencies will work together to develop and optimize data sharing methods between data systems. Examples of optimization could include development of new tools or processes that will help streamline the data sharing between agencies, and help to eliminate duplicative data submittals by operators. Non-disclosure agreement to allow uninterrupted access to private information will be applied.

Training of agency staff

Focused training sessions will be developed and provided to agency staff as data sharing processes are developed or modified. Information will be made available to operators to help streamline and make more efficient information and data uploads. This will include “How to Guides” shared with operators and made available on the agency websites.

Regular updates to the public

An update on understanding existing data systems, optimization of data sharing, and training of agency staff and public will be included in the annual Model Criteria performance report, beginning in March of 2017.

ACTIONS

- Monthly meetings/conference calls will be held to better understand existing data systems and optimize data sharing.
- Over the next 6 months, Water Boards staff will work towards consolidating existing oil and gas data and information and transfer that information into GeoTracker (e.g. produced water pond geolocations and associated monitoring data).
- Over the next 6 months, Water Boards staff will work on developing new tools in GeoTracker to facilitate data and information sharing with DOGGR and operators (e.g. linking groundwater monitoring plans or exclusions from monitoring with DOGGR well stimulation permit numbers and 72-hour well stimulation treatment notifications).