

# CLEAN GROUNDWATER TEAM PROJECT CHARTER

## March 14, 2008

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### Project Background

In 2007, the Central Coast Water Board (Water Board) formed four vision teams whose purpose is to implement the Water Board's vision for healthy watersheds. The teams help achieve the Water Board's goals to protect and enhance healthy aquatic habitat, clean groundwater, and achieve sustainable land management. The measurable goal addressed by this project charter is the following:

**By 2025, 80 percent of groundwater will be clean, and the remaining 20 percent will exhibit positive trends in key parameters<sup>1</sup>**

The Central Coast Region covers approximately 7.22 million acres (11,300 square miles). The Region includes Santa Cruz, Monterey, San Luis Obispo, and Santa Barbara Counties and portions of San Benito, San Mateo, Santa Clara, and Ventura Counties. The Region has 53 groundwater basins. Groundwater accounts for approximately 83 percent of the annual supply used for agricultural and urban needs (DWR, 2003) within the Region. This dependence on groundwater drives our organization to protect, restore, and provide ongoing assessment of regional water quality for the benefit of current and future populations.

The Water Board has effectively identified and characterized most of this Region's point-source groundwater pollution, and through existing programs has implemented remedial actions at most of the known polluted sites. However, formal mechanisms are not in place to determine if Water Board staff appropriately prioritizes our efforts, whether our efforts improve and protect water quality on a watershed/groundwater basin scale, if they address adverse surface water-groundwater interactions, if existing Water Board programs address all the Region's priority groundwater quality problems or if they address all vulnerable groundwater basins/subbasins. Examples of threats to water quality that should be evaluated on a watershed/groundwater basin scale include nutrient and salts loading, agricultural chemical use, salt water intrusion, overdraft, reduction in recharge, infiltration of polluted runoff, adverse groundwater/surface water interaction, and use of chemicals that could have long-term or synergistic impacts on

<sup>1</sup> Clean Groundwater is suitable for all present and future beneficial uses. Whenever the groundwater quality is better than the quality of water suitable for all present and future beneficial uses, the goal will be to maintain such groundwater quality.

human health or water quality (i.e., emergent chemicals). These threats to water quality may be particularly adverse in recharge areas or areas where pollutants from the land surface are known to easily enter and can impair underlying aquifers (vulnerable aquifers). Consequently, the Water Board may need to align existing programs and develop new projects/programs to protect, restore, and assess Regional groundwater quality over time. Organizational changes are also required to improve internal cross-program and external cross-agency collaboration and communication regarding groundwater issues.

Region-wide groundwater basin management is essential to ensure that our Region will continue to have groundwater suitable for all present and future beneficial uses. With demands for groundwater certain to increase in the future, we must plan to protect our pristine groundwater resources, restore groundwater resources that are impacted, and provide ongoing assessment.

This project charter documents the Clean Groundwater Team's plan to identify, prioritize, and implement actions to meet the project charter measurable goal.

### **Problem/Opportunity Statement**

Degraded groundwater quality conditions exist in our Region and further degradation of groundwater quality will likely occur due to increased water demand as a result of population growth, development, and increased industrial and agricultural activity without corrective actions. The following problems were identified by the Clean Groundwater Team:

- The Water Board does not implement a formal procedure to determine if our current distribution of resources matches with our priority groundwater issues, and whether they improve water quality on a watershed/groundwater basin scale. For example, the staff resources dedicated to nitrate plume in lower Salinas groundwater basin do not match the scale of the effects.
- Water Board staff does not specifically identify and protect groundwater recharge areas or vulnerable aquifers,
- Surface water and groundwater are typically viewed as separate water bodies but in many areas surface water and groundwater are in hydraulic communication. Therefore water quality and quantity effects to groundwater can have adverse effects to surface water and their interrelationship must be evaluated,
- Various threats to water quality are not addressed by existing Water Board programs on a watershed/groundwater basin scale. Some examples of these threats include: nutrients and salts loading, agricultural chemical use, salt water intrusion, overdraft and sustainable yield, reduction in recharge, adverse land use management practices, infiltration of polluted runoff, and use of chemicals that could have long-term or synergistic impacts on human health or the environment (i.e., emergent chemicals),
- Water Board staff does not evaluate the cumulative impacts and sustainable loads of individual discharges on groundwater at a groundwater basin scale,
- The Water Board's CCAMP has focused on surface water and does not yet have a clear and comprehensive regional groundwater monitoring strategy that effectively assesses changes in watersheds and groundwater basin-wide water quality and evaluates progress toward groundwater quality protection and improvement,
- Water Board lacks a comprehensive regional data management system to effectively manage and analyze groundwater data and to evaluate implementation effectiveness with respect to various cleanup and prevention strategies,
- Water Quality will benefit from more cross-program and cross-agency communication, by

utilizing best qualified in-house knowledge and expertise to optimize our efforts in meeting our measurable goal.

There are currently a number of state and regional efforts, both within and outside our organization, that may offer opportunities to fill data gaps, build monitoring and implementation partnerships, and from which to obtain data to address groundwater quality issues in our Region. Some of these opportunities include:

- The Central Coast Ambient Monitoring Program (CCAMP), which offers both sampling and data management models for a regional surface water quality monitoring and assessment program that could be expanded to include a groundwater component,
- The Department of Water Resources' 2009 update of the California Water Plan, which is soliciting input from stakeholders, including this Region,
- The stormwater program's requirements and dialogue with municipalities throughout the region regarding the need to maximize infiltration and minimize pollutant loading to surface and groundwater, could offer an opportunity to improve protection and require additional evaluation of groundwater quality and quantity,
- The Water Board's agricultural regulation to address nutrient and pesticide source control offers an opportunity to include groundwater evaluations and source reduction as part of the program's strategy,
- The Total Maximum Daily Load (TMDL) unit's current dialogue with ranchers throughout the Region to address pathogen and sediment issues could offer an opportunity to increase groundwater supplies through improved rangeland management practices,]
- Integrated Regional Water Management grants through Proposition 50 and 84 to local agencies offer partnership opportunities to address groundwater issues,
- Statewide climate change initiatives offer additional incentives for ground water recharge and stewardship, resources and partnerships,
- Renewed attention to watershed management issues may result from the State Board Strategic Plan update and offer an opportunity for watershed and groundwater basin management approaches to addressing multiple water issues, including groundwater,
- Successful local/regional groundwater basin management practices and programs may offer opportunities for partnerships,
- Existing and new programs to restore and protect groundwater quality (e.g., Department of Water Resources Water Plan, Agricultural Regulation Program, Municipal Stormwater Management Programs, Integrated Regional Watershed Management Plans) offer opportunities to protect groundwater more effectively.

The desired conditions for the proposed project are:

- Development of metrics for measuring success,
- Recommendations for organizational changes to improve our water quality protection efforts, including opportunities for cross-agency partnerships,
- Recommendations for a regional groundwater monitoring and assessment approach,
- Identification of groundwater recharge areas and strategies for their protection,
- A tool for prioritizing groundwater issues,
- Identification of regulatory mechanisms to improve basin-wide groundwater management
- Implementation of pilot study to evaluate if actions proposed in the project charter improve groundwater quality.

## **Project Objective Statement**

The project objective of this charter is to identify, prioritize, and implement actions to improve groundwater quality in the Region (i.e. achieve the measurable goal). This project objective is broken down into six specific sub-objectives. The Clean Groundwater Team has prepared preliminary draft work plans for each sub-objective. A summary of each sub-objective is included in the project charter below and copies of each draft work plan are available upon request.

### **Sub-Objectives:**

1. Develop a list of performance measures.
2. Identify and implement organizational changes to improve cross-program and cross-agency collaboration and communication.
3. Develop and implement an approach for regional monitoring and assessment.
4. Define groundwater use and recharge areas and use in decision-making.
5. Develop and implement a tool for prioritizing groundwater issues and groundwater basins.
6. Identify and implement available regulatory mechanisms that will aid in basin-wide management.

Water Board staff will validate and refine the development of each sub-objective by conducting a pilot project. Water Board staff will use the lessons learned from the pilot project to validate the project charter and to effectively manage and optimize efforts in other regional groundwater basins.

## **Project Stakeholders**

The lead stakeholders include State Water Resources Control Board (including the Division of Water Rights), Regional Water Boards, other federal and state regulatory agencies, cities, counties, water districts and associations, water purveyors, private municipalities (water and wastewater related), agricultural community, and the general public (as regulated community and water users and consumers).

Other key regulatory agency stakeholders may include Department of Water Resources, US Bureau of Reclamation, US Geological Survey, US Environmental Protection Agency, California Coastal Commission, National Oceanic and Atmospheric Administration (i.e. National Marine Fisheries Service and Monterey Bay National Marine Sanctuary), California Department of Fish and Game, Department of Toxic Substances Control, Department of Pesticide Regulation, California Department of Public Health, etc. In addition to planning and building departments, key county agency level stakeholders include the various local oversight agencies and programs managed by the counties for public health and safety, well permitting, on-site wastewater system permitting etc.

The Assessment, Aquatic Habitat, and Land Use Vision Teams are also key stakeholders because of the interrelationship of the Vision Teams and the physical connectivity of surface water, groundwater, land use, and water quality and healthy aquatic habitat.

Stakeholders may also include individual professionals, associations, and consultants with specific skills, knowledge, and data, etc. necessary for implementing the various objectives of the project charter.

## **Project Objectives**

The Clean Groundwater Team will complete the following sub-objectives to plan to identify, prioritize, and implement actions to assess groundwater quality, prioritizing groundwater basins and issues, and implementing actions to protect and restore groundwater quality in the Region. The sub-objectives are listed in order of priority and include a description of a pilot project that will be used to validate and refine the development of each sub-objective. The proposed approach and priority of each sub-objective may change as Water Board staff evaluates information and data during the development and implementation of each workplan for each sub-objective.

### **1. Develop Groundwater Performance Measures:**

Water Board staff will develop groundwater quality-based (Strategic) and management implementation-based (Operational) performance measures. For example, groundwater quality-based measures (i.e., nitrate concentration in groundwater) allow for direct evaluation of the ultimate effectiveness of the implementation strategy; however, it will likely provide less immediate feedback on success, due to the buffering nature of groundwater basins. More immediate measures, such as management implementation changes (i.e., nutrient management budgeting for nitrate input, case closures), are a less direct measure; however, it can provide more immediate implementation effectiveness feedback. A strategy combining both groundwater quality-based and management implementation-based measures allows for both near-term evaluation/correction of implementation strategy and long-term accountability toward the measurable goal. Water Board staff will use the measures of success to determine whether groundwater quality is improving over time and whether 80 percent of our groundwater basins are clean and the rest are getting cleaner.

### **2. Identify organizational changes to improve internal cross-program and external cross-agency coordination and communication**

Water Board staff will recommend organizational changes that will enhance Water Board performance to more effectively and efficiently meet the measurable goal and to promote a watershed/groundwater basin approach. To achieve healthy watersheds, each program and the Vision Teams must work together to consider how their work influences the water quality of the watershed and groundwater basin as a whole. Water Board staff will also identify means for collaborating and improving communication with other agencies and external stakeholders to identify successful programs that our organization can build on to meet the measurable goal. Improved communication between internal programs, external agencies, and other stakeholders will be the measure of success for this sub-objective. Water Board staff will develop metrics to measure improved communication (i.e., development of watershed strategies for cross-programmatic problems that can be integrated into program work plans). As part of this sub-objective, program managers will evaluate how their programs support achieving the measurable goal and identify non-aligned tasks or find efficiencies that will yield a minimum of ten percent available capacity for reassignment to vision-based tasks.

### **3. Develop an approach for regional monitoring and assessment**

Water Board staff will recommend an approach for regional groundwater monitoring and assessment for the Region and utilize performance measures identified by the Clean Groundwater Team. Key elements of a regional groundwater monitoring approach for

groundwater basin characterization will likely include:

1. Define the metric for measuring the 80 percent identified in our measurable goal (i.e., volume or area metric),
2. Evaluate what the appropriate percentage is for measureable goal No. 3 – is 80% correct or should this be higher/lower?
3. Identify whether contaminant specific goals need to be developed (i.e., organic chemical contaminants and industrial chemicals (methyl tertiary-butyl ether, volatile organic compounds, perchlorate, etc.) which could be a goal of 99% by volume clean, and for total dissolved solids and nitrates the goal is 80% by volume clean).
4. Develop specific goals and objectives for a regional groundwater monitoring and assessment effort (i.e., determine the status and trends of groundwater quality and evaluate progress towards measurable goals, provide water quality information to users in accessible forms to support decision making, and collaborate with other monitoring programs to promote effective and efficient monitoring),
5. Evaluate existing data from various sources,
6. Develop a regional groundwater quality monitoring network design,
7. Develop groundwater quality monitoring parameters to measure,
8. Develop a timeframe for monitoring,
9. Select criteria for monitoring point selection,
10. Identify groundwater data quality needs, and
11. Develop specific groundwater quality criteria for assessment purposes.

The regional groundwater monitoring approach will also address data management tools and data structures to manage regional groundwater data and evaluate the effective use of external groundwater data and electronic data submittal. Water Board staff will evaluate the feasibility of including regional groundwater monitoring and assessment as part of the Central Coast Ambient Monitoring Program (CCAMP) (or another similar program) and validate the regional groundwater monitoring approach at a local scale (e.g., Paso Robles subbasin or portions of the Santa Maria Valley). Measures of success for this sub-objective include identification of staff and resources to address regional groundwater monitoring and assessment, development of recommendations for a comprehensive regional groundwater monitoring approach that effectively assesses changes in regional groundwater quality and evaluates progress toward the groundwater measurable goal, and allocation of resources for implementing the regional groundwater monitoring and assessment approach. Staff will start acquiring, collecting and assessing data and information that is most readily available or already exists even if all elements of the approach are not yet completed and/or some desirable data or information is not readily available (e.g. must be monitored for a year)

#### **4. Define groundwater use and recharge areas**

Water Board staff will identify groundwater uses and recharge areas to help prioritize our efforts to protect and restore groundwater quality. Water Board staff will build on existing information (e.g., State Water Board's Aquifer Vulnerability Assessment and Groundwater Ambient Monitoring Assessment (GAMA) Program, California Department of Public Health, and water districts, etc.), to identify recharge areas and groundwater uses. Existing data will also be used to identify critical data gaps, and, within the scope of the effort, collect data to fill those data gaps. Water Board staff will compile the results in a usable format, preferably GIS, summarize the findings, and recommend any additional actions or evaluations to define groundwater uses and recharge areas. Identification and graphical representation of recharge areas and groundwater uses in our Region will be the measure of success for this sub-objective. We will

use these maps to develop language and area restriction/protection for recharge.

## **5. Develop a tool for prioritizing groundwater issues**

Water Board staff will develop a tiered ranking system or decision tree to prioritize groundwater issues and groundwater basins. The ranking system will utilize various criteria (to be determined) based on contaminant type, water quality objectives, impaired beneficial uses, public health risks (i.e. contaminant characteristics, concentrations, areal and vertical extent, number and type of potential receptors, etc.), economic impact, public perception, groundwater basin/subbasin characteristics, water quantity impacts, feasibility and effectiveness of corrective/remedial action, availability of resources, etc. Development of a clear and comprehensive tool that will result in the objective prioritization of groundwater issues and groundwater basins will be the measure of success for this sub-objective.

## **6. Identify available regulatory mechanisms that will aid in basin-wide groundwater management**

Water Board staff will identify available regulatory mechanisms to aid basin-wide management of groundwater quality. Specifically, Water Board staff will review existing Water Board programs, the Basin Plan, and policies and recommend how they can be modified or better utilized. Examples could include:

1. Basin Plan
  - a. Update prohibitions (add basin and subbasin specific prohibitions)
  - b. Update water quality objectives
  - c. Develop groundwater management plans for basins and subbasins
2. Waste Discharge Requirements
  - a. Develop basinal and/or region-wide general permits
  - b. Utilize as vehicle for regional/basinal groundwater monitoring programs [i.e., CCLEAN]
  - c. Implement basinal or site specific requirements or prohibitions (i.e. nutrient and salt management plans etc.)
  - d. Consider defining point of compliance [i.e., Templeton]
3. Enforcement
  - a. Supplemental environmental projects for groundwater management, monitoring.
  - b. Enforce groundwater quality objectives (i.e. salts and nutrients)
  - c. Groundwater cleanup for municipal and agricultural discharges
4. Grant funding
  - a. Identify and champion funding opportunities for groundwater management related projects

Water Board staff will also recommend potential programs and policies beyond existing business functions to facilitate basin wide groundwater management. Examples could include:

1. Groundwater Assessment Unit for groundwater TMDL type approach, or a hybrid approach that prioritizes basins, without requiring them to first be impaired, for the establishment of loading/assimilative capacities,
2. CEQA Review and Response Unit or organizational function that evaluates loading impacts and sustainability for proposed removals or discharges to basins, local land use policies, industrial or treatment facility siting in or near recharge areas,
3. Geographical Information System (GIS) Unit with designated staff,

#### 4. Development of a water recycling policy.

In addition, Water Board staff will identify and collaborate with various entities and agencies throughout the Region with existing policies and programs governing groundwater management and recommend interagency programs to facilitate basin wide groundwater management. Water Board staff will draft language to aid in basin wide groundwater management for incorporation into current regulatory mechanisms. The measure of success for this sub-objective will be identification of both internal and external regulatory mechanisms and policies that will result in more effective groundwater management to achieve the groundwater measurable goal.

### **Optimize and Validate Sub-Objectives through a Pilot Project**

Water Board staff will conduct a pilot project in a selected groundwater basin or subbasin to develop a "road map" for achieving the measurable goal. Water Board staff will use the pilot project to refine and validate the development of each sub-objective in order to identify, prioritize, and implement actions to improve groundwater quality. Water Board staff tentatively selected the Paso Robles subbasin for the pilot project because of its relatively small size and proximity to our office, and the availability of relevant and usable data. The pilot project will explore methods for assessing groundwater quality, prioritizing groundwater issues, and implementing groundwater cleanup and protection through regulatory and/or institutional controls and the implementation of groundwater management plans. Water Board staff will develop the pilot project in conjunction with the other sub-objectives of this project charter and the project charters of the other Vision Teams as they progress. Water Board staff will use the lessons learned from the pilot project to validate the project charter, develop subsequent project plans and to effectively manage and optimize efforts in other basins.

The measure of success for this sub-objective will be development of a framework for assessing groundwater quality, prioritizing groundwater issues, and implementing actions to protect and restore groundwater quality in the Paso Robles subbasin that can then be applied to other basins throughout the Region.

#### **Timeline:**

Provided adequate resources are allocated, the Clean Groundwater Team anticipates completion of objectives one through six within 18 months from the date of approval of the project charter. The Clean Groundwater Team anticipates completion of the pilot project within 2.5 years from the date of approval of this project charter. The Pilot Project will provide the opportunity for development and testing of regulatory tools and performance measures. The Clean Groundwater Team will develop critical timelines and resource allocation/funding requirements in a workplan for each sub-objective, following approval of the project charter. Each workplan will also identify interim actions (this may include early implementation) that Water Board staff can take to demonstrate success in moving toward our measurable goal.

### **Project Characteristics**

#### **Assumptions:**

- Water Board staff and management will stay motivated and focused to achieve the stated objectives and measurable goal.



- Water Board staff will believe in the Clean Groundwater Team objectives and begin working toward adapting their work to improve water quality on a watershed and groundwater basin scale.
- Sufficient staff time and resources will be allotted and existing program tasks will be re-assigned or dropped to implement the project charter.
- Water Board staff have the required technical skills, regulatory authority (or are willing to develop it), and/or influence to achieve the objectives.
- Sufficient data and information regarding groundwater quality, quantity, uses, recharge areas, groundwater basins and watersheds currently exists and is readily available.
- Available data can be compiled into a database using existing technology in a standard, usable, and easily managed format.
- Compiled data will be evaluated for quality and gaps, and inconsistencies and will be rectified in a reasonable time frame based on determined data quality standards.
- The performance measures will reveal clear trends that will allow us to validate and prioritize subsequent actions to address priority groundwater issues and groundwater basin/subbasins.
- Review of existing regulatory mechanisms and programs will result in the identification of additional measures that Water Board staff can implement to aid in basin wide groundwater management.
- The pilot project's objective will validate priority issues and recommend actions that result in real water quality improvements for the pilot project area.
- Our organization will have the sufficient legal authority, influence, and Board Member support to implement actions to address the priority issues and achieve the measurable goal.
- Internal and external outreach, coordination, and collaboration will effectively facilitate implementation of the objectives and subsequent actions.
- The Vision teams will develop effective mechanisms to communicate and coordinate efforts so that our efforts build on each other rather than duplicate them.
- There will be stakeholder outreach and involvement for the evaluation and utilization of successful regulatory mechanisms of other agencies.

**Constraints:**

- The allocated 10% for implementation of the project is insufficient or goes away.
- Existing programmatic requirements may still need to be met that will compete for staff resources.
- The stated measurable goal and objectives may change throughout the process as more information becomes available.
- We may need to negotiate with State Board regarding monitored work plan requirements or simply realize increased efficiency resulting from general orders versus individual orders, etc.
- There may be critical data gaps or inconsistencies that cannot be rectified within a reasonable time frame.
- Groundwater quality may not show positive trends in response to the actions implemented within the project time frame.
- Water Board staff may not have direct regulatory authority to implement actions or require others to implement them. Water Board staff may seek direct regulatory authority or rely on influence/authority from other agencies or organizations to assist in implementation.
- Objectives are dependent on external stakeholder support to provide and review data.

- External stakeholders may not be willing or have sufficient resources to provide data, carryout other supporting tasks to meet the project charter objectives, or help implement recommended actions to address priority issues.
- Although data is available from a number of internal and external sources, it does not exist in a consistent format.
- Proposed or implemented actions may result in significant stakeholder opposition and third party appeals.

**Issues:**

- We may experience severe staffing and resource shortfalls from state mandated budget and staffing cuts.
- We may identify/recommend actions to protect and restore groundwater quality in the Region that are not technically or economically feasible.
- Some stakeholders may lack the political will to carryout recommended actions.

**Related/Dependent Projects**

- The project charters and work products for the Assessment, Sustainable Land Use, and Healthy Aquatic Habitat Teams are important and interrelated to the Clean Groundwater Team’s project charter and performance. Each Vision Team’s project charter has overlapping data needs (e.g., identifying recharge areas, surface water-groundwater interaction, GIS, database management), common sources of water resource impacts (e.g., agricultural practices, development), and overlapping internal and external resource and outreach needs.
- Obtain information from the “Study of the Paso Robles Groundwater Basin to Establish Best Management Practices and Establish Salt Objectives”, D. Chipping et. al., 1993; and DWR southern district “Water Quality in the Paso Robles Groundwater Basin, 1981; obtain water level data from SLO County and/or DWR; procure recent water quality data from DHS, SLO County, and GAMA program. Review the Regional Integrated Watershed Management Plan (RIWMP), which identifies steps for improving groundwater quality. Also, identify and map point-source sites in the basin (using GeoTracker and NPDES discharge permit info-create maps in GIS).
- California Department of Public Health Drinking Water Source Assessment and Protection Program
- State Water Board Groundwater Ambient Monitoring and Assessment
- CCAMP
- Department of Water Resources California Water Plan Update
- Local Water Agency Groundwater Basin Management Plans

**Critical Success Factors**

Key areas of activity or support include the following:

- A clear and implementable plan to reach project goals, including objectives, assigned responsibilities, milestones, timelines, and reporting.
- Effective database management.
- A user-friendly, adequate, and updated database that will be accessible by everyone with appropriate data tools.

- Appropriate allocation of staff resources and management buy-in to ensure a balance between the vision work and programmatic priorities.
- Adjustments to funding and program workplans to accommodate vision work.
- Staff and management commitment to success of the vision work.
- Collaboration with internal and external stakeholders.
- Formal and open lines of communication and cooperation between Vision Teams and Water Board staff.

## Resources

- Access to relevant databases and supporting software, hardware, GIS, MODFLOW, chemical transport models (e.g., MT3DMS), pre- and post-processors.
- IT support.
- Committed staff with the expertise (or appropriate background and willingness to learn) to perform the data acquisition (if necessary), analyses, and reporting.
- Technical expertise to develop creative and innovative solutions to water quality problems.
- Complementary skill sets including; hydrogeology, surface water/groundwater interactions, environmental engineering, fate and transport, data management, Geographical Information System (GIS), technical writing, waste water treatment operations and design, land use planning, agricultural practices, numerical modeling, results-based project management.
- Staff with institutional knowledge and familiarity with the Region's groundwater basins and their associated issues.
- External stakeholders educated about our Vision.
- Team players with good communication skills and capable of working with other Clean Groundwater Team members, the other Vision Teams, and other agencies and entities.

## References

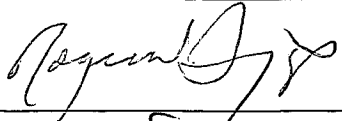
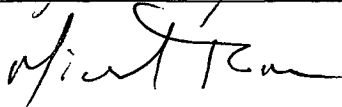
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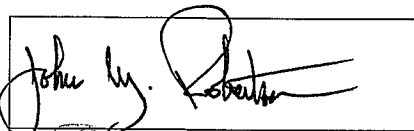
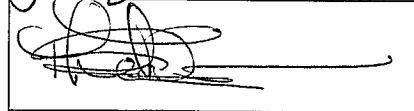
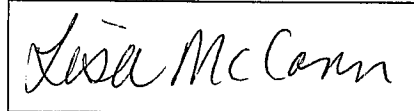
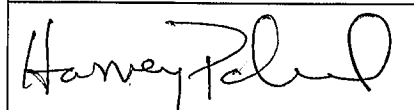
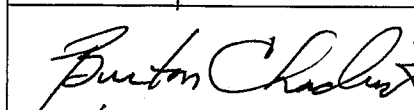

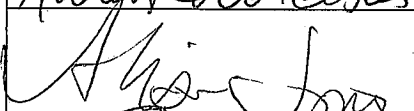

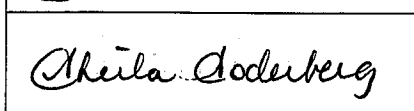
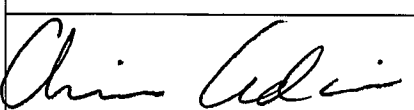
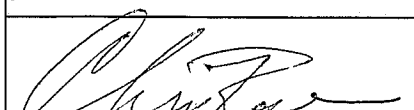
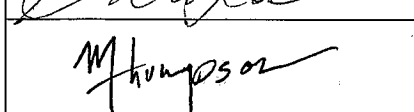
## DEFINITIONS

Groundwater basin management: Management of an area underlain by permeable materials capable of furnishing a significant supply of groundwater to wells or storing a significant amount of water.

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## Vision Project Charter Approval Signoff

Signature:	Name and Title:	Date:
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