

Project Information and Background

What It Does

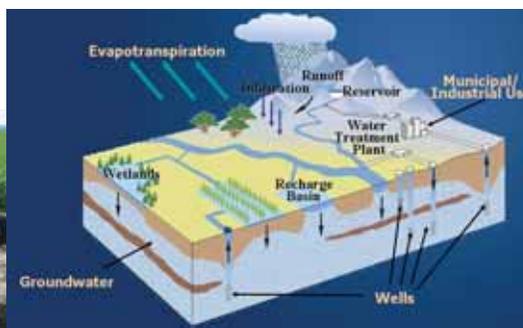
- Protects and preserves the natural resource.
- Enables partners to pursue and strengthen regional grant funding opportunities.
- Aligns groundwater polices and enhances cooperation among water purveyors.
- Supports Placer County General Plan policy of no urban growth on groundwater.
- Monitors groundwater elevations to prevent adverse effects on adjacent areas

What is the WPCGMP

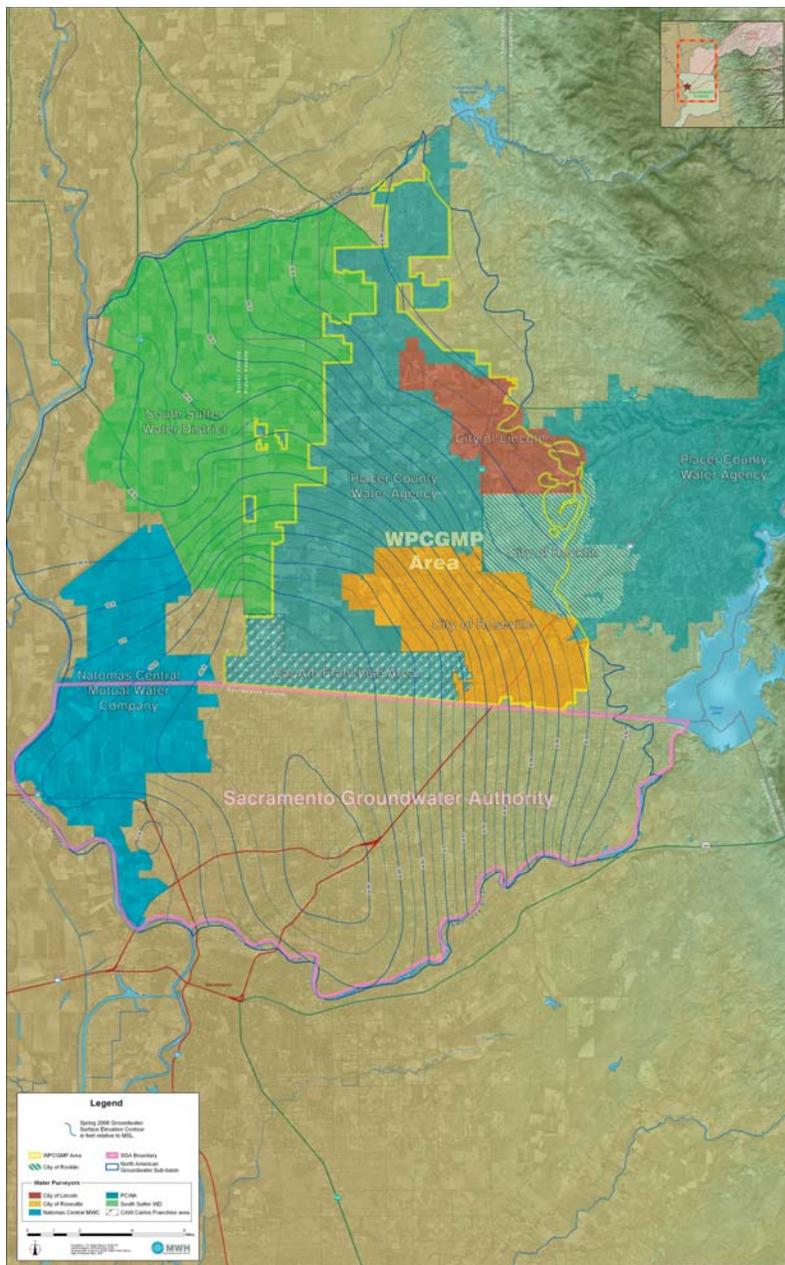
- A planning tool for the shared management of groundwater resources among plan participants
- A list of activities that ensure a sustainable, high-quality water supply for future generations
- A living document that will change over time.
- The first regional groundwater plan in Placer County history.
- Compliant with state rules for groundwater management plans (AB 3030 and SB 1938)

What It Doesn't

- Call for projects to mine groundwater for urban growth.
- Manage or influence surface water supplies for municipal or agricultural use.
- Affect land-use decisions of cities or supersede County land-use policies.
- Influence groundwater use by private well operators.

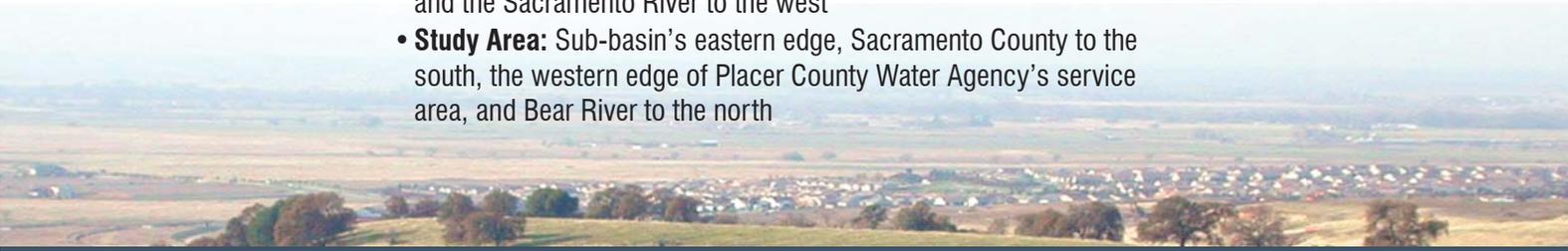


Western Placer County Basin Conditions

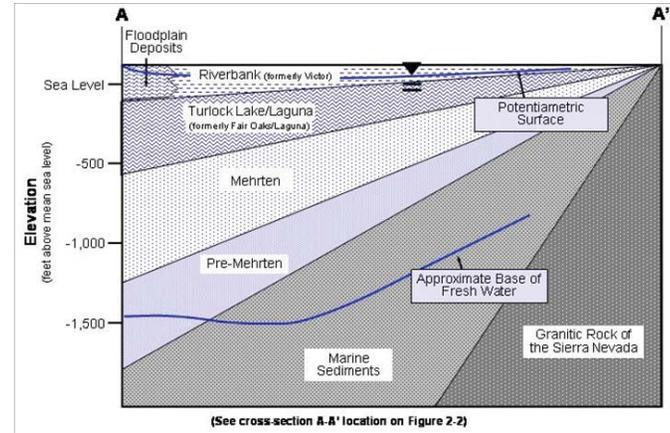
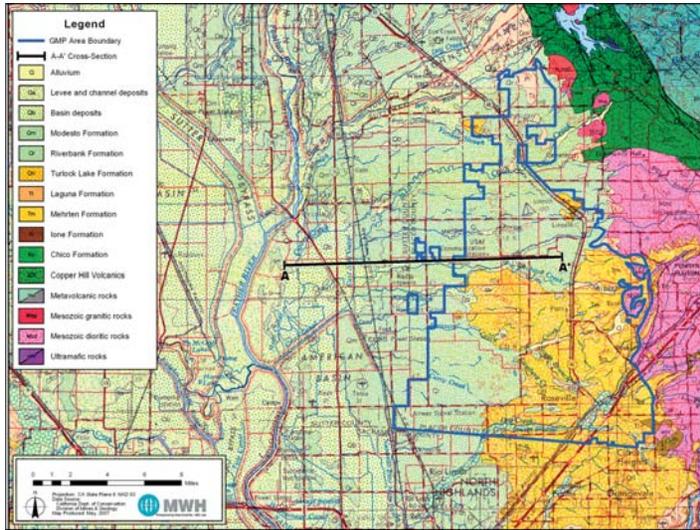


North American River Groundwater Sub-Basin

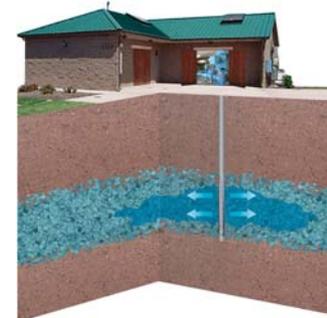
- **Basin Size and Area:** 548 square-miles. Roughly bounded by the American River to the east and south, the Bear River to the north and the Sacramento River to the west
- **Study Area:** Sub-basin's eastern edge, Sacramento County to the south, the western edge of Placer County Water Agency's service area, and Bear River to the north



Western Placer County Basin Conditions



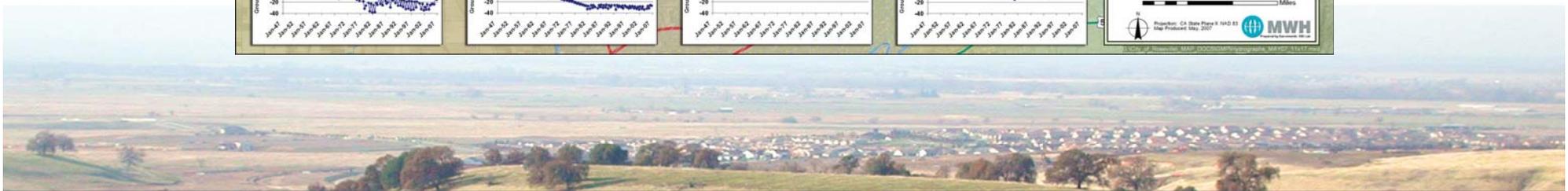
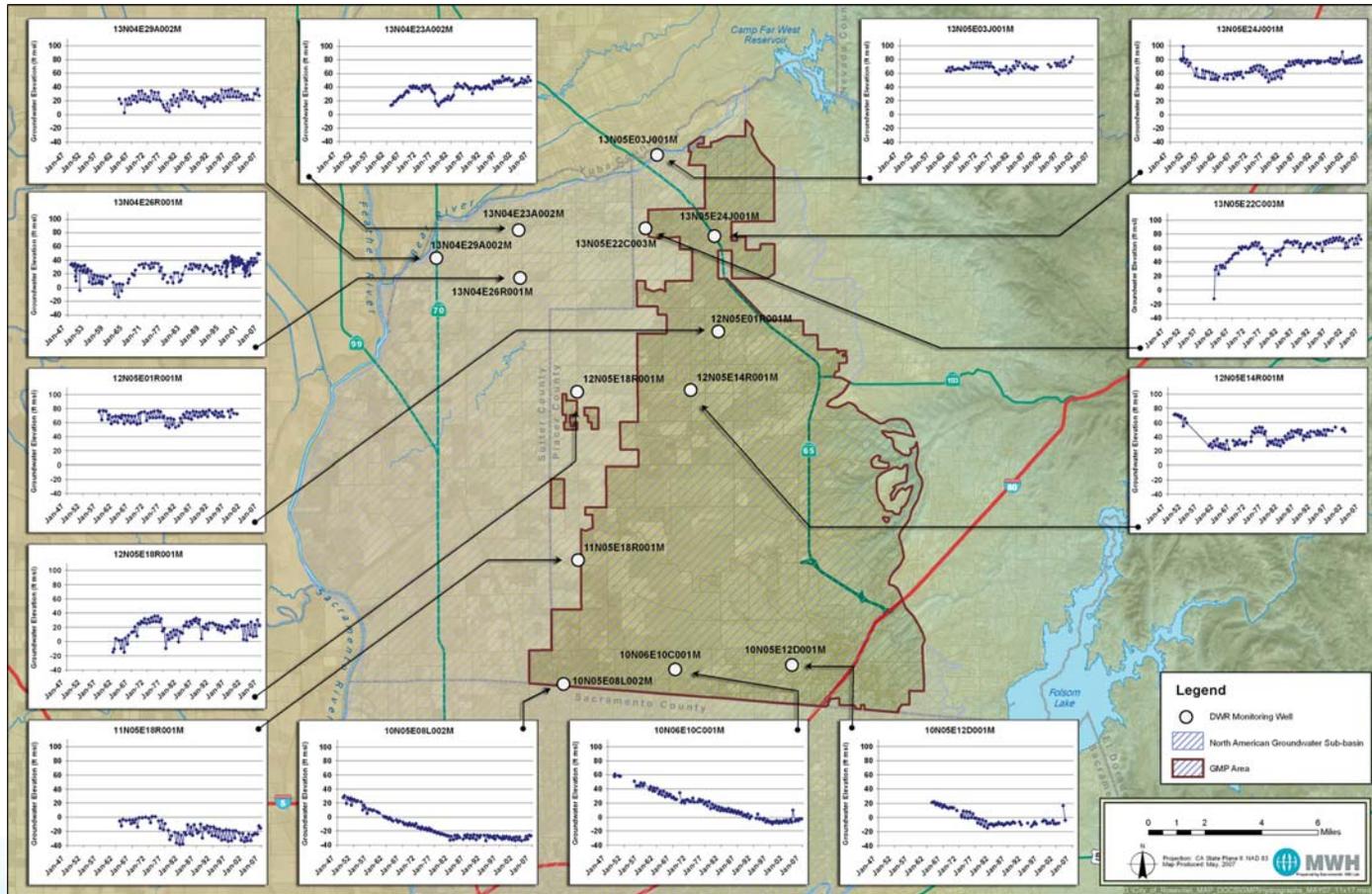
Lincoln area forage crops irrigated with reclaimed water



City of Roseville Aquifer Storage and Recovery Program



Western Placer County Basin Conditions



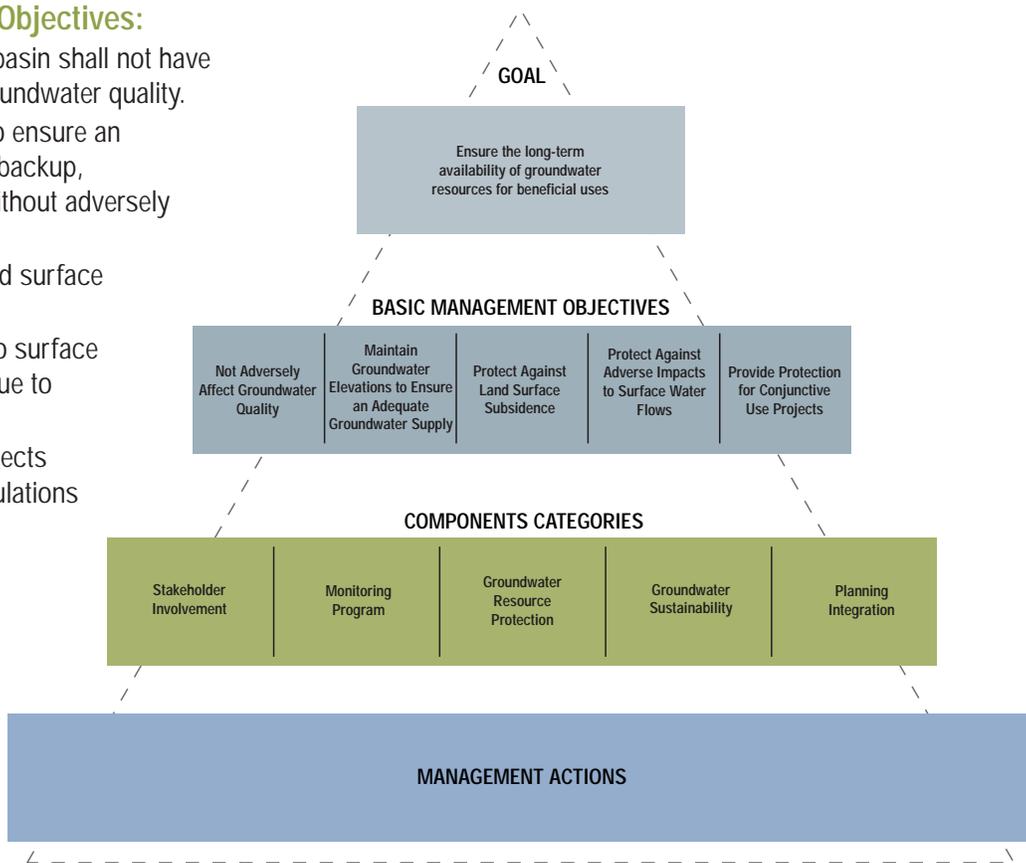
WPCGMP Development Gallery

WPCGMP Basin Goal:

The over-arching goal of the plan is “to maintain the quality and ensure the long-term availability of groundwater to meet backup, emergency, and peak demands without adversely affecting other groundwater uses within the WPCGMP area.”

WPCGMP Basin Management Objectives:

1. Management of the groundwater basin shall not have a significant adverse effect on groundwater quality.
2. Manage groundwater elevations to ensure an adequate groundwater supply for backup, emergency, and peak demands without adversely impacting adjacent areas.
3. Participate in state and federal land surface subsidence monitoring programs.
4. Protect against adverse impacts to surface water flows in creeks and rivers due to groundwater pumping.
5. Ensure groundwater recharge projects comply with state and federal regulations and protect beneficial uses of groundwater.



WPCGMP Development Gallery

WPCGMP Plan Components:

1. **Stakeholder Involvement:** Promote active stakeholder involvement in the WPCGMP among the public, and local, regional, state and federal agencies.
2. **Monitoring Program:** Track, analyze and maintain a monitoring system of groundwater supplies; evaluate the network adequacy and establish a Data Management System for partner agencies.
3. **Groundwater Resource Protection:** Implement practices and policies that protect groundwater supplies from contamination and implement measures that protect public health.
4. **Groundwater Sustainability:** Develop actions that augment natural recharge of the groundwater basin through direct and in-lieu recharge.
5. **Planning Integration:** Develop an integrated water management plan for WPCGMP partners, including review of proposed General Plans, Specific Plans, and other development plans as to their effect on the WPCGMP BMOs.



WPCGMP Development Gallery

Description of Action	Implementation Schedule	Reoccurrence Schedule
Plan Component #3 - Groundwater Resource Protection		
Well Construction Policies		
1. Ensure that the SGA, SSWD, NCMWC are provided a copy of the Roseville/Lincoln/PCWA/Placer County's well ordinance and understand the proper well construction procedures.	6 months	none
2. Provide a copy of the most recently delineated plume extents (if any) to the SGA, SSWD, NCMWC and others.	6 months	none
3. Coordinate with the SGA, SSWD, NCMWC and others to provide guidance as appropriate on well construction. Where feasible and appropriate, this could include the use of subsurface geophysical tools prior to construction of the well to assist in well design.	6 months	none
Well Abandonment and Well Destruction Policies		
1. Review DWR well records for all known wells in the WPCGMP area which were reported abandonment and destruction. Rate and provide a survey on the confidence of proper destruction based on the information provided on the report.	6 months	none
2. Ensure that the SGA, SSWD, NCMWC, NID, and others are provided a copy of the Roseville/Lincoln/Placer County's code and understanding the proper destruction procedures and support implementation of these procedures.	6 months	none
3. Follow up with the SGA, SSWD, NCMWC on the reported abandoned and destroyed wells to confirm the information collected from DWR.	6 months	none
4. Provide a copy of the information of abandoned and destroyed wells in Placer County to fill gaps in County records (if any).	6 months	none
5. Meet with Placer County EMD and DWR to ensure that wells in the WPCGMP area are properly abandoned or destroyed.	6 months	none
6. Meet with the Placer County Farm Bureau and Placer County Agricultural Commission to encourage them to help educate agriculturalists regarding the identification and proper destruction of abandoned wells.	6 months	none
7. Obtain "wildcat" map from California Division of Oil and Gas to ascertain the extent of historic gas well drilling operations in the area as these wells could function as conduits to groundwater if not properly destroyed.	6 months	none
Wellhead Protection Measures		
1. Request that the SGA, SSWD, NCMWC, and NID provide vulnerability summaries from the DWSAP to the plan participants governance structure to be used for guiding management decisions in the basin.	6 months	none
2. Contact groundwater basin managers in other areas of the state for technical advice, effective management practices, and "lessons learned", regarding establishing wellhead protection areas.	6 months	none
Protection of Recharge Areas		
1. Implement and meet to discuss results of an California Aquifer Susceptibility (CAS) study with the SGA, SSWD, NCMWC and others to discuss the results and coordinate follow-up actions items.	9 months	none
2. Develop a recharge program that identifies major natural recharge areas, quantifies current recharge rates, identifies potential sources of surface water that could be utilized for recharge, and methods for recharging groundwater.	24 months	none
3. Identify potential activities that could adversely affect recharge quantities or qualities and formulate cohesive policies that the plan participants can use to manage or mitigate potential impacts.	24 months	none
Control of the mitigation and remediation of contaminated groundwater		
1. Map and monitor known contaminated sites while coordinating with known responsible parties (if any) to develop a network of monitoring wells to act as an early warning system for public supply wells.	18 months	none
2. If detections occur in these monitoring wells, work with the responsible parties and the potentially impacted areas of the SGA, SSWD, NCMWC and NID to develop strategies to minimize the further spread of contaminants.	18 months	none
3. Provide the SGA, SSWD, NCMWC and others with all information on mapped contaminant polluters and LUST sites for their information in developing groundwater extraction patterns and in the siting of future production or monitoring wells.	18 months	none
4. Inform the SGA, SSWD, NCMWC, and NID of the presence of the interface and the approximate depth of the interface below their service area for their reference when siting potential wells.	18 months	none
5. Establish and isolate zones around known contamination plumes so as to limit the placement of production wells whose pumping might otherwise exacerbate the contamination. Add offset requirements for landfills.	18 months	none

Description of Action	Implementation Schedule	Reoccurrence Schedule
Control of Saline Water Intrusion		
1. Track the progression, if any, of saline water bodies moving toward the east from the Delta. Because this is a highly unlikely scenario, this action will be limited to communicating with DWR's Northern District Office on a biennial basis to check for significant changes in TDS concentrations in wells. DWR has a regular program of sampling water quality in select production wells throughout the adjacent Solano, San Joaquin, and Yolo counties. This will serve as an early warning system for the potential of saline water intrusion from the Delta.	12 months	24 months
2. Determine and monitor the elevation of the fresh water/saline water vertical interface. Analyze for trends in sodium, chloride, and TDS that may indicate upwelling of saline water.	6 months	12 months
3. Observe TDS concentrations in plan participant's municipal wells that are routinely sampled under Title 22. This data will be readily available as part of the DMS and are already an on-going task for the annual review of basin conditions.	6 months	12 months
4. Inform all stakeholders of the presence of the salinity interface and the approximate depth to the interface for their reference when siting potential wells. The plan participants will also ensure that Placer County EMD is aware of the interface. The plan participants will provide a map indicating the contour of the elevation of the base of fresh water in Placer County to EMD for their reference when issuing well permits.	12 months	12 months
Plan Component #4 - Groundwater Sustainability		
Conjunctive Management Activities		
1. Continue to investigate conjunctive use opportunities within the WPCGMP area.	6 months	On-going
2. Continue to investigate opportunities for the development of direct recharge facilities in addition to in-lieu recharge (e.g. injection wells or surface spreading facilities, through constructed recharge basins or in river or streambeds.	6 months	On-going
Demand Reduction (Water Conservation and Water Recycling)		
1. Continue to participate in their respective conservation efforts.	12 months	On-going
2. Coordinate with City of Lincoln, SGA, SSWD, NCMWC, NID, and others to investigate further opportunities for expanded use of recycled water throughout the WPCGMP area.	12 months	On-going
Plan Component #5 - Planning Integration		
Integrated Water Management Plan		
1. Coordinate with SGA and Sutter County on regional hydrologic modeling efforts and updates.	9 months	24 months



WPCGMP Development Gallery

Description of Action	Implementation Schedule	Reoccurrence Schedule
Plan Component #1 - Stakeholder Involvement		
Involving the Public		
1. Continue efforts to encourage public participation as opportunities arise.	6 months	On-going
2. Review and take actions from a Public Outreach Plan as necessary during implementation of various aspects of the WPCGMP.	6 months	On-going
3. Continue to provide briefings to the Water Forum Successor Effort on WPCGMP implementation progress.	6 months	On-going
4. Work with basin stakeholders to maximize outreach on WPCGMP activities, including the use of the plan and plan participants' websites.	6 months	On-going
Involving other Agencies adjacent to the WPCGMP area		
1. Continue a high level of involvement with SGA, SSWD, NCMWC, NID and other interested parties in implementing the WPCGMP.	6 months	On-going
2. Provide copies of the adopted WPCGMP and subsequent annual reports to representatives from the SGA, SSWD, NCMWC, NID and other interested parties.	12 months	24 months
3. Meet with representatives from the SGA, SSWD, NCMWC, NID and other interested parties, as needed.	6 months	On-going
4. Coordinate a meeting with other self supplied groundwater pumpers in the WPCGMP area to inform them of the plan participant's management responsibilities and activities, and develop a list of other self supplied groundwater pumpers concerns and needs to the plan participant's management.	6 months	12 months
5. Coordinate a meeting with the agricultural groundwater pumpers in the WPCGMP area to inform them of the plan participant's management responsibilities and activities, and develop a list of agricultural groundwater pumpers concerns and needs to the plan participant's management.	6 months	12 months
Utilizing advisory committees		
1. Upon adoption of the WPCGMP, the TRC will periodically meet to discuss scheduling and functions to guide implementation of the plan and provide these recommendations to the WPCGMP governance body.	6 months	6 months
Developing relationships with State and Federal Agencies		
1. Continue existing and develop new working relationships with local, state, and federal regulatory agencies.	6 months	On-going
Pursuing Partnership Opportunities		
1. Continue to promote partnerships that achieve both local supply reliability and achieve broader regional and statewide benefits.	6 months	On-going
2. Continue to track and apply for grant opportunities to fund regional groundwater management activities and local water infrastructure projects.	6 months	On-going

Description of Action	Implementation Schedule	Reoccurrence Schedule
Plan Component #2 - Monitoring Program		
Groundwater Elevation Monitoring		
1. Coordinate with DWR and others to identify an appropriate group of wells for monitoring a Fall 2007 and future groundwater elevation measurements.	6 months	12 months
2. Coordinate with DWR and others to ensure that the selected wells are maintained as part of a long-term monitoring network.	6 months	12 months
3. Coordinate with DWR to ensure that the timing of groundwater elevation data collection by other agencies coincides within one month of DWR data collection. Currently, DWR collects water level data in the spring and fall.	6 months	12 months
4. Coordinate with other agencies to ensure that needed groundwater elevations are collected and verify that uniform data collection protocols are used among the agencies.	6 months	12 months
5. Consider ways to fill gaps in the monitoring well network by identifying suitable existing wells or identifying opportunities for constructing new monitoring wells.	6 months	12 months
6. Assess groundwater elevation trends and conditions based on the monitoring well network annually.	6 months	12 months
7. Assess the adequacy of the groundwater elevation monitoring network annually.	6 months	12 months
8. Identify a subset of monitoring wells that will be monitoring more frequently than annually to improve the understanding of aquifer responses to pumping throughout the year.	6 months	12 months
Groundwater Quality Monitoring		
1. Coordinate with cooperating agencies to verify that uniform protocols are used when collecting water quality data.	6 months	12 months
2. Coordinate with local, state, and federal agencies to identify where wells may exist in areas with sparse groundwater quality data. Identify opportunities for collecting and analyzing water quality samples from those wells.	6 months	12 months
3. Assess the adequacy of the groundwater quality monitoring network annually.	6 months	12 months
Land Surface Elevation Monitoring		
1. Coordinate with other agencies (particularly DWR, USGS and SGA) to determine if there are other suitable benchmark locations in the WPCGMP area to aid in the analysis of potential land surface subsidence.	Immediately	24 months
Surface Water/Groundwater Interaction Monitoring		
1. Work cooperatively with DWR and others to compile available stream gage data and information on tributary inflows and diversions from the Feather, Bear, and Sacramento Rivers to quantify net groundwater recharge or discharge between gages in the WPCGMP area.	12 months	12 months
2. Coordinate with local, state, and federal agencies to identify available surface water quality data from the Feather, Bear, and Sacramento Rivers proximate to the WPCGMP area.	12 months	12 months
3. Correlate groundwater level data from wells in the vicinity of river stage data to further establish whether the river and water table are in direct hydraulic connection, and if the surface water is gaining or losing at those points.	12 months	12 months
4. Continue to coordinate with local, state, and federal agencies and develop partnerships to investigate cost-effective methods that could be applied to better understand surface water-groundwater interaction along the Feather, Bear, and Sacramento rivers.	12 months	On-going
5. Perform evaluations of accretion/depletion interactions for local streams that bisect the WPCGMP, such as Auburn Ravine and Coon Creek.	12 months	12 months
Protocols for the Collection of Groundwater Data		
1. Use a Standard Operating Procedure (SOP) for collection of water level data by each of the cooperating agencies. Appendix C includes a SOP for Manual Water Level Measurements. This SOP was prepared using guidance documents available through the Environmental Protection Agency (EPA) and was included in a technical memorandum developed for SGA summarizing the accuracy and reliability of groundwater data (MWH, 2002).	6 months	On-going
2. Provide cooperating agencies with guidelines on the collection of water quality data developed by DHS for the collection, pretreatment, storage, and transportation of water samples (DHS, 1995).	6 months	On-going
3. Provide training on the implementation of these SOPs to cooperating agencies, if requested.	6 months	12 months
Groundwater Data Management System		
1. Provide users staff with training and use of a Data Management System (DMS).	9 months	none
2. Populate and update a DMS with available groundwater, water quality, well, and surface water data.	9 months	12 months
3. Develop list of recommended enhancements to a DMS.	15 months	12 months
4. Provide resources for maintaining and updating a DMS.	Immediately	On-going
5. Provide resources for maintaining, updating and utilizing a groundwater model or the North American River IGSM.	15 months	12 months
6. Develop and present an biennial State of the Basin Report	24 months	12 months

