

Appendix 1

**Napa County General Plan – Conservation Element
Section on Water Resources Goals, Policies and
Action Items**



Action Item CON NR-6: The County shall adopt protocols to be followed, including a methodology for analyzing the need for buffers, and establish setbacks where discretionary projects are proposed on parcels that may contain sensitive biotic communities or habitats/communities of limited distribution or sensitive natural communities. [Implements Policy 17]

Action Item CON NR-7: The County shall adopt a voluntary Oak Woodland Management Plan to identify and mitigate significant direct and indirect impacts to oak woodlands. Mitigation may be accomplished through a combination of the following measures:

- a) Conservation easement and land dedication for habitat preservation;
- b) Payment of in-lieu fees; and/or
- c) Replacement planting of appropriate size, species, area, and ratio.

[Implements Policy 24]

WATER RESOURCES GOALS AND POLICIES

Goal CON-8: Reduce or eliminate groundwater and surface water contamination from known sources (e.g., underground tanks, chemical spills, landfills, livestock grazing, and other dispersed sources such as septic systems).

Goal CON-9: Control urban and rural storm water runoff and related non-point source pollutants, reducing to acceptable levels pollutant discharges from land-based activities throughout the county.

Goal CON-10: Conserve, enhance and manage water resources on a sustainable basis to attempt to ensure that sufficient amounts of water will be available for the uses allowed by this General Plan, for the natural environment, and for future generations.

Goal CON-11: Prioritize the use of available groundwater for agricultural and rural residential uses rather than for urbanized areas and ensure that land use decisions recognize the long-term availability and value of water resources in Napa County.

Goal CON-12: Proactively collect information about the status of the county's surface and groundwater resources to provide for improved forecasting of future supplies and effective management of the resources in each of the County's watersheds.



Goal CON-13: Promote the development of additional water resources to improve water supply reliability and sustainability in Napa County, including imported water supplies and recycled water projects.

WATER RESOURCES POLICIES

Policy CON-41: The County will work to protect Napa County's watersheds and public and private water reservoirs to provide for the following purposes:

- a) Clean drinking water for public health and safety;
- b) Municipal uses, including commercial, industrial and domestic uses;
- c) Support of the eco-systems;
- d) Agricultural water supply;
- e) Recreation and open space; and
- f) Scenic beauty.

Policy CON-42: The County shall work to improve and maintain the vitality and health of its watersheds. Specifically, the County shall:

- a) Use all available sources of assistance to protect and enhance the Napa River and its tributaries and watershed to meet or exceed water quality standards imposed by state and federal authorities (e.g., pursue grants and other funding opportunities to assist in the identification, testing, and improvement of individual septic as well as community waste disposal systems, and to support watershed monitoring/sampling and scientific understanding to inform and develop effective and targeted management options in an adaptive and locally driven manner).
- b) Reduce water pollutants through education, monitoring, and pollutant elimination programs (e.g., watershed education and monitoring programs identified in the Watershed Information Center and Conservancy (WICC) Strategic Plan and Napa County/Resource Conservation District (RCD) Watershed Programs, and pollution reduction goals outlined in Napa County's Phase II National Pollution Discharge Elimination System (NPDES) General Permit from the State Water Board).
- c) Support voluntary cooperative efforts in watershed planning to identify and establish habitat enhancement goals on various reaches of the Napa River and its tributaries, including, but not limited to, the development of localized watershed management plans, project identification, implementation and monitoring to support adaptive management (e.g., Napa Green Certified Land/Fish Friendly Farming, Rutherford Dust Restoration Team, Resource Conservation District's Stewardship Program, on- and off-site habitat protection and mitigation programs, and dozens of other active efforts currently planned or now underway).
- d) Support environmentally sustainable agricultural techniques and best management practices (BMPs) that protect surface water and groundwater quality and quantity (e.g., cover crop management, integrated pest management, informed surface water withdrawals and groundwater use).



- e) Promote and support the use of recycled water wherever feasible, including the use of tertiary treated water, to help improve supply reliability and enhance groundwater recharge.
- f) Support completion of the federal, state, and local government flood control projects that contribute to the health of Napa County's watersheds.
- g) Recognize that unmanaged forests and watersheds can have unintended adverse environmental consequences such as increasing the threat and intensity of wild land fires, which could lead to widespread erosion and degradation of water quality. Support voluntary efforts by landowners to reduce fuel loads in forests and watersheds to reduce this threat.
- h) Recognize that efforts to protect and preserve water for wildlife habitat and watershed health in Napa County can have long term benefits related to adequate water supplies and water quality. [Implemented by Action Items CON WR-1, 4, and 7]

Policy CON-43: Pursuant to the Open Space and Conservation goals and policies that conserve open space and recreational resources, the County shall protect and enhance watershed lands, including the downstream delivery of essential watershed resources and benefits from headwater channels. The County's efforts shall include:

- a) Preserving and where economically feasible restoring the density and diversity of water dependent species and continuous riparian habitats based on sound ecological principles; and
- b) Supporting the acquisition, development, maintenance and restoration of habitat lands for wildlife and watershed enhancement where clearly consistent with General Plan policies.

Policy CON-44: The County shall identify, improve, and conserve Napa County's surface water resources through the following measures:

- a) Evaluate and develop land use policies resulting in the appropriate density and mix of impervious surface and stable vegetation cover to improve water quality and reduce surface water pollution and siltation within domestic water supply watersheds.
- b) Encourage public agencies and private individuals to explore environmentally sensitive ways to store winter runoff in consultation with the State Department of Water Resources and other regulatory agencies.
- c) Promote a balanced approach to managing reservoir outflows, particularly municipal supply reservoirs, through coordination with cities and town to maintain a reliable water supply for domestic uses, minimize flooding, and preserve fish habitat and riparian vegetation.
- d) Work with other agencies to develop a comprehensive understanding of potential deficiencies in surface water supplies, and coordinate with private property owners on a voluntary basis to collect additional surface water data and implement an expanded voluntary monitoring effort to ensure development of effective water



management and conservation strategies where appropriate. [Implemented by Action Items CON WR-1, 4, and 7]

Policy CON-45: Protect the County’s domestic supply drainages through vegetation preservation and protective buffers to ensure clean and reliable drinking water consistent with state regulations and guidelines. Continue implementation of current Conservation Regulations relevant to these areas, such as vegetation retention requirements, consultation with water purveyors/system owners, implementation of erosion controls to minimize water pollution, and prohibition of detrimental recreational uses. [Implemented by Action Item CON WR-3]

Policy CON-46: Napa County’s past, present, and future are intertwined with that of the Napa River; therefore, the County is committed to improving and sustaining the health of the river, through attaining water quality and habitat enhancement goals, supporting public access to the river for visual appreciation and recreational purposes, and completing federal, state, and local flood control projects that are consistent with “living rivers” principles.

Policy CON-47: The County shall comply with applicable Water Quality Control/Basin Plans as amended through the Total Maximum Daily Load (TMDL) process to improve water quality. In its efforts to comply, the following may be undertaken:

- a) Monitoring water quality in impaired waterbodies identified by the Regional Water Quality Control Board(s).
- b) Addressing failing septic systems in the vicinity of Murphy, Browns Valley, and Salvador Creeks and throughout the County, should they be found to exist.
- c) Retrofitting County-maintained roads to reduce sediment caused by runoff.
- d) Supporting voluntary habitat restoration and bank stabilization efforts, with particular focus on the main stem and main tributaries of the Napa River.
- e) Ensuring continued effectiveness of the National Pollution Discharge Elimination System (NPDES) program and storm water pollution prevention.
- f) Ensuring continued effectiveness of the County’s Conservation Regulations related to vineyard projects and other earth-disturbing activities.
- g) Addressing effects related to past and current mining, grazing, and other activities to the extent feasible.
- h) Amending the County’s Conservation Regulations or County Code to address excessive sediment delivered to waterways as required by state law, particularly as it relates to private roads and rural unimproved (i.e., dirt or gravel) roads.
- i) Developing outreach and education programs to inform land owners and managers about improving surface water quality (e.g., rural and private road maintenance, soil and vegetation retention, construction site management, runoff control, etc.) and cooperating with other governmental and non-governmental agencies seeking to establish waiver or certification programs. [Implemented by Action Item CON WR-4]



Policy CON-48: Proposed developments shall implement project-specific sediment and erosion control measures (e.g., erosion control plans and/or stormwater pollution prevention plans) that maintain pre-development sediment erosion conditions or at minimum comply with state water quality pollution control (i.e., Basin Plan) requirements and are protective of the County's sensitive domestic supply watersheds. Technical reports and/or erosion control plans that recommend site-specific erosion control measures shall meet the requirements of the County Code and provide detailed information regarding site specific geologic, soil, and hydrologic conditions and how the proposed measure will function.

Policy CON-49: The County shall develop and implement a water quality monitoring program (or programs) to track the effectiveness of temporary and permanent Best Management Practices (BMPs) to control soil erosion and sedimentation within watershed areas and employ corrective actions for identified water quality issues (in violation of Basin Plans and/or associated TMDLs) identified during monitoring. [Implemented by Action Item CON WR-4]

Policy CON-50: The County will take appropriate steps to protect surface water quality and quantity, including the following:

- a) Preserve riparian areas through adequate buffering and pursue retention, maintenance, and enhancement of existing native vegetation along all intermittent and perennial streams through existing stream setbacks in the County's Conservation Regulations (also see Policy CON-27 which retains existing stream setback requirements).
- b) Encourage flood control reduction projects to give full consideration to scenic, fish, wildlife, and other environmental benefits when computing costs of alternative methods of flood control.
- c) The County shall require discretionary projects to meet performance standards designed to ensure peak runoff in 2-, 10-, 50-, and 100-year events following development is not greater than predevelopment conditions.
- d) Maintain minimum lot sizes of not less than 160 acres in Agriculture, Watershed, and Open Space (AWOS) designated areas to reflect desirable densities based on access, slope, productive capabilities for agriculture and forestry, sewage disposal, water supply, wildlife habitat, and other environmental considerations.
- e) In conformance with National Pollution Discharge Elimination System (NPDES) requirements, prohibit grading and excavation unless it can be demonstrated that such activities will not result in significant soil erosion, silting of lower slopes or waterways, slide damage, flooding problems, or damage to wildlife and fishery habitats.
- f) Adopt development standards, in conformance with NPDES Phase II requirements, for post-construction storm water control.
- g) Address potential soil erosion by maintaining sections of the County Code that require all construction-related activities to have protective measures in place or installed by the grading deadlines established in the Conservation Regulations. In



addition, the County shall ensure enforceable fines are levied upon code violators and shall require violators to perform all necessary remediation activities.

- h) Require replanting and/or restoration of riparian vegetation to the extent feasible as part of any discretionary permit or erosion control plan approved by the County, understanding that replanting or restoration that enhances the potential for Pierce's Disease or other vectors is considered infeasible.
- i) Encourage management of reservoir outflows (bypass flows) to maintain fish life and riparian (streamside) vegetation.
- j) Encourage minimal use of chemical treatment of reservoirs to prevent undue damage to fish and wildlife resources.
- k) Prohibit new septic systems in areas where sewage treatment and disposal systems are available and encourage new sewage treatment and disposal systems in urbanized areas where there is high groundwater recharge potential and existing concentrations of septic systems.

Policy CON-50.5: Recognize the importance of water resources that guard against flooding and attenuate floodwaters including those rivers, creeks, streams, flood corridors, riparian habitat, and lands that may accommodate floodwater important for the purposes of groundwater recharge and stormwater management as those areas identified on the County's adopted Federal Emergency Management Agency (FEMA) Flood Insurance Rate Mapping (FIRM)¹⁹. (see also Policy SAF-25 and Figure SAF-3)

Policy CON-51: Recognizing that groundwater best supports agricultural and rural uses, the County discourages urbanization requiring net increases in groundwater use and discourages incorporated jurisdictions from using groundwater except in emergencies or as part of conjunctive-use programs that do not cause or exacerbate conditions of overdraft or otherwise adversely affect the County's groundwater resources.

Policy CON-52: Groundwater is a valuable resource in Napa County. The County encourages responsible use and conservation of groundwater and regulates groundwater resources by way of its groundwater ordinances. [Implemented by Action Items CON WR-6 and 9]

Policy CON-52.5: Over time, the County should seek ways to increase the institutional capacity and level of expertise within the County related to groundwater issues.

Policy CON-53: The County shall ensure that the intensity and timing of new development are consistent with the capacity of water supplies and protect groundwater and other water supplies by requiring all applicants for discretionary projects to demonstrate the availability of an adequate water supply prior to approval. Depending on the site location and the specific circumstances, adequate demonstration of availability may include evidence or calculation of groundwater availability via an appropriate hydrogeologic analysis or may be satisfied by compliance with County Code "fair-share" provisions or applicable State

¹⁹ Flood Insurance Rate Map, Napa County, California, Map Number 06055CIND0A (index sheet), Effective Date: September 26, 2008



law. In some areas, evidence may be provided through coordination with applicable municipalities and public and private water purveyors to verify water supply sufficiency.

Policy CON-53.5: Before authorizing any new exportation of water from the County, the County shall ensure an adequate, long term supply of ground and surface water for agriculture, conservation, domestic, industrial, and recreational uses in affected areas/watersheds.

Policy CON-54: The County shall maintain or enhance infiltration and recharge of groundwater aquifers by requiring all projects in designated groundwater deficient areas as identified in the County's groundwater ordinance (County Code Chapter 13.15) be designed (at minimum) to maintain a site's predevelopment groundwater recharge potential, to the extent feasible, by minimizing impervious surfaces and promoting recharge (e.g., via the use of water retention/detention structures, use of permeable paving materials, bio-swales, water gardens, cisterns, and other best management practices). [Implemented by Action Item CON WR-5]

Policy CON-55: The County shall consider existing water uses during the review of new water uses associated with discretionary projects, and where hydrogeologic studies have shown that the new water uses will cause significant adverse well interference or substantial reductions in groundwater discharge to surface waters that would alter critical flows to sustain riparian habitat and fisheries or exacerbate conditions of overdraft, the County shall curtail those new or expanded water uses. [Implemented by Action Item CON WR-6]

Policy CON-56: The County shall discourage the drilling or operation of any new wells in known areas of saltwater intrusion until such time as a program has been approved and funded which will minimize or avoid expansion of salt water intrusion into useable groundwater supplies.

Policy CON-57: The County shall work with appropriate agencies and districts to develop an understanding of potential groundwater deficiencies and coordinate with private property owners to voluntarily collect groundwater data, including implementing effective water management and conservation strategies and encouraging exploration and use of alternative (e.g., non-groundwater) water supplies where feasible to further conserve existing groundwater resources. [Implemented by Action Items CON WR-8 and 9]

Policy CON-58: Recognizing the difficulty of assessing and resolving groundwater problems, the County shall periodically review and update groundwater policies and ordinances as new studies and monitoring data become available to protect the County's surface water and groundwater resources, and implement various protective recommendations outlined in the 2050 Napa Valley Water Resources Study as appropriate (West Yost & Assoc., 2005). [Implemented by Action Item WR-9]

Policy CON-59: The County shall disseminate available information (online or in report format) on groundwater levels on an aggregated drainage basin level or other aggregated scale that is appropriate based on data availability and confidentiality. [Implemented by Action Item WR-5]



CONSERVATION

Policy CON-60: The County shall promote cost-effective water conservation and water efficiency measures that reduce water loss, waste, and water demand through the following measures:

- a) Taking a leadership role in water conservation efforts, by monitoring and publicly reporting on the County's water use, using low flow fixtures, drought-tolerant landscaping, drip irrigation, recycled water use where available and appropriate, periodic water use "audits" and other strategies to conserve water at all County-owned and operated facilities.
- b) Requiring the use of water conservation measures in areas served by municipal supplies to improve water use efficiency and reduce overall demand including, but not limited to, working cooperatively with all water providers and with developers to incorporate water conservation measures into project designs (e.g., as recommended by the California Urban Water Conservation Council), and coordination with water providers to continue to develop and implement water drought contingency plans to assist County citizens and businesses in reducing water use during periods of water shortages and emergencies.
- c) Seeking cooperative partnerships with government agencies, non-profit organizations, private industry groups, and individuals in furthering water conservation strategies in Napa County.

[Implemented by Action Item CON WR-9]

Policy CON-60.5: All aspects of landscaping from the selection of plants to soil preparation and the installation of irrigation systems should be designed to reduce water demand, retain runoff, decrease flooding, and recharge groundwater.

Policy CON-61: The County shall coordinate and collaborate with other agencies to identify, improve, and conserve Napa County's community and municipal water supply resources as follows:

- a) Environmentally sustainable water supply projects should receive priority attention, including development of sustainable alternative water supplies such as the use of recycled water or other options for non-potable uses in Carneros and the MST groundwater basins.
- b) Manage potential disruptions in water supply from reduced Sierra snow-pack and related drought conditions to ensure a stable water supply in the future by purchasing additional supplies or entitlements, including opportunities to purchase dry year water supplies, modifying standard operational procedures and/or facilities to enhance the availability of local water resources, and planning for water supply treatment facilities and delivery systems to urbanized areas of the county.

[Implemented by Action Item CON WR-7]

Policy CON-62: As stated in Policy AG/LU-74, the County supports the extension of recycled water to the Coombsville area to reduce reliance on groundwater in the MST groundwater basin and exploration of other alternatives. Also, the County shall identify and support ways to utilize recycled water for irrigation and non-potable uses to offset dependency on



groundwater and surface waters and ensure adequate wastewater treatment capacity through the following measures:

- a) Require (as part of continued implementation of County Code Title 13 Division 2 provisions associated with sewer systems) verification of adequate wastewater service for all development projects prior to their approvals. This requirement includes coordination with wastewater service purveyors to verify adequate capacity and infrastructure either exists or will be available prior to operation of the development project.
- b) Use wastewater treatment and reuse facilities where feasible to reclaim, reuse, and deliver treated wastewater for irrigation and possible potable use depending on wastewater treatment standards.
- c) Require proposals for non-residential construction in the Airport Industrial Area and lower Milliken-Sarco-Tulocay Creeks Area to incorporate dual plumbing to allow for the use of non-potable/recycled water when such water becomes available.
- d) Encourage the use of non-potable/recycled water wherever recycled water is available and require the use of recycled water for golf courses where feasible.

Policy CON-63: The County will support the work of the Watershed Information Center and Conservancy (WICC) Board as a clearinghouse for watershed information, a forum for citizen and interagency discussion and cooperation, and development and coordination of watershed monitoring efforts and strategic planning. [Implemented by Action Items CON WR-4, 7, 8, and 9]

Policy CON-64: The County shall monitor the rise in sea levels and resulting saltwater intrusion into surface waters and use adaptive management strategies to modify County practices when warranted. [Implemented by Action Item CON WR-4, 8, and 9]

WATER RESOURCES ACTION ITEMS

Action Item CON WR-1: Develop basin-level watershed management plans for each of the three major watersheds in Napa County (Napa River, Putah Creek, and Suisun Creek). Support each basin-level plan with focused sub-basin (drainage-level) or evaluation area-level implementation strategies, specifically adapted and scaled to address identified water resource problems and restoration opportunities. Plan development and implementation shall utilize a flexible watershed approach to manage surface water and groundwater quality and quantity. The watershed planning process should be an iterative, holistic, and collaborative approach, identifying specific drainage areas or watersheds, eliciting stakeholder involvement, and developing management actions supported by sound science that can be effectively implemented. [Implements Policies 42 and 44]

Action Item CON WR-2: [Reserved]

Action Item CON WR-3: Update the Conservation Regulations to establish an appropriate protective buffer (e.g., a special protection zone) in areas that drain toward any intake structure associated with the County's sensitive domestic water supply



drainages, requiring specific development and performance measures to protect water quality and balance property owners' ability to use their land and stipulating that discretionary projects must be located outside of the protective buffer wherever this is feasible. [Implements Policy 45]

Action Item CON WR-4: Implement a countywide watershed monitoring program to assess the health of the County's watersheds and track the effectiveness of management activities and related restoration efforts. Information from the monitoring program should be used to inform the development of basin-level watershed management plans as well as focused sub-basin (drainage-level) implementation strategies intended to address targeted water resource problems and facilitate restoration opportunities. Over time, the monitoring data will be used to develop overall watershed health indicators and as a basis of employing adaptive watershed management planning. [Implements Policies 42, 44, 47, 49, 63, and 64]

Action Item CON WR-5: Identify, map, and disseminate information on groundwater recharge areas, to the extent feasible, and provide educational materials and resource information on ways of reducing and limiting the development of non-pervious surfaces in those areas. [Implements Policy 54 and 59]

Action Item CON WR-6: Establish and disseminate standards for well pump testing and reporting and include as a condition of discretionary projects that well owners provide to the County upon request information regarding the locations, depths, yields, drilling and well construction logs, soil data, water levels and general mineral quality of any new wells. [Implements Policy 52 and 55]

Action Item CON WR-7: The County, in cooperation with local municipalities and districts, shall perform surface water and groundwater resources studies and analyses and work toward the development and implementation of an integrated water resources management plan (IRWMP) that covers the entirety of Napa County and addresses local and state water resource goals, including the identification of surface water protection and restoration projects, establishment of countywide groundwater management objectives and programs for the purpose of meeting those objectives, funding, and implementation. [Implements Policy 42, 44, 61 and 63]

Action Item CON WR-8: The County shall monitor groundwater and interrelated surface water resources, using County-owned monitoring wells and stream and precipitation gauges, data obtained from private property owners on a voluntary basis, data obtained via conditions of approval associated with discretionary projects, data from the State Department of Water Resources, other agencies and organizations. Monitoring data shall be used to determine baseline water quality conditions, track groundwater levels, and identify where problems may exist. Where there is a demonstrated need for additional management actions to address groundwater problems, the County shall work collaboratively with property owners and other stakeholders to prepare a plan for managing groundwater supplies pursuant to State Water Code Sections 10750-10755.4 or other applicable legal authorities. [Implements Policy 57, 63 and 64]



- Action Item CON WR-9: The County shall adopt a Water-Efficient Landscape Ordinance for multifamily residential, industrial, and commercial developments regarding the use of water-efficient landscaping consistent with AB 325. [Implements Policy 52, 57, 58, 60, 63 and 64]
- Action Item CON WR-9.5: The County shall work with the SWRCB, DWR, DPH, CalEPA, and applicable County and City agencies to seek and secure funding sources for the County to develop and expand its groundwater monitoring and assessment and undertake community-based planning efforts aimed at developing necessary management programs and enhancements.

CLIMATE PROTECTION AND SUSTAINABLE PRACTICES FOR ENVIRONMENTAL HEALTH GOALS AND POLICIES

- Goal CON-14:** Promote policies to ensure the long-term sustainability of Napa County, including its environment, economy, and social equity.
- Goal CON-15:** Reduce emissions of local greenhouse gases that contribute to climate change.
- Goal CON-16:** Promote the economic and environmental health of Napa County by conserving energy, increasing the efficiency of energy use, and producing renewable energy locally.
- Goal CON-17:** Reduce air pollution and reduce local contributions to regional air quality problems, achieving and maintaining air quality in Napa County which meets or exceeds state and federal standards.
- Goal CON-18:** Provide sufficient long-term solid waste disposal capacity for the County consistent with California Integrated Waste Management Act (Public Resources Code section 40000, et seq.) requirements.

Note to the Reader: Please see the Open Space Conservation and Water Resources sections above for additional policies regarding water conservation and sustainable practices related to habitat preservation and forest, and open space management.

CLIMATE PROTECTION AND SUSTAINABLE PRACTICES FOR ENVIRONMENTAL HEALTH POLICIES

- Policy CON-65: The County shall support efforts to reduce and offset greenhouse gas (GHG) emissions and strive to maintain and enhance the County's current level of carbon sequestration functions through the following measures:

Appendix 2

California Water Code

Groundwater Management Act

(Sections 10750 – 10755.4)

CALIFORNIA CODES

WATER CODE

SECTION 10750-10750.10

10750. (a) The Legislature finds and declares that **groundwater** is a valuable natural resource in California, and should be managed to ensure both its safe production and its quality. It is the intent of the Legislature to encourage local agencies to work cooperatively to manage **groundwater** resources within their jurisdictions.

(b) The Legislature also finds and declares that additional study of **groundwater** resources is necessary to better understand how to manage **groundwater** effectively to ensure the safe production, quality, and proper storage of **groundwater** in this state.

10750.2. (a) Subject to subdivision (b), this part applies to all **groundwater** basins in the state.

(b) This part does not apply to any portion of a **groundwater** basin that is subject to **groundwater** management by a local agency or a watermaster pursuant to other provisions of law or a court order, judgment, or decree, unless the local agency or watermaster agrees to the application of this part.

10750.4. Nothing in this part requires a local agency overlying a **groundwater** basin to adopt or implement a **groundwater** management plan or **groundwater** management program pursuant to this part.

10750.6. Nothing in this part affects the authority of a local agency or a watermaster to manage **groundwater** pursuant to other provisions of law or a court order, judgment, or decree.

10750.7. (a) A local agency may not manage **groundwater** pursuant to this part within the service area of another local agency, a **water** corporation regulated by the Public Utilities Commission, or a mutual **water** company without the agreement of that other entity.

(b) This section applies only to **groundwater** basins that are not critically overdrafted.

10750.8. (a) A local agency may not manage **groundwater** pursuant to this part within the service area of another local agency without the

agreement of that other entity.

(b) This section applies only to **groundwater** basins that are critically overdrafted.

10750.9. (a) A local agency that commences procedures, prior to January 1, 1993, to adopt an ordinance or resolution to establish a program for the management of **groundwater** pursuant to Part 2.75 (commencing with Section 10750), as added by Chapter 903 of the Statutes of 1991, may proceed to adopt the ordinance or resolution pursuant to Part 2.75, and the completion of those procedures is deemed to meet the requirements of this part.

(b) A local agency that has adopted an ordinance or resolution pursuant to Part 2.75 (commencing with Section 10750), as added by Chapter 903 of the Statutes of 1991, may amend its **groundwater** management program by ordinance or resolution of the governing body of the local agency to include any of the plan components set forth in Section 10753.7.

10750.10. This part is in addition to, and not a limitation on, the authority granted to a local agency pursuant to other provisions of law.

WATER CODE

SECTION 10752

10752. Unless the context otherwise requires, the following definitions govern the construction of this part:

(a) "Groundwater" means all water beneath the surface of the earth within the zone below the water table in which the soil is completely saturated with water, but does not include water which flows in known and definite channels.

(b) "Groundwater basin" means any basin identified in the department's Bulletin No. 118, dated September 1975, and any amendments to that bulletin, but does not include a basin in which the average well yield, excluding domestic wells that supply water to a single-unit dwelling, is less than 100 gallons per minute.

(c) "Groundwater extraction facility" means any device or method for the extraction of groundwater within a groundwater basin.

(d) "Groundwater management plan" or "plan" means a document that describes the activities intended to be included in a groundwater management program.

(e) "Groundwater management program" or "program" means a coordinated and ongoing activity undertaken for the benefit of a groundwater basin, or a portion of a groundwater basin, pursuant to a groundwater management plan adopted pursuant to this part.

(f) "Groundwater recharge" means the augmentation of groundwater, by natural or artificial means, with surface water or recycled water.

(g) "Local agency" means any local public agency that provides water service to all or a portion of its service area, and includes a joint powers authority formed by local public agencies that provide water service.

(h) "Recharge area" means the area that supplies water to an aquifer in a groundwater basin and includes multiple wellhead protection areas.

(i) "Watermaster" means a watermaster appointed by a court or pursuant to other provisions of law.

(j) "Wellhead protection area" means the surface and subsurface area surrounding a water well or well field that supplies a public water system through which contaminants are reasonably likely to migrate toward the water well or well field.

WATER CODE

SECTION 10753-10753.10

10753. (a) Any local agency, whose service area includes a groundwater basin, or a portion of a groundwater basin, that is not subject to groundwater management pursuant to other provisions of law or a court order, judgment, or decree, may, by ordinance, or by resolution if the local agency is not authorized to act by ordinance, adopt and implement a groundwater management plan pursuant to this part within all or a portion of its service area.

(b) Notwithstanding subdivision (a), a local public agency, other than an agency defined in subdivision (g) of Section 10752, that provides flood control, groundwater management, or groundwater replenishment, or a local agency formed pursuant to this code for the principal purpose of providing water service that has not yet provided that service, may exercise the authority of this part within a groundwater basin that is located within its boundaries within areas that are either of the following:

(1) Not served by a local agency.

(2) Served by a local agency whose governing body, by a majority vote, declines to exercise the authority of this part and enters into an agreement with the local public agency pursuant to Section 10750.7 or 10750.8.

10753.1. Nothing in this part, or in any groundwater management plan adopted pursuant to this part, affects surface water rights or the procedures under common law or local groundwater authority, or any provision of law other than this part that determines or grants surface water rights.

10753.2. (a) Prior to adopting a resolution of intention to draft a groundwater management plan, a local agency shall hold a hearing, after publication of notice pursuant to Section 6066 of the Government Code, on whether or not to adopt a resolution of intention to draft a groundwater management plan pursuant to this part for the purposes of implementing the plan and establishing a groundwater management program.

(b) At the conclusion of the hearing, the local agency may draft a resolution of intention to adopt a groundwater management plan pursuant to this part for the purposes of implementing the plan and establishing a groundwater management program.

10753.3. (a) After the conclusion of the hearing, and if the local agency adopts a resolution of intention, the local agency shall publish the resolution of intention in the same manner that notice for the hearing held under Section 10753.2 was published.

(b) Upon written request, the local agency shall provide any

interested person with a copy of the resolution of intention.

10753.4. (a) The local agency shall prepare a groundwater management plan within two years of the date of the adoption of the resolution of intention. If the plan is not adopted within two years, the resolution of intention expires, and no plan may be adopted except pursuant to a new resolution of intention adopted in accordance with this chapter.

(b) For the purposes of carrying out this part, the local agency shall make available to the public a written statement describing the manner in which interested parties may participate in developing the groundwater management plan. The local agency may appoint, and consult with, a technical advisory committee consisting of interested parties for the purposes of carrying out this part.

10753.5. (a) After a groundwater management plan is prepared, the local agency shall hold a second hearing to determine whether to adopt the plan. Notice of the hearing shall be given pursuant to Section 6066 of the Government Code. The notice shall include a summary of the plan and shall state that copies of the plan may be obtained for the cost of reproduction at the office of the local agency.

(b) At the second hearing, the local agency shall consider protests to the adoption of the plan. At any time prior to the conclusion of the second hearing, any landowner within the local agency may file a written protest or withdraw a protest previously filed.

10753.6. (a) A written protest filed by a landowner shall include the landowner's signature and a description of the land owned sufficient to identify the land. A public agency owning land is deemed to be a landowner for the purpose of making a written protest.

(b) The secretary of the local agency shall compare the names and property descriptions on the protest against the property ownership records of the county assessors.

(c) (1) A majority protest shall be determined to exist if the governing board of the local agency finds that the protests filed and not withdrawn prior to the conclusion of the second hearing represent more than 50 percent of the assessed value of the land within the local agency subject to groundwater management pursuant to this part.

(2) If the local agency determines that a majority protest exists, the groundwater plan may not be adopted and the local agency shall not consider adopting a plan for the area proposed to be included within the program for a period of one year after the date of the second hearing.

(3) If a majority protest has not been filed, the local agency, within 35 days after the conclusion of the second hearing, may adopt the groundwater management plan.

10753.7. (a) For the purposes of qualifying as a groundwater management plan under this section, a plan shall contain the components that are set forth in this section. In addition to the requirements of a specific funding program, any local agency seeking state funds administered by the department for the construction of groundwater projects or groundwater quality projects, excluding programs that are funded under Part 2.78 (commencing with Section 10795), shall do all of the following:

(1) Prepare and implement a groundwater management plan that includes basin management objectives for the groundwater basin that is subject to the plan. The plan shall include components relating to the monitoring and management of groundwater levels within the groundwater basin, groundwater quality degradation, inelastic land surface subsidence, and changes in surface flow and surface water quality that directly affect groundwater levels or quality or are caused by groundwater pumping in the basin.

(2) For the purposes of carrying out paragraph (1), the local agency shall prepare a plan to involve other agencies that enables the local agency to work cooperatively with other public entities whose service area or boundary overlies the groundwater basin.

(3) For the purposes of carrying out paragraph (1), the local agency shall prepare a map that details the area of the groundwater basin, as defined in the department's Bulletin No. 118, and the area of the local agency, that will be subject to the plan, as well as the boundaries of other local agencies that overlie the basin in which the agency is developing a groundwater management plan.

(4) The local agency shall adopt monitoring protocols that are designed to detect changes in groundwater levels, groundwater quality, inelastic surface subsidence for basins for which subsidence has been identified as a potential problem, and flow and quality of surface water that directly affect groundwater levels or quality or are caused by groundwater pumping in the basin. The monitoring protocols shall be designed to generate information that promotes efficient and effective groundwater management.

(5) Local agencies that are located in areas outside the groundwater basins delineated on the latest edition of the department's groundwater basin and subbasin map shall prepare groundwater management plans incorporating the components in this subdivision, and shall use geologic and hydrologic principles appropriate to those areas.

(b) (1) (A) A local agency may receive state funds administered by the department for the construction of groundwater projects or for other projects that directly affect groundwater levels or quality if it prepares and implements, participates in, or consents to be subject to, a groundwater management plan, a basinwide management plan, or other integrated regional water management program or plan that meets, or is in the process of meeting, the requirements of subdivision (a). A local agency with an existing groundwater management plan that meets the requirements of subdivision (a), or a local agency that completes an upgrade of its plan to meet the requirements of subdivision (a) within one year of applying for funds, shall be given priority consideration for state funds administered by the department over local agencies that are in the process of developing a groundwater management plan. The department shall withhold funds from the project until the upgrade of the groundwater management plan is complete.

(B) Notwithstanding subparagraph (A), a local agency that manages groundwater under any other provision of existing law that meets the requirements of subdivision (a), or that completes an upgrade of its plan to meet the requirements of subdivision (a) within one year of applying for funding, shall be eligible for funding administered by the department. The department shall withhold funds from a project until the upgrade of the groundwater management plan is complete.

(C) Notwithstanding subparagraph (A), a local agency that conforms to the requirements of an adjudication of water rights in the groundwater basin is in compliance with subdivision (a). For purposes of this section, an "adjudication" includes an adjudication under Section 2101, an administrative adjudication, and an adjudication in state or federal court.

(D) Subparagraphs (A) and (B) do not apply to proposals for funding under Part 2.78 (commencing with Section 10795), or to funds authorized or appropriated prior to September 1, 2002.

(2) Upon the adoption of a groundwater management plan in accordance with this part, the local agency shall submit a copy of the plan to the department, in an electronic format, if practicable, approved by the department. The department shall make available to the public copies of the plan received pursuant to this part.

10753.8. A groundwater management plan may include components relating to all of the following:

- (a) The control of saline water intrusion.
- (b) Identification and management of wellhead protection areas and recharge areas.
- (c) Regulation of the migration of contaminated groundwater.
- (d) The administration of a well abandonment and well destruction program.
- (e) Mitigation of conditions of overdraft.
- (f) Replenishment of groundwater extracted by water producers.
- (g) Monitoring of groundwater levels and storage.
- (h) Facilitating conjunctive use operations.
- (i) Identification of well construction policies.
- (j) The construction and operation by the local agency of groundwater contamination cleanup, recharge, storage, conservation, water recycling, and extraction projects.
- (k) The development of relationships with state and federal regulatory agencies.
- (l) The review of land use plans and coordination with land use planning agencies to assess activities which create a reasonable risk of groundwater contamination.

10753.9. (a) A local agency shall adopt rules and regulations to implement and enforce a groundwater management plan adopted pursuant to this part.

(b) Nothing in this part shall be construed as authorizing the local agency to make a binding determination of the water rights of any person or entity.

(c) Nothing in this part shall be construed as authorizing the local agency to limit or suspend extractions unless the local agency

has determined through study and investigation that groundwater replenishment programs or other alternative sources of water supply have proved insufficient or infeasible to lessen the demand for groundwater.

10753.10. In adopting rules and regulations pursuant to Section 10753.9, the local agency shall consider the potential impact of those rules and regulations on business activities, including agricultural operations, and to the extent practicable and consistent with the protection of the groundwater resources, minimize any adverse impacts on those business activities.

WATER CODE

SECTION 10754-10754.3

10754. For purposes of groundwater management, a local agency that adopts a groundwater management plan pursuant to this part has the authority of a water replenishment district pursuant to Part 4 (commencing with Section 60220) of Division 18 and may fix and collect fees and assessments for groundwater management in accordance with Part 6 (commencing with Section 60300) of Division 18.

10754.2. (a) Subject to Section 10754.3, except as specified in subdivision (b), a local agency that adopts a groundwater management plan pursuant to this part, may impose equitable annual fees and assessments for groundwater management based on the amount of groundwater extracted from the groundwater basin within the area included in the groundwater management plan to pay for costs incurred by the local agency for groundwater management, including, but not limited to, the costs associated with the acquisition of replenishment water, administrative and operating costs, and costs of construction of capital facilities necessary to implement the groundwater management plan.

(b) The local agency may not impose fees or assessments on the extraction and replacement of groundwater pursuant to a groundwater remediation program required by other provisions of law or a groundwater storage contract with the local agency.

10754.3. Before a local agency may levy a water management assessment pursuant to Section 10754.2 or otherwise fix and collect fees for the replenishment or extraction of groundwater pursuant to this part, the local agency shall hold an election on the proposition of whether or not the local agency shall be authorized to levy a groundwater management assessment or fix and collect fees for the replenishment or extraction of groundwater. The local agency shall be so authorized if a majority of the votes cast at the election is in favor of the proposition. The election shall be conducted in the manner prescribed by the laws applicable to the local agency or, if there are no laws so applicable, then as prescribed by laws relating to local elections. The election shall be conducted only within the portion of the jurisdiction of the local agency subject to groundwater management pursuant to this part.

WATER CODE

SECTION 10755-10755.4

10755. (a) If a local agency annexes land subject to a groundwater management plan adopted pursuant to this part, the local agency annexing the land shall comply with the groundwater management plan for the annexed property.

(b) If a local agency subject to a groundwater management plan adopted pursuant to this part annexes land not subject to a groundwater management plan adopted pursuant to this part at the time of annexation, the annexed territory shall be subject to the groundwater management plan of the local agency annexing the land.

10755.2. (a) It is the intent of the Legislature to encourage local agencies, within the same groundwater basin, that are authorized to adopt groundwater management plans pursuant to this part, to adopt and implement a coordinated groundwater management plan.

(b) For the purpose of adopting and implementing a coordinated groundwater management program pursuant to this part, a local agency may enter into a joint powers agreement pursuant to Chapter 5 (commencing with Section 6500) of Division 7 of Title 1 of the Government Code with public agencies, or a memorandum of understanding with public or private entities providing water service.

(c) A local agency may enter into agreements with public entities or private parties for the purpose of implementing a coordinated groundwater management plan.

10755.3. Local agencies within the same groundwater basin that conduct groundwater management programs within that basin pursuant to this part, and cities and counties that either manage groundwater pursuant to this part or have ordinances relating to groundwater within that basin, shall, at least annually, meet to coordinate those programs.

10755.4. Except in those groundwater basins that are subject to critical conditions of groundwater overdraft, as identified in the department's Bulletin 118-80, revised on December 24, 1982, the requirements of a groundwater management plan that is implemented pursuant to this part do not apply to the extraction of groundwater by means of a groundwater extraction facility that is used to provide water for domestic purposes to a single-unit residence and, if applicable, any dwelling unit authorized to be constructed pursuant to Section 65852.1 or 65852.2 of the Government Code.

Appendix 3

**SBX2-1, Integrated Regional Water Management
Planning Act (Water Code Sections 10530 *et seq.*)**

BILL NUMBER: SBX2 1 ENROLLED
BILL TEXT

PASSED THE SENATE AUGUST 31, 2008
PASSED THE ASSEMBLY AUGUST 28, 2008
AMENDED IN ASSEMBLY AUGUST 28, 2008
AMENDED IN ASSEMBLY AUGUST 28, 2008
AMENDED IN ASSEMBLY AUGUST 4, 2008

INTRODUCED BY Senators Perata, Machado, and Steinberg
 (Principal coauthor: Assembly Member Bass)
 (Coauthors: Assembly Members Arambula, Eng, Feuer, Huffman, Jones,
Krekorian, Laird, Salas, and Wolk)

SEPTEMBER 14, 2007

An act to add and repeal Section 65595.5 of the Government Code, and to add Sections 127.5 and 134.5 to, to add Division 33 (commencing with Section 83000) to, and to repeal and add Part 2.2 (commencing with Section 10530) of Division 6 of, the Water Code, relating to water, and making an appropriation therefor.

LEGISLATIVE COUNSEL'S DIGEST

SB 1, Perata. Water quality, flood control, water storage, and wildlife preservation.

(1) The Integrated Regional Water Management Planning Act of 2002 authorizes a regional water management group, as defined, to prepare and adopt a regional water plan meeting specified requirements.

This bill would repeal these provisions of law and enact the Integrated Regional Water Management Planning Act. Regional water management groups, as defined, would be authorized to prepare and adopt integrated regional water management plans meeting specified requirements.

The Department of Water Resources would be required to develop project solicitation and evaluation guidelines for a specified funding source.

(2) Under existing law, various bond acts have been approved by the voters to provide funds for water projects, facilities, and programs. The Disaster Preparedness and Flood Prevention Bond Act of 2006, a bond act approved by the voters at the November 7, 2006, statewide general election, authorizes the issuance of bonds in the amount of \$4,090,000,000 for the purposes of financing disaster preparedness and flood prevention projects. The Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006, an initiative bond act approved by the voters at the November 7, 2006, statewide general election, authorizes the issuance of bonds in the amount of \$5,388,000,000 for the purposes of financing a safe drinking water, water quality and supply, flood control, and resource protection program. The Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002, an initiative bond act approved by the voters at the November 5, 2002, statewide general election, authorizes the issuance of bonds in the amount of \$3,440,000,000 to finance a safe drinking water, water

quality, and water reliability program. The Costa-Machado Water Act of 2000, a bond act approved by the voters at the March 7, 2000, statewide direct primary election, authorizes the issuance of bonds in the amount of \$1,970,000,000 for the purposes of financing a safe drinking water, water quality, flood protection, and water reliability program.

This bill, with regard to those bond funds, would appropriate \$820,973,000 as follows: of the funds made available pursuant to the Disaster Preparedness and Flood Prevention Bond Act of 2006, \$135,000,000 to the Department of Water Resources for essential emergency preparedness supplies and projects, and \$150,000,000 to the department for stormwater flood management project grants; of the funds made available pursuant to the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006, \$50,000,000 to the State Department of Public Health for grants for small community drinking water systems infrastructure improvements and related actions, \$50,400,000 to the State Department of Public Health for grants for projects to prevent or reduce the contamination of groundwater that serves as a source of drinking water, \$181,971,000 to the department for integrated regional water management activities, \$90,000,000 to the department for the implementation of Delta water quality improvement projects that protect drinking water supplies, \$100,000,000 to the department for the acquisition, preservation, protection, and restoration of Sacramento-San Joaquin Delta resources, \$12,000,000 to the department to complete planning and feasibility studies associated with new surface storage under the California Bay-Delta Program, \$15,000,000 to the department for planning and feasibility studies to identify potential options for the reoperation of the state's flood protection and water supply systems, \$10,000,000 to the department to update the California Water Plan, \$10,000,000 to the State Coastal Conservancy for projects on the Santa Ana River, and \$7,300,000 to the department for the urban streams restoration program; of the funds made available under the Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002, \$3,760,000 to the department for planning and feasibility studies associated with surface storage under the California Bay-Delta Program; and of the funds made available pursuant to the Costa-Machado Water Act of 2000, \$2,272,000 to the department for the Sacramento River Hamilton City Area Flood Damage Reduction Project and \$3,450,000 to the department for the Franks Tract Pilot Project.

The bill would provide that up to 5% of the funds appropriated by the bill may be expended to pay for the administrative costs of that program. The bill would provide that funds appropriated by the bill are available for encumbrance until June 30, 2010. On January 10, 2010, program recipients would be required to report to the fiscal committees of the Legislature with regard to the committed and anticipated expenditures of these funds. The bill would require the Director of Finance to administratively establish positions necessary to implement activities funded by the bill's appropriations.

(3) Under the Porter-Cologne Water Quality Control Act, the State Water Resources Control Board and the California regional water quality control boards are the principal state agencies with authority over matters relating to water quality.

This bill would require the state board, in consultation with other agencies, to develop pilot projects in the Tulare Lake Basin and the Salinas Valley focused on nitrate contamination. The bill

would require the state board to create an interagency task force, as needed, to oversee the pilot projects and submit a report to the Legislature on the scope and findings of the projects within 2 years of receiving funding. The state board would be required to implement recommendations for developing a groundwater cleanup program for the Central Valley Water Quality Control Region and the Central Coast Water Quality Control Region based upon pilot project results within 2 years of submitting the report to the Legislature.

(4) Existing law requires the department, not later than January 1, 2009, to update a model water efficient landscape ordinance. Existing law generally requires rules and regulations of the department to be first presented to the California Water Commission and to become effective only upon approval of the commission.

This bill, until December 31, 2009, would provide that commission review and approval does not apply to the department's adoption of regulations updating the model water efficient landscape ordinance.

(5) The bill would authorize the department to utilize the Program Manager class series that was created for the California Bay-Delta Authority for positions to manage vital departmental activities.

Appropriation: yes.

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

SECTION 1. Section 65595.5 is added to the Government Code, to read:

65595.5. (a) Notwithstanding Section 161 of the Water Code, until December 31, 2009, in order to ensure timely implementation of water conservation activities relating to landscaping, Section 161 of the Water Code does not apply to the department's adoption of regulations required by Section 65595.

(b) This section shall remain in effect only until January 1, 2010, and as of that date is repealed, unless a later enacted statute, that is enacted before January 1, 2010, deletes or extends that date.

SEC. 2. Section 127.5 is added to the Water Code, to read:

127.5. The department may utilize the program manager class series that was created for the California Bay-Delta Authority, for positions to manage vital departmental activities, including those relating to climate change mitigation and adaptation, water management, and statewide planning.

SEC. 3. Section 134.5 is added to the Water Code, to read:

134.5. The Director of Finance shall administratively establish positions necessary to implement activities funded by the appropriations made in Division 33 (commencing with Section 83000).

SEC. 4. Part 2.2 (commencing with Section 10530) of Division 6 of the Water Code is repealed.

SEC. 5. Part 2.2 (commencing with Section 10530) is added to Division 6 of the Water Code, to read:

PART 2.2. INTEGRATED REGIONAL WATER MANAGEMENT PLANS

CHAPTER 1. SHORT TITLE

10530. This part shall be known and may be cited as the

Integrated Regional Water Management Planning Act.

CHAPTER 2. LEGISLATIVE FINDINGS AND DECLARATIONS

10531. The Legislature finds and declares all of the following:

(a) Water is a valuable natural resource in California, and should be managed to ensure the availability of sufficient supplies to meet the state's agricultural, domestic, industrial, and environmental needs. It is the intent of the Legislature to encourage local agencies to work cooperatively to manage their available local and imported water supplies to improve the quality, quantity, and reliability of those supplies.

(b) Local agencies can realize efficiencies by coordinating and integrating their assets and seeking mutual solutions to water management issues.

(c) The reliability of water supplies can be significantly improved by diversifying water portfolios, taking advantage of local and regional opportunities, and considering a broad variety of water management strategies as described in the California Water Plan.

(d) The implementation of this part will facilitate the development of integrated regional water management plans, thereby assisting each region of the state to improve water supply reliability, water quality, and environmental stewardship to meet current and future needs.

(e) Water management is integrally linked to public health and the health of all natural resources within our watersheds. It is the intent of the Legislature that water management strategies and projects are carried out in a way that promotes these important public values.

CHAPTER 3. DEFINITIONS

10532. Unless the context otherwise requires, the definitions set forth in this chapter govern the construction of this part.

10533. "Basin plan" means a water quality control plan developed pursuant to Section 13240.

10534. "Integrated regional water management plan" means a comprehensive plan for a defined geographic area, the specific development, content, and adoption of which shall satisfy requirements developed pursuant to this part. At a minimum, an integrated regional water management plan describes the major water-related objectives and conflicts within a region, considers a broad variety of water management strategies, identifies the appropriate mix of water demand and supply management alternatives, water quality protections, and environmental stewardship actions to provide long-term, reliable, and high-quality water supply and protect the environment, and identifies disadvantaged communities in the region and takes the water-related needs of those communities into consideration.

10535. "Local agency" means any city, county, city and county, special district, joint powers authority, or other political subdivision of the state, a public utility as defined in Section 216 of the Public Utilities Code, or a mutual water company as defined in Section 2725 of the Public Utilities Code.

10536. "Plan" means an integrated regional water management plan.

10537. "Regional projects or programs" means projects or programs

identified in an integrated regional water management plan that accomplish any of the following:

- (a) Reduce water demand through agricultural and urban water use efficiency.
- (b) Increase water supplies for any beneficial use through the use of any of the following, or other, means:
 - (1) Groundwater storage and conjunctive water management.
 - (2) Desalination.
 - (3) Precipitation enhancement.
 - (4) Water recycling.
 - (5) Regional and local surface storage.
 - (6) Water-use efficiency.
 - (7) Stormwater management.
- (c) Improve operational efficiency and water supply reliability, including conveyance facilities, system reoperation, and water transfers.
- (d) Improve water quality, including drinking water treatment and distribution, groundwater and aquifer remediation, matching water quality to water use, wastewater treatment, water pollution prevention, and management of urban and agricultural runoff.
- (e) Improve resource stewardship, including agricultural lands stewardship, ecosystem restoration, flood plain management, recharge area protection, urban land use management, groundwater management, water-dependent recreation, fishery restoration, including fish passage improvement, and watershed management.
- (f) Improve flood management through structural and nonstructural means, or by any other means.

10538. "Regional reports or studies" means reports or studies relating to any of the matters described in subdivisions (a) to (f), inclusive, of Section 10537, that are identified in an integrated regional water management plan.

10539. "Regional water management group" means a group in which three or more local agencies, at least two of which have statutory authority over water supply or water management, as well as those other persons who may be necessary for the development and implementation of a plan that meets the requirements in Sections 10540 and 10541, participate by means of a joint powers agreement, memorandum of understanding, or other written agreement, as appropriate, that is approved by the governing bodies of those local agencies.

CHAPTER 4. INTEGRATED REGIONAL WATER MANAGEMENT PLANS

10540. (a) A regional water management group may prepare and adopt an integrated regional water management plan in accordance with this part.

(b) A regional water management group may coordinate its planning activities to address or incorporate all or part of any of the following actions of its members into its plan:

- (1) Groundwater management planning pursuant to Part 2.75 (commencing with Section 10750) or other specific groundwater management authority.
- (2) Urban water management planning pursuant to Part 2.6 (commencing with Section 10610).
- (3) The preparation of a water supply assessment required pursuant to Part 2.10 (commencing with Section 10910).
- (4) Agricultural water management planning pursuant to Part 2.8

(commencing with Section 10800).

(5) City and county general planning pursuant to Section 65350 of the Government Code.

(6) Other water resource management planning, including flood protection, watershed management planning, and multipurpose program planning.

(c) At a minimum, all plans shall address all of the following:

(1) Protection and improvement of water supply reliability, including identification of feasible agricultural and urban water use efficiency strategies.

(2) Identification and consideration of the drinking water quality of communities within the area of the plan.

(3) Protection and improvement of water quality within the area of the plan, consistent with the relevant basin plan.

(4) Identification of any significant threats to groundwater resources from overdrafting.

(5) Protection, restoration, and improvement of stewardship of aquatic, riparian, and watershed resources within the region.

(6) Protection of groundwater resources from contamination.

(7) Identification and consideration of the water-related needs of disadvantaged communities in the area within the boundaries of the plan.

(d) This section does not obligate a local agency to fund the implementation of any project or program.

10541. (a) The department shall develop project solicitation and evaluation guidelines for the application of funds made available pursuant to Section 75026 of the Public Resources Code, to enable broad and diverse participation in integrated regional water management plan development and refinement.

(b) The department shall conduct two public meetings to consider public comments prior to finalizing the guidelines. The department shall publish the draft solicitation and evaluation guidelines on its Internet Web site at least 30 days before the public meetings. One meeting shall be conducted at a location in northern California and one meeting shall be conducted at a location in southern California. Upon adoption, the department shall transmit copies of the guidelines to the fiscal committees and the appropriate policy committees of the Legislature. To the extent feasible, each state agency shall provide outreach to disadvantaged communities to promote access to and participation in those meetings.

(c) The department shall consult with the board, the California regional water quality control boards, the State Department of Public Health, the Department of Fish and Game, the California Bay-Delta Authority or its successor, and other state agencies with water management responsibility and authority in the development of the guidelines.

(d) The department may periodically review and update the guidelines to accommodate changes in funding sources, statutory requirements, new commonly accepted management practices, and changes in state water management policy. Any guideline changes shall be made with appropriate consultation with other state agencies and public review pursuant to subdivisions (b) and (c).

(e) The guidelines shall require that integrated regional water management plans include all of the following:

(1) Consideration of all of the resource management strategies identified in the California Water Plan, as updated by department Bulletin No. 160-2005 and future updates.

(2) Consideration of objectives in the appropriate basin plan or plans and strategies to meet applicable water quality standards.

(3) Description of the major water-related objectives and conflicts within a region.

(4) Measurable regional objectives and criteria for developing regional project priorities.

(5) An integrated, collaborative, multibenefit approach to selection and design of projects and programs.

(6) Identification and consideration of the water-related needs of disadvantaged communities in the area within the boundaries of the plan.

(7) Performance measures and monitoring to demonstrate progress toward meeting regional objectives.

(8) A plan for implementation and financing of identified projects and programs.

(9) Consideration of greenhouse gas emissions of identified programs and projects.

(10) Evaluation of the adaptability to climate change of water management systems in the region.

(11) Documentation of data and technical analyses used in the development of the plan.

(12) A process to disseminate data and information related to the development and implementation of the plan.

(13) A process to coordinate water management projects and activities of participating local agencies and local stakeholders to avoid conflicts and take advantage of efficiencies.

(14) Any other matters identified by the department.

(f) The guidelines shall include standards for identifying a region for the purpose of developing or modifying an integrated regional water management plan. At a minimum, a region shall be a contiguous geographic area encompassing the service areas of multiple local agencies, and shall be defined to maximize opportunities for integration of water management activities. The department shall develop a process to approve the composition of a region for the purposes of Sections 75026, 75027, and 75028 of the Public Resources Code.

(g) The guidelines shall require that the development and implementation of an integrated regional water management plan include a public process that provides outreach and an opportunity to participate in plan development and implementation to appropriate local agencies and stakeholders, as applicable to the region, including all of the following:

(1) Wholesale and retail water purveyors, including a local agency, mutual water company, or a water corporation as defined in Section 241 of the Public Utilities Code.

(2) Wastewater agencies.

(3) Flood control agencies.

(4) Municipal and county governments and special districts.

(5) Electrical corporations, as defined in Section 218 of the Public Utilities Code.

(6) Native American tribes that have lands within the region.

(7) Self-supplied water users, including agricultural, industrial, residential, park districts, school districts, colleges and universities, and others.

(8) Environmental stewardship organizations, including watershed groups, fishing groups, land conservancies, and environmental groups.

(9) Community organizations, including landowner organizations, taxpayer groups, and recreational interests.

(10) Industry organizations representing agriculture, developers, and other industries appropriate to the region.

(11) State, federal, and regional agencies or universities, with specific responsibilities or knowledge within the region.

(12) Disadvantaged community members and representatives, including environmental justice organizations, neighborhood councils, and social justice organizations.

(13) Any other interested groups appropriate to the region.

(h) The guidelines shall require integrated regional water management plans to be developed through a collaborative process that makes public both of the following:

(1) The process by which decisions are made in consultation with the persons or entities identified in subdivision (g).

(2) The manner in which a balance of interested persons or entities representing different sectors and interests listed in subdivision (g) have been or will be engaged in the process described in this subdivision, regardless of their ability to contribute financially to the plan.

(i) The guidelines shall provide for a process for the development, periodic review, updating, and amending of integrated regional water management plans. The department shall establish eligibility requirements for the project funding, that provide sufficient time for the updating of plans as necessary to reflect changes in the guidelines.

10543. (a) A regional water management group proposing to prepare an integrated regional water management plan shall publish a notice of intention to prepare the plan in accordance with Section 6066 of the Government Code.

(b) For the purposes of carrying out this part, the regional water management group shall make available to the public the documentation prepared pursuant to subdivision (g) of Section 10541 describing the manner in which interested parties may participate in developing the integrated regional water management plan.

(c) Upon the completion of the integrated regional water management plan, the regional water management group shall publish a notice of intention to adopt the plan in accordance with Section 6066 of the Government Code and shall adopt the plan in a public meeting of its governing board.

CHAPTER 5. FUNDING FOR QUALIFIED PROJECTS AND PROGRAMS

10544. When selecting projects and programs pursuant to Division 24 (commencing with Section 78500), Division 26 (commencing with Section 79000), Division 26.5 (commencing with Section 79500), or pursuant to any grant funding authorized on or after January 1, 2009, for water management activities, the department, the board, the State Department of Public Health, and the California Bay-Delta Authority or its successor, as appropriate, shall include in any set of criteria used to select projects and programs for funding, a criterion that provides a preference for regional projects or programs.

10546. An integrated regional water management plan prepared pursuant to this part shall be eligible for funding pursuant to Section 75026 of the Public Resources Code, and for any funding authorized on or after January 1, 2009, that is allocated

specifically for implementation of integrated regional water management.

10547. This part does not prohibit the department from implementing Section 75026 of the Public Resources Code by using existing integrated regional water management guidelines in accordance with subdivision (d) of Section 75026 of the Public Resources Code.

CHAPTER 6. MISCELLANEOUS

10548. This part does not affect any powers granted to a local agency by any other law.

10549. This part does not authorize a regional water management group to define, or otherwise determine, the water rights of any person.

10550. The plan or project shall not be funded pursuant to this part if it would fund activities inconsistent with applicable state and federal water quality laws.

SEC. 6. Division 33 (commencing with Section 83000) is added to the Water Code, to read:

DIVISION 33. INTEGRATED WATER SUPPLY AND FLOOD PROTECTION PLANNING, DESIGN, AND IMPLEMENTATION

83000. The Legislature hereby finds and declares all of the following:

(a) Water is vital to the economy, environment, and overall well-being of the state.

(b) California faces increasing challenges in managing its water supply due to climate change, uncertainty regarding the availability of water from the Sacramento-San Joaquin Delta and other sources, an increasing state population, limitations on public funds, and other factors.

(c) California must adopt a new, updated, and comprehensive set of water planning, design, and implementation policies that reflect these realities to protect its water supply future.

(d) In the past, state laws, funding schemes, and administrative actions have treated the planning, construction, and operation of water supply, groundwater, and flood control systems as separate and distinct activities, thereby reducing efficiency and water supply reliability.

(e) California has not taken full advantage of the cost savings, the environmental benefits, or the expediency of more efficient operations and usage of existing water supply, storage, and flood protection facilities.

(f) It is the policy of the state to more effectively integrate its flood protection systems with its water supply and conveyance systems in order to conserve limited public dollars, increase the available water supply, improve water quality, increase wildlife and ecosystem protections, protect public health and safety, and address the effects of climate change.

(g) The purpose of this division is to require the integration of flood protection and water systems to achieve multiple public benefits, including all of the following:

(1) Increasing water supply reliability in the least costly, most efficient, and most reliable manner to meet current and future state

needs.

(2) Increasing use of water use efficiency and water conservation measures to increase and extend existing water supplies.

(3) Reducing energy consumption associated with water transport, thereby reducing state greenhouse gas emissions.

(4) Improving water management to protect and restore ecosystems and wildlife habitat.

83001. In order to provide the least costly, most efficient, and reliable water supply to a growing state, it is the intent of the Legislature that the department accomplish the following objectives:

(a) Integrate state flood protection and water supply systems.

(b) Promote conjunctive use of groundwater storage capacity to improve overall water supply and flood system operation.

(c) Promote increased water use efficiency through expanded use of water conservation, water recycling, and improvements in technology.

83002. The sum of eight hundred twenty million nine hundred seventy-three thousand dollars (\$820,973,000) is hereby appropriated in accordance with the following schedule:

(a) Of the funds made available pursuant to Chapter 1.699 (commencing with Section 5096.800) of Division 5 of the Public Resources Code, the sum of two hundred eighty-five million dollars (\$285,000,000) is hereby appropriated as follows:

(1) Pursuant to subdivision (c) of Section 5096.821 of the Public Resources Code, the sum of one hundred thirty-five million dollars (\$135,000,000) to the department for the acquisition, design, and construction of essential emergency preparedness supplies and projects. Prior to the design or construction of any project funded pursuant to this paragraph, the California Bay-Delta Authority, or its successor, shall approve the specific project or program. Preference shall be given to projects that protect and improve Delta water quality and drinking water supplies. Of the amount made available pursuant to this paragraph, not less than thirty-five million dollars (\$35,000,000) shall be expended by the department for projects to reinforce those sections of the levees that have the highest potential to suffer breaches or failure and cause harm to municipal and industrial water supply aqueducts that cross the Delta and which are vulnerable to flood damage, including the installation of scour protection on the supports of the aqueducts in those areas located adjacent to the sections of the levees that have been identified as the highest risk of breaches or failure.

(2) Pursuant to Section 5096.827 of the Public Resources Code, the sum of one hundred fifty million dollars (\$150,000,000) to the department for grants for stormwater flood management projects that reduce flood damage and provide other benefits, including groundwater recharge, water quality improvement, and ecosystem restoration. Not less than one hundred million dollars (\$100,000,000) of this amount shall be available for projects that address immediate public health and safety needs, strengthen existing flood control facilities to address seismic safety issues. Twenty million dollars (\$20,000,000) shall be available for local agencies to meet immediate water quality needs related to combined municipal sewer and stormwater systems to prevent sewage discharges into state waters. Twenty million dollars (\$20,000,000) shall be available for urban stream stormwater flood management projects to reduce the frequency and impacts of flooding in watersheds that drain to the San Francisco Bay.

(b) Of the funds made available pursuant to Division 43

(commencing with Section 75001) of the Public Resources Code, the sum of five hundred twenty-six million four hundred ninety-one thousand dollars (\$526,491,000) is hereby appropriated as follows:

(1) Pursuant to Section 75022 of the Public Resources Code, the sum of fifty million dollars (\$50,000,000) to the State Department of Public Health for grants for small community drinking water system infrastructure improvements and related action to meet safe drinking water standards. First priority for these funds shall be given to disadvantaged or severely disadvantaged communities lacking resources to provide safe drinking water to residents. Small community drinking water systems that are dependent on surface water and are under orders from the State Department of Public Health to boil water from existing treatment systems for parasites, viruses, or giardia shall be eligible for grants for drinking water system infrastructure improvements.

(2) Pursuant to Section 75025 of the Public Resources Code, the sum of fifty million four hundred thousand dollars (\$50,400,000) to the State Department of Public Health for grants for projects to prevent or reduce the contamination of groundwater that serves as a source of drinking water. Funds appropriated by this paragraph shall be available for immediate projects needed to protect public health by preventing or reducing the contamination of groundwater that serves as a major source of drinking water for a community.

(A) The State Department of Public Health shall prioritize project funding based on the following criteria:

(i) The threat posed by groundwater contamination to the affected community's overall drinking water supplies, including the need for the treatment or construction of alternative supplies if groundwater is not available due to contamination.

(ii) The potential for groundwater contamination to spread and reduce drinking water supply and water storage capacity for major population areas.

(iii) The potential of the project, if fully implemented, to enhance local water supply reliability.

(iv) The potential of the project to increase opportunities for groundwater recharge and optimization of groundwater supplies.

(B) The State Department of Public Health shall give additional consideration to projects that meet any of the following criteria:

(i) The project is implemented pursuant to a comprehensive basinwide groundwater quality management and remediation plan or is necessary to develop a comprehensive groundwater plan.

(ii) Affected groundwater provides a local supply that, if contaminated, will require the importation of additional water from the Sacramento-San Joaquin Delta or the Colorado River.

(iii) The project will serve an economically disadvantaged community.

(iv) Multiple contaminants affect more than one-third of the well capacity of a local water system.

(C) Of the amount made available by this paragraph, up to ten million dollars (\$10,000,000) shall be allocated for projects that meet the criteria of this paragraph and both of the following criteria:

(i) The project has the potential to leverage funds.

(ii) The project addresses contamination at a site on the list maintained by the Department of Toxic Substances Control pursuant to Section 25356 of the Health and Safety Code or a site listed on the National Priorities List pursuant to the federal Comprehensive

Environmental Response,
Compensation, and Liability Act of 1980 (42 U.S.C. Sec. 9601 et
seq.).

(D) Of the funds made available by this paragraph, two million dollars (\$2,000,000) shall be allocated to the State Department of Public Health to contract with the State Water Resources Control Board for the purposes of Section 83002.5.

(3) (A) Pursuant to Section 75026 of the Public Resources Code, the sum of one hundred eighty-one million seven hundred ninety-one thousand dollars (\$181,791,000) to the department for integrated regional water management activities as follows:

(i) One hundred million dollars (\$100,000,000) for implementation grants.

(ii) Thirty-nine million dollars (\$39,000,000) for planning grants, local groundwater assistance grants, and CALFED scientific research grants.

(iii) Twenty-two million ninety-one thousand dollars (\$22,091,000) for projects with interregional or statewide benefits.

Of the amount made available pursuant to this paragraph, not less than ten million dollars (\$10,000,000) shall be made available for expenditure to interconnect municipal and industrial water supply aqueducts that cross the Delta and that are vulnerable to flood damage, including the design and construction of interties among aqueducts that provide at least 90 percent of a regional water supply that would be threatened in the event of levee failure or other disaster, and that support an integrated regional emergency water supply system.

(iv) Twenty million seven hundred thousand dollars (\$20,700,000) for program delivery costs.

(B) An implementation grant pursuant to clause (i) of subparagraph (A) shall be available only for projects included in an integrated regional water management plan that meets one of the following conditions:

(i) The plan complies with Part 2.2 (commencing with Section 10530) of Division 6.

(ii) For a plan adopted before the date on which this section is enacted, both of the following apply:

(I) The regional water management group that prepared the plan enters into a binding agreement with the department to update the plan to comply with Part 2.2 (commencing with Section 10530) of Division 6 within two years of the date on which the agreement was entered into.

(II) The regional water management group undertakes all reasonable and feasible efforts to take into account water-related needs of disadvantaged communities in the area within the boundaries of the plan.

(C) Of the funds described in clauses (i) and (ii) of subparagraph (A), the department shall allocate not less than 10 percent to facilitate and support the participation of disadvantaged communities in integrated regional water management planning and for projects that address critical water supply or water quality needs for disadvantaged communities.

(D) Of the funds described in clause (iii) of subparagraph (A), the department shall allocate two million dollars (\$2,000,000) to Tulare County for development of an integrated water quality and wastewater treatment program plan to address the drinking water and wastewater needs of disadvantaged communities in the Tulare Lake

Basin. Funds allocated pursuant to this paragraph shall be available for assessment and feasibility studies necessary to develop the plan, and the plan shall include recommendations for planning, infrastructure, and other water management actions, and shall include specific recommendations for regional drinking water treatment facilities, regional wastewater treatment facilities, conjunctive use sites and groundwater recharge, groundwater for surface water exchanges, related infrastructure, and cost-sharing mechanisms. Tulare County shall consult with appropriate stakeholders, including representatives of disadvantaged communities, when preparing the plan. The department, in consultation with the State Department of Public Health, shall submit the plan to the Legislature by January 1, 2011.

(E) Of the funds described in clause (i) of subparagraph (A), the department shall allocate not less than twenty million dollars (\$20,000,000) to support urban and agricultural water conservation projects necessary to meet a 20-percent reduction in per capita water use by the year 2020.

(4) Pursuant to Section 75029 of the Public Resources Code, the sum of ninety million dollars (90,000,000) to the department for the implementation of Delta water quality improvement projects that protect drinking water supplies as follows:

(A) Pursuant to subdivision (d) of Section 75029 of the Public Resources Code, the sum of fifty million dollars (\$50,000,000) for drinking water intake facility projects to improve the quality of drinking water supply from the Sacramento-San Joaquin Delta that are identified in the June 2005 Delta Region Drinking Water Quality Management Plan. Funding shall be made available for environmental review, design, and construction. Project proponents seeking funding for construction shall meet all of the following criteria:

(i) Have completed documentation required under the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) and a notice of determination has been filed prior to June 30, 2008.

(ii) Have demonstrated multiple benefits in conveyance and Delta operation to achieve protection or improvement to Delta pelagic fisheries, as well as drinking water quality improvement and public health protection.

(iii) Are able to complete design and commence construction before June 30, 2009.

(iv) Have local or federal cost-sharing funds immediately available.

(B) The sum of forty million dollars (\$40,000,000) for projects consistent with subdivision (c) of Section 75029 of the Public Resources Code.

(5) Pursuant to Section 75033 of the Public Resources Code, the sum of one hundred million dollars (\$100,000,000) to the department for the acquisition, preservation, protection, and restoration of Sacramento-San Joaquin Delta resources in accordance with Section 75033 of the Public Resources Code. The department shall expend these funds pursuant to priorities that reflect the value of the resources and land uses protected by the levees to the state as a whole, consistent with the Delta Vision Strategic Plan. Projects shall be selected to improve the stability of the Delta levee system, reduce subsidence, and assist in restoring the ecosystem of the Delta. Priority shall be given to projects that improve conditions for Delta smelt and other native fish. Up to five million dollars (\$5,000,000)

made available pursuant to this paragraph shall be available as grants and direct expenditures for emergency communications equipment to improve emergency response preparedness.

(6) Pursuant to Chapter 4 (commencing with Section 75041) of Division 43 of the Public Resources Code, the sum of thirty-seven million dollars (\$37,000,000) to the department as follows:

(A) (i) Twelve million dollars (\$12,000,000) to complete the planning and feasibility studies associated with new surface storage under the California Bay-Delta Program.

(ii) The planning and feasibility studies shall include the following information:

(I) The identification of specific construction and operation conditions proposed for each surface storage facility, including consideration of climate change, an estimated schedule for the construction and completion of each project funded under Section 75041, and the total costs of constructing each project.

(II) A description of the estimated total costs to construct each project and an allocation of the costs to public and private beneficiaries.

(iii) Any feasibility study conducted by or funded by the state for new surface storage under the California Bay-Delta Program shall evaluate funded projects consistent with all statutory and other legally established requirements for protection of environmental and natural resources, including protections for the McCloud River pursuant to Section 5093.542 of the Public Resources Code.

(iv) The feasibility studies shall be prepared and submitted to the Governor and the Legislature no later than December 31, 2009.

(B) (i) Fifteen million dollars (\$15,000,000) for planning and feasibility studies to identify potential options for the reoperation of the state's flood protection and water supply systems that will optimize the use of existing facilities and groundwater storage capacity.

(ii) The studies shall incorporate appropriate climate change scenarios and be designed to determine the potential to achieve the following objectives:

(I) Integration of flood protection and water supply systems to increase water supply reliability and flood protection, improve water quality, and provide for ecosystem protection and restoration.

(II) Reoperation of existing reservoirs, flood facilities, and other water facilities in conjunction with groundwater storage to improve water supply reliability, flood control, and ecosystem protection and to reduce groundwater overdraft.

(III) Promotion of more effective groundwater management and protection and greater integration of groundwater and surface water resource uses.

(IV) Improvement of existing water conveyance systems to increase water supply reliability, improve water quality, expand flood protection, and protect and restore ecosystems.

(C) Ten million dollars (\$10,000,000) to update the California Water Plan, including evaluation of climate change impacts, the development of strategies to adapt to climate change impacts, technical assistance to local agencies that incorporate climate change into their studies, reports, and plans, and the identification of strategies to reduce greenhouse gas emissions related to the storage, conveyance, and distribution of water.

(D) Of the money made available pursuant to subparagraphs (A), (B), and (C), up to two million dollars (\$2,000,000) may be expended

for planning and feasibility studies necessary to implement the Delta Vision Strategic Plan, developed pursuant to Executive Order No. S-17-06, dated September 28, 2006, establishing the Delta Vision process.

(7) Pursuant to Section 75050 of the Public Resources Code, the sum of seventeen million three hundred thousand dollars (\$17,300,000) for the protection and restoration of rivers and streams as follows:

(A) Ten million dollars (\$10,000,000) to the State Coastal Conservancy for the purposes of subdivision (i) of Section 75050 of the Public Resources Code.

(B) Seven million three hundred thousand dollars (\$7,300,000) to the department for the purposes of subdivision (e) of Section 75050 of the Public Resources Code.

(c) Of the funds made available pursuant to subdivision (a) of Section 79550, the sum of three million seven hundred sixty thousand dollars (\$3,760,000) is hereby appropriated to the department for planning and feasibility studies associated with surface storage under the California Bay-Delta Program.

(d) (1) Of the funds available pursuant to Section 79101.4, the sum of two million two hundred seventy-two thousand dollars (\$2,272,000) is appropriated to the department for the Sacramento River Hamilton City Area Flood Damage Reduction Project.

(2) Of the funds available pursuant to subdivision (c) of Section 79196.5, the sum of three million four hundred fifty thousand dollars (\$3,450,000) is appropriated to the department for the Franks Tract Pilot Project under the CALFED Drinking Water Quality Program.

83002.5. To improve understanding of the causes of groundwater contamination, identify potential remediation solutions and funding sources to recover costs expended by the state for the purposes of this section to clean up or treat groundwater, and ensure the provision of safe drinking water to all communities, the State Water Resources Control Board, in consultation with other agencies as specified in this section, shall develop pilot projects in the Tulare Lake Basin and the Salinas Valley that focus on nitrate contamination and do all of the following:

(a) (1) In collaboration with relevant agencies and utilizing existing data, including groundwater ambient monitoring and assessment results along with the collection of new information as needed, do all of the following:

(A) Identify sources, by category of discharger, of groundwater contamination due to nitrates in the pilot project basins.

(B) Estimate proportionate contributions to groundwater contamination by source and category of discharger.

(C) Identify and analyze options within the board's current authority to reduce current nitrate levels and prevent continuing nitrate contamination of these basins and estimate the costs associated with exercising existing authority.

(2) In collaboration with the State Department of Public Health, do all of the following:

(A) Identify methods and costs associated with the treatment of nitrate contaminated groundwater for use as drinking water.

(B) Identify methods and costs to provide an alternative water supply to groundwater reliant communities in each pilot project basin.

(3) Identify all potential funding sources to provide resources for the cleanup of nitrates, groundwater treatment for nitrates, and

the provision of alternative drinking water supply, including, but not limited to, state bond funding, federal funds, water rates, and fees or fines on polluters.

(4) Develop recommendations for developing a groundwater cleanup program for the Central Valley Water Quality Control Region and the Central Coast Water Quality Control Region based upon pilot project results.

(b) Create an interagency task force, as needed, to oversee the pilot projects and develop recommendations for the Legislature. The interagency task force may include the board, the State Department of Public Health, the Department of Toxic Substances Control, the California Environmental Protection Agency, the Department of Water Resources, local public health officials, the Department of Food and Agriculture, and the Department of Pesticide Regulation.

(c) Submit a report to the Legislature on the scope and findings of the pilot projects, including recommendations, within two years of receiving funding.

(d) Implement recommendations in the Central Coast Water Quality Control Region and the Central Valley Water Quality Control Region pursuant to paragraph (4) of subdivision (a) within two years of submitting the report described in subdivision (c) to the Legislature.

(e) For the Salinas Valley Pilot Project, the State Water Resources Control Board shall consult with the Monterey County Water Resources Agency.

83002.6. Up to 5 percent of the funds appropriated by this division may be expended to pay the costs incurred in the administration of that program.

83002.7. Funds appropriated by this division shall only be available for encumbrance until June 30, 2010. On January 10, 2010, any program that is the recipient of an appropriation made by this division shall report to the fiscal committees of the Legislature on the details of all committed and anticipated expenditures of these funds. The report shall include all of the following information:

(a) Fiscal detail of state operations support and local assistance costs.

(b) A general description of the project and the project funding made available by an appropriation in the annual Budget Act for the 2008-09 fiscal year or proposed to be made available in the annual Budget Act for the 2009-10 fiscal year.

(c) A description of the manner in which funds have been expended and a plan for the future expenditure of funds.

(d) An anticipated timeframe for the full expenditure of the appropriation.

(e) An anticipated timeframe for the full completion of the designated project.

(f) The amount of total matching project funding that is being provided by an entity other than the state.

Appendix 4

**California Department of Water Resources, Integrated
Regional Water Management (IRWM) Guidelines**



PROPOSITION 84 & PROPOSITION 1E

Integrated Regional Water Management

AUGUST 2010

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North Coast



Sacramento River



San Francisco Bay Area



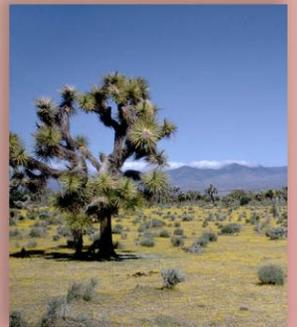
San Joaquin River



Central Coast



Tulare/Kern



North/South Lahontan



Los Angeles



Santa Ana



San Diego



Colorado River Basin

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FOREWORD

This document contains the California Department of Water Resources' (DWR) Integrated Regional Water Management (IRWM) Grant Program Guidelines for IRWM Implementation and Planning grants funded by Proposition 84 (The Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coast Protection Bond Act of 2006), Chapter 2, and the Stormwater Flood Management (SWFM) grants funded by Proposition 1E (The Disaster Preparedness and Flood Prevention Bond Act of 2006).

IRWM Grant Program Websites

DWR will use the internet as a communication tool to notify interested parties of the status of the first round and to convey pertinent information. Information will be posted at the following website:

<http://www.grantsloans.water.ca.gov/grants/integregio.cfm>

[See Appendix A for other useful web links.](#)

Mailing List

In addition to the above-referenced website, DWR will distribute information via email. If you are not already on the IRWM contact list and wish to be placed on it, please e-mail your contact information to: DWR_IRWM@water.ca.gov.

Points of Contact

For questions about the Guidelines, or other technical issues, please contact DWR's Financial Assistance Branch at (916) 651-9613 or by email at DWR_IRWM@water.ca.gov.

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ACRONYMS AND ABBREVIATIONS USED IN THESE GUIDELINES AND APPENDICES

Basin Plan	Regional Water Quality Control Plan
BMP	Best Management Practice
BMS	Bond Management System
CARB	California Air Resources Board
CAT	Climate Action Team
CO₂e	Carbon Dioxide Equivalents
CEIC	California Environmental Information Catalog
CalEPA	California Environmental Protection Agency
CEQA	California Environmental Quality Act
CERES	California Environmental Resources Evaluation System
CNRA	California Natural Resources Agency
CUWCC	California Urban Water Conservation Council
CWC	California Water Code
CWP	California Water Plan
DAC	Disadvantaged Community
DMS	Data Management System
DWR	Department of Water Resources
EAD	Expected Annual Damage
EIR	Environmental Impact Report
EJ	Environmental Justice
EO	Executive Order
FEP	Functionally Equivalent Plan
GHG	Greenhouse Gas
GAMA	Groundwater Ambient Monitoring Assessment
GWMP	Groundwater Management Plan
IRWM	Integrated Regional Water Management
IWRIS	Integrated Water Resource Information System
LID	Low Impact Development
MB	Megabyte
MHI	Median Household Income
MOU	Memorandum of Understanding
NEPA	National Environmental Policy Act
NPS	Non-Point Source
O&M	Operation and Maintenance
OPR	The Governor's Office of Planning and Research

PIN	Proposal Identification Number
PRC	Public Resources Code
PSP	Proposal Solicitation Package
RAP	Regional Acceptance Process
RMS	Resource Management Strategies
RWVG	Regional Water Management Group
RWQCB	Regional Water Quality Control Board
SPFC	State Plan of Flood Control
SWAMP	Surface Water Ambient Monitoring Program
SWRCB	State Water Resources Control Board
SWFM	Stormwater Flood Management
TMDL	Total Maximum Daily Load
USCB	United States Census Bureau
USEPA	United States Environmental Protection Agency
UWMP	Urban Water Management Plan
WBCSD	World Business Council for Sustainable Development
WDL	Water Data Library
WRI	World Resources Institute
WUEB	Water Use and Efficiency Branch

INTEGRATED REGIONAL WATER MANAGEMENT GRANT PROGRAM GUIDELINES

I. PURPOSE AND USE

The purpose of these guidelines is to establish the general process, procedures, and criteria that DWR will use to implement the Integrated Regional Water Management (IRWM) Grant Program including Stormwater Flood Management (SWFM) grants. These guidelines include acceptance of IRWM regions into the grant program; IRWM Plan standards and guidance; solicitation, submittal, and review of grant applications; and award of grant funding. The related Proposal Solicitation Packages (PSPs) contain detailed information on how to apply for funding from the individual component grant programs – IRWM Planning Grants, IRWM Implementation Grants, and SWFM Grants.

PSPs for specific grant solicitations through the IRWM grant program can be downloaded from the DWR website listed in the Foreword.

II. INTRODUCTION AND OVERVIEW

The IRWM Grant Program is designed to encourage integrated regional strategies for management of water resources and to provide funding for both planning and implementation projects that support integrated water management. These guidelines are intended to remain unchanged for the life of the funding source. However, changes may be necessary due to legislation or changes in State water management policy. If changes are necessary, these guidelines will be amended and subject to a public review process per California Water Code (CWC) §10541.

These guidelines are based on guidelines used to disburse grant funding under the Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002, Proposition 50. The Proposition 50 IRWM guidelines have been modified to be consistent with the following legislation:

- ↪ Public Resources Code (PRC) §75026 *et seq.* (Proposition 84)
- ↪ Senate Bill (SB) x2-1 (Perata, Statutes of 2008) – CWC §10530 *et seq.* – which repealed and replace the Integrated Regional Water Planning Act
- ↪ Assembly Bill (AB) 739 (Laird, Chapter 610, Statutes of 2007) – consultation with State Water Resources Control Board (SWRCB) and identification of SWFM preferences
- ↪ SB 732 (Steinberg, Chapter 729, Statutes of 2008) – PRC §75100 and PRC §75102 – requiring new grant solicitation for each funding cycle and tribal notification
- ↪ SB 790 (Pavely, Chapter 620, Statutes of 2009) – stormwater resource planning as part of IRWM planning
- ↪ AB 626 (Eng, Chapter 367, Statutes of 2009) – the 10% of appropriated funds for DAC projects should target distribution on a funding area basis
- ↪ CWC §525 – water meter installation as condition of receiving a water management grant
- ↪ CWC §10610 – Urban Water Management Plans (UWMP)
- ↪ AB 1420 (Laird, Chapter 628, Statutes of 2007) – CWC §10631.5 – implementation of demand management measures as condition of receiving a water management grant
- ↪ SBx7-6 (Steinberg, Chapter 1, Statutes of 2009) – groundwater elevation monitoring as a condition of receiving a water management grant

Additionally, the requirements of PRC §5096.800 *et seq.* (Proposition 1E) were incorporated into the Guidelines because of the linkages between the IRWM grants and the SWFM grants.

A. Usage of Terms

To foster understanding and clarity DWR will use the following terms consistently in these guidelines:

- ↪ “Project Proponent” means the entity that has primary responsibility for a specific project within the grant proposal. Project proponents receive grant funds through their relationship with the grant applicant. Project proponents can be those entities defined in CWC §10541(g). For grant solicitations where there is a single project the project proponent and the applicant can be the same entity.
- ↪ “Proposal” refers to a project or suite of projects and actions that are proposed for funding.
- ↪ “Project” refers to an individual effort included in the Proposal that may be planning actions, in the case of planning grants; construction of physical facilities; or implementation of non-structural actions.
- ↪ “Funding Source” refers to the bond measure providing funding.

B. Funding

The IRWM Grant Program manages General Obligation Bond funds from various sources, including the following funds:

- ↪ Proposition 84, the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006, which was passed by California voters in November 2006. Proposition 84 amended the PRC to add among other articles, Section 75026 *et seq.*, authorizing the Legislature to appropriate \$1,000,000,000 for IRWM projects that assist local public agencies to meet the long term water needs of the State including the delivery of safe drinking water and the protection of water quality and the environment.
- ↪ Of that \$1,000,000,000, \$900,000,000, referred to as “regional funding”, was allocated to 11 hydrologic regions and sub-regions or “funding areas”, as shown in Figure 1. The remaining \$100,000,000, referred to as “inter-regional funding”, was allocated to addressing multi-regional needs or issues of Statewide significance. Proposition 84 authorizes DWR to either expend directly or grant the interregional funds.
- ↪ Proposition 84 authorized DWR to establish three sub-regions within the South Coast Hydrologic Region. Those sub-regions and the boundaries of the remaining Funding Area are described at the following link:
<http://www.water.ca.gov/irwm/docs/prop84/guidelinepsp/FA%20factsheetrev1.pdf>
- ↪ Proposition 1E, the Disaster Preparedness and Flood Prevention Bond Act of 2006, was passed by California voters in November 2006. Proposition 1E amended the PRC to add, among other articles, Section 5096.827 *et seq.*, authorizing the Legislature to appropriate \$300,000,000 for grants for SWFM projects. Future additional funding from Proposition 1E may become available for Regional Flood Management Planning Grants. Such planning grants would fund incorporating regional flood management into IRWM plans.

Prior appropriations have directed interregional funding to either specific actions, to support various grant programs, and have directed grant funding to a specific SWFM project. DWR will administer these funds consistent with the appropriation. Directed expenditures are anticipated to include funding to support the following actions: 1) assist DWR in determining ways to improve DAC participation, DAC Assistance Pilot Program; 2) support specific actions named in an appropriation, including actions to support the Colorado River Quantification Settlement Agreement, DAC actions in the Tulare Basin; and Delta Intertiers; 3) to support and advance regional planning, including technical assistance contracts; and 4) support of specific financial assistance actions, the Local Groundwater Assistance and the Bay-Delta Science grant programs.

Detailed information on bond fund allocations can be found at the following websites:

<http://bondaccountability.resources.ca.gov/p84.aspx>

<http://bondaccountability.resources.ca.gov/p1e.aspx>

Figure 1 – Proposition 84 Funding Area Allocations



C. Region Acceptance Process

CWC §10541(f) states the guidelines shall include a standard for identifying a region for the purpose of developing and modifying an IRWM Plan, and the DWR shall develop a process to approve the composition of a region for the purposes of Sections 75026 – 75028 of the PRC. DWR developed the Region Acceptance Process (RAP) to approve region composition for the purpose of developing or modifying an IRWM Plan. Through the RAP, IRWM planning regions are accepted into the IRWM grant program. IRWM planning regions can then apply for IRWM grants subject to conditions on the acceptance through the RAP and the criteria and review process set up for each funding cycle. DWR will perform the RAP before grant solicitations to allow new regions into the grant program. The first round of region acceptance has been completed. The procedures used in the initial RAP cycle and the final decisions are located at:

http://www.water.ca.gov/irwm/integregio_rap.cfm

For future RAP cycles, DWR may revise the existing RAP procedures. Any proposed revisions to the RAP will be released for public review and comment prior to final approval by DWR's Director.

D. Maximum Grant Amount

PROPOSITION 1E FUNDING

SWFM grants shall not exceed \$30,000,000 per project.

The maximum grant amount for Regional Flood planning grant shall not exceed \$1,000,000 per grant. The PSP for the Regional Flood planning grants will establish the maximum grant amount for a given solicitation. DWR may reduce the maximum grant amount depending on the amount of available future funding.

PROPOSITION 84 FUNDING

IRWM planning grants shall not exceed \$1,000,000 per grant and will be limited to one grant per IRWM region.

The IRWM implementation grant maximum award will vary for each solicitation and will be outlined in each PSP. For each solicitation, DWR will use the funding schedule in PRC §75027(a) and the amount of funding available for that solicitation to determine the maximum grant amount and the grant funding available for each funding area. For example, if there is \$100,000,000 available to fund IRWM implementation grant (1/9th of the entire Proposition 84 regional allotment), the maximum grant amount for each funding area may be set at 1/9th of their total funding allocation for that funding area. Provisions in the Implementation PSPs for each round of funding will stipulate if an applicant is permitted to propose phases of a project, in the event that additional grant funds become available or in anticipation of reduced funding for funding areas with multiple IRWM planning efforts.

The maximum grant amount of regional funds to be awarded to an individual funding area, for both planning and implementation grants, will not exceed the allocation schedule in PCR §75027(a), see Figure 1. Additionally, as required by PRC §75028(b), funding from one funding area will not be reallocated to another funding area.

E. Minimum Funding Match Requirements

For proposals containing multiple projects, the funding match is based on the total of the proposal. Funding match may include, but is not limited to, federal funds, local funding, or donated services from non-State sources. For a State agency, funding match may include state funds and services. There are different funding match requirements for different grants.

For IRWM planning grants, the minimum funding match is 25% of the total project cost. Minimum funding match for regional flood planning grants is 25% of the total project cost.

For IRWM Implementation grants the minimum funding match is 25%. For IRWM implementation projects that address a critical water supply or water quality need for a disadvantaged community (DAC) and are seeking Proposition 84 funds, funding match may be waived. Refer to each PSP for more information regarding funding match waivers.

For the Proposition 1E SWFM funding, PRC §5096.827(a) requires a 50% funding match minimum. The SWFM funding match cannot be waived or reduced.

F. Program Preferences

PRC §75026.(b) and CWC §10544 state that preference will be given to Proposals that:

- ↪ Include regional projects or programs (CWC §10544)
- ↪ Effectively integrate water management programs and projects within a hydrologic region identified in the California Water Plan; the Regional Water Quality Control Board (RWQCB) region or subdivision; or other region or sub-region specifically identified by DWR
- ↪ Effectively resolve significant water-related conflicts within or between regions
- ↪ Contribute to attainment of one or more of the objectives of the CALFED Bay-Delta Program
- ↪ Address critical water supply or water quality needs of disadvantaged communities within the region
- ↪ Effectively integrate water management with land use planning
- ↪ For eligible SWFM funding, projects which: a) are not receiving State funding for flood control or flood prevention projects pursuant to PRC §5096.824 or §75034 or b) provide multiple benefits, including, but not limited to, water quality improvements, ecosystem benefits, reduction of instream erosion and sedimentation, and groundwater recharge.
- ↪ Address Statewide priorities (Table 1 establishes the specific Statewide Priorities for the IRWM Grant Program.)

Table 1 – Statewide Priorities

Statewide Priority	Description	Source
Drought Preparedness	<p>Proposals that contain projects that effectively address long-term drought preparedness by contributing to sustainable water supply and reliability during water shortages. Drought preparedness projects do not include drought emergency response actions, such as trucking of water or lowering well intakes. Desirable proposals will achieve one or more of the following:</p> <ul style="list-style-type: none"> • Promote water conservation, conjunctive use, reuse and recycling • Improve landscape and agricultural irrigation efficiencies • Achieve long term reduction of water use • Efficient groundwater basin management • Establish system interties 	<ul style="list-style-type: none"> • Executive Order S-06-08 • California Water Plan (CWP) Update 2009
Use and Reuse Water More Efficiently	<p>Proposals that include projects that implement water use efficiency, water conservation, recycling and reuse to help meet future water demands, increase water supply reliability and adapt to climate change. Desirable proposals include those with projects that:</p> <ul style="list-style-type: none"> • Increase urban and agricultural water use efficiency measures such as conservation and recycling • Capture, store, treat, and use urban stormwater runoff (such as percolation to usable aquifers, underground storage beneath parks, small surface basins, domestic stormwater capture systems, or the creation of catch basins or sumps downhill of development) or projects outlined in PRC §30916 (SB 790) • Incorporate and implement low impact development (LID) design features, techniques, and practices to reduce or eliminate stormwater runoff 	<ul style="list-style-type: none"> • CWP Update 2009 • SWRCB Recycled Water Policy • DWR Sustainability Values • SB 790
Climate Change Response Actions (refer to Appendix C, for further guidance)	<p>Water Management actions that will address the key Climate Change issues of:</p> <ul style="list-style-type: none"> • Adaptation to Climate Change • Reduction of Greenhouse Gas (GHG) Emissions • Reduce Energy Consumption <p>Proposals that contain projects that when implemented address adaptation to climate change effects in an IRWM region. Desirable proposals include those that:</p> <ul style="list-style-type: none"> • Advance and expand conjunctive management of multiple water supply sources • Use and reuse water more efficiently • Water management system modifications that address anticipated climate change impacts, such as rising sea-level, and which may include modifications or relocations of intakes or outfalls • Establish migration corridors, re-establish river-floodplain hydrologic continuity, re-introduce anadromous fish populations to upper watersheds, and enhance and protect upper watershed forests and meadow systems <p>Proposals that contain projects that reduce GHG emissions compared to alternate projects that achieve similar water management contributions toward IRWM objectives. Desirable proposals include those that:</p> <ul style="list-style-type: none"> • Reduce energy consumption of water systems and uses • Use cleaner energy sources to move and treat water <p>Proposals that contain projects that reduce not only water demand but wastewater loads as well, and can reduce energy demand and GHG emissions. Desirable proposals include:</p> <ul style="list-style-type: none"> • Water use efficiency • Water recycling • Water system energy efficiency 	<ul style="list-style-type: none"> • CWP Update 2009 • AB32 • Managing an Uncertain Future, DWR October 2008

Table 1 – Statewide Priorities

Statewide Priority	Description	Source
	<ul style="list-style-type: none"> • Reuse runoff 	
Expand Environmental Stewardship	Proposals that contain projects that practice, promote, improve, and expand environmental stewardship to protect and enhance the environment by improving watersheds, floodplains, and instream functions and to sustain water and flood management ecosystems.	CWP Update 2009
Practice Integrated Flood Management	Proposals that contain projects that promote and practice integrated flood management to provide multiple benefits including: <ul style="list-style-type: none"> • Better emergency preparedness and response • Improved flood protection • More sustainable flood and water management systems • Enhanced floodplain ecosystems • LID techniques that store and infiltrate runoff while protecting groundwater 	CWP Update 2009
Protect Surface Water and Groundwater Quality	Proposals that include: <ul style="list-style-type: none"> • Protecting and restoring surface water and groundwater quality to safeguard public and environmental health and secure water supplies for beneficial uses • Salt/nutrient management planning as a component of an IRWM Plan 	SWRCB Recycled Water Policy
Improve Tribal Water and Natural Resources	Proposals that include the development of Tribal consultation, collaboration, and access to funding for water programs and projects to better sustain Tribal water and natural resources.	CWP Update 2009
Ensure Equitable Distribution of Benefits	Proposals that: <ul style="list-style-type: none"> • Increase the participation of small and disadvantaged communities in the IRWM process. • Develop multi-benefit projects with consideration of affected disadvantaged communities and vulnerable populations • Contain projects that address safe drinking water and wastewater treatment needs of DACs • Address critical water supply or water quality needs of California Native American Tribes within the region 	CWP Update 2009

These program preferences are reflected in the scoring criteria and will be taken into consideration during the review process. Appendix A includes a listing of web links for accessing additional information on the Program Preferences.

G. Competition

IRWM grants are awarded on a competitive basis using specific criteria contained in the PSPs. The types of competition vary with differing grants. Both the IRWM planning grant and the SWFM grants utilize a Statewide competition. So each grant application submitted is scored according to criteria and then the applications are ranked by score without regard to geographic location in the State.

IRWM implementation grant competition is slightly different in that funding is allocated to individual funding areas. If there are multiple IRWM regions in a funding area, those IRWM regions are competing for the funding allocated to that funding area. DWR will make funding decisions based on application scores within a funding area. In order to ensure wise investments of State general obligation bond funds, minimum scores for various criteria may be implemented to ensure that quality proposals are awarded funding.

III. ELIGIBILITY REQUIREMENTS

A. Eligible Grant Applicants

For both funding sources, eligible grant applicants are local agencies and non-profit organizations, as defined in Appendix B.

The grant applicant is the agency submitting an application on behalf of an IRWM region. The grant applicant is also the agency that would enter into an agreement with the State, should the application be successful. Other IRWM stakeholder or partner entities, as defined in CWC §10541 (g), may be part of the proposal as a project sponsor and access grant funding through their relationship with the applicant, at DWR's discretion.

B. Eligibility Criteria

Applications for IRWM and SWFM grants must meet all relevant Eligibility Criteria below in order to be considered for funding. Additional eligibility criteria may be applicable to specific appropriations of funding. Such appropriation specific elements will be found in the PSPs.

- ↪ **The IRWM region must have been accepted into the IRWM grant program through the RAP.** The terms of a conditional acceptance may preclude an IRWM region from being eligible for a specific grant. Conditionally accepted IRWM regions should check the conditions and ensure they are not prohibited from applying to a specific type of grant. For example an IRWM region may be limited to competing for planning grants only until certain conditions are met. Conditionally accepted IRWM regions should work with DWR to satisfy the specific conditions prior to grant application deadlines. Each PSP will contain a list of IRWM regions accepted and eligible for a specific solicitation based on RAP acceptance.
- ↪ **Projects included in either an IRWM implementation or SWFM proposal must be consistent with an adopted IRWM Plan.** Consistency means, implementation projects submitted for funding must be included in an adopted IRWM Plan. Updates and changes to an IRWM project list may be performed according to the IRWM Plan. When submitting for a grant, applicants will need to demonstrate the projects in a proposal are included in its IRWM Plan or have been added to the implementation project list for an IRWM Plan according to the procedures in that plan. If the IRWM Plan is silent regarding a process to update or change the project list, the proposal must include documentation demonstrating that those projects added to the implementation project list after the IRWM Plan's adoption have been fully vetted by the IRWM Region.
- ↪ **Groundwater Management Plan (GWMP) Compliance.** For groundwater management and recharge projects and for projects with potential groundwater impacts, the applicant or the project proponent responsible for such projects must demonstrate that either:
 - ◆ They have prepared and implemented a GWMP in compliance with CWC §10753.7.
 - ◆ They participate or consent to be subject to a GWMP, basin-wide management plan, or other IRWM program or plan that meets the requirements of CWC §10753.7(a).
 - ◆ The Proposal includes development of a GWMP that meets the requirements of CWC §10753.7 which will be completed within 1-year of the grant application submittal date. In the event that a grant solicitation is a 2-step process, DWR will use the due date of the Step 2 application to begin the 1-year compliance period.
 - ◆ They conform to the requirements of an adjudication of water rights in the subject groundwater basin.
- ↪ **Urban Water Management Planning Act Compliance.** Water suppliers who were required by the Urban Water Management Planning Act (CWC §10610 *et seq.*) to submit an Urban Water

Management Plan (UWMP) to DWR must have submitted a complete UWMP to be eligible for IRWM Grant Program funding. Applicants and project proponents that are urban water suppliers and have projects that would receive funding through the IRWM grant program must have a 2010 UWMP (due by July 1, 2011) that has been verified as complete by DWR before a grant agreement can be executed.

- ↪ **AB1420 Compliance.** AB1420 (Stats. 2007, ch. 628) conditions the receipt of a water management grant or loan, including IRWM grant funds and IRWM related water management funding. For example, SWFM funds by urban water suppliers on the implementation of water demand management measures described in CWC §10631, as determined by DWR. DWR has determined the appropriate implementation level of these measures as documented in the California Urban Water Conservation Council (CUWCC) best management practices (BMPs). Urban water suppliers who are applicants or project proponents in a grant application for either funding source must supply additional information as required by DWR's Water Use and Efficiency Branch (WUEB) <http://www.water.ca.gov/wateruseefficiency/finance>. An urban water supplier may be eligible for a water management grant or loan if it demonstrates that it has, or is implementing or scheduling the implementation of BMPs. Urban water suppliers applying to use grant funds for implementation of BMPs must ensure they have submitted all the necessary information per the WUEB instructions.
- ↪ **CWC §529.5 Compliance.** CWC §529.5 requires on or after January 1, 2010, any urban water supplier applying for State grant funds for wastewater treatment projects, water use efficiency projects, drinking water treatment projects, or for a permit for a new or expanded water supply, shall demonstrate that they meet the water meter requirements in CWC §525 *et seq.*
- ↪ **CWC §10920 Compliance.** CWC §10920 *et seq.* establishes a groundwater monitoring program designed to monitor and report groundwater elevations in all or part of a basin or subbasin. These new requirements also limit counties and various entities (CWC §10927.(a)-(d), inclusive) ability to receive State grants or loans in the event that DWR is required to perform ground monitoring functions pursuant to CWC §10933.5. DWR is charged with creating the program that implements this legislation. Once the program is implemented, additional information will be included in these guidelines.

C. Eligible Project Types

Factors affecting eligible project type include funding source, DAC status, and BMP implementation. As an IRWM region considers projects to include in a proposal, they need to consider the project eligibility as described below. Some provisions for eligible project types are applicable regardless of funding source and others are funding source specific.

1. Planning Grant Projects

Eligible projects are activities that directly develop, update, or improve an IRWM Plan. Such activities may include focused, topic-specific activities that fill gaps or improve sections of the IRWM Plan, i.e. salt/nutrient management planning or enhanced integration of flood management, as well as broader plan development efforts. Applicants must establish within their grant proposals (work plan and other components) that the end result of the proposed activities is an IRWM Plan that meets the IRWM Plan Standards contained in this document and serves to meet the regional water management objectives contained in its IRWM Plan.

2. Applicable to All Implementation and Stormwater Flood Management Projects

Eligible projects must be consistent with an adopted IRWM Plan (PRC §75026.(a) and PRC §5096.827). This means that all projects must be identified within the IRWM Plan as a project or program needed to implement the Plan. The Regional Water Management Group (RWMG) should follow the IRWM Plan's procedures for updating the implementation project list. As long as the projects exist on the implementation project list of the IRWM Plan and have been added according to the IRWM Plan processes, they will be considered as eligible projects. If the IRWM Plan is silent regarding a process to update or change the project

list, the proposal must include documentation demonstrating that those projects added to the implementation project list after the IRWM Plan's adoption have been fully vetted by the IRWM Region.

3. Projects requesting Proposition 84 IRWM Implementation funding

Eligible projects must yield multiple benefits and include one or more of the following elements (PRC §75026.(a)):

- ↪ Water supply reliability, water conservation and water use efficiency
- ↪ Stormwater capture, storage, clean-up, treatment, and management
- ↪ Removal of invasive non-native species, the creation and enhancement of wetlands, and the acquisition, protection, and restoration of open space and watershed lands
- ↪ Non-point source pollution reduction, management and monitoring
- ↪ Groundwater recharge and management projects
- ↪ Contaminant and salt removal through reclamation, desalting, and other treatment technologies and conveyance of reclaimed water for distribution to users
- ↪ Water banking, exchange, reclamation and improvement of water quality
- ↪ Planning and implementation of multipurpose flood management programs
- ↪ Watershed protection and management
- ↪ Drinking water treatment and distribution
- ↪ Ecosystem and fisheries restoration and protection

There are additional considerations for an eligible project under Proposition 84. DWR will make two exceptions to the eligibility criterion listed above:

1. Projects that directly address a critical water quality or supply issue in a DAC
2. Urban water suppliers implementing certain BMPs as described below

These exceptions are being made to assist DACs and encourage implementation of BMPs by urban water suppliers. Such projects must still be consistent with the IRWM Plan objectives.

DAC WATER QUALITY/SUPPLY PROJECTS

Because DACs may not have a developed project to put forward, the types of eligible projects to address critical water supply or water quality needs of a DAC are expanded. Eligible projects in direct support of DACs include feasibility studies that may lead to a construction project to address DAC needs; engineering designs and specifications; or needs assessments where a critical water supply or quality issue is perceived but specific needs have not been determined.

BMP IMPLEMENTATION

For urban water suppliers who are not in compliance with the requirements of AB1420, an eligible project can include implementation of two specific BMPs – leak detection and repair and installation of water meters. As stated above, the BMP implementation work does not have to be included as part of the IRWM Plan; however the work must be consistent with all other eligible project requirements as listed above. In the description of the project, it should be made clear that the project is implementing one or more of the BMPs. All other grant program requirements apply to BMP implementation projects (funding match, max grant, reporting, etc.) BMP implementation work that is not consistent with the provisions of PRC §75026 *et seq.* is not considered an eligible project.

FUNDING PROJECTS IN ADJACENT FUNDING AREAS

Because Proposition 84 allotted funds by funding area, DWR will default to project location in determining which fund allotment is applied to which project. In some cases, an IRWM region may choose to propose to use grant funds allocated to its funding area to perform work in another funding area. This is allowable, but the applicant must include in their proposal:

- ↪ Clear explanation of how the project contributes directly to the objectives of their IRWM Plan
- ↪ Description of the IRWM regions' efforts to cooperate on planning and implementation
- ↪ Description of the level of support for the project from both IRWM regions.

4. **Projects requesting Proposition 1E Stormwater Flood Management funding**

Projects requesting Proposition 1E funding must meet the "Applicable to All Projects" criterion, as well as all of the following items:

- ↪ Be designed to manage stormwater runoff to reduce flood damage (PRC §5096.827)
- ↪ Be consistent with the applicable Regional Water Quality Control Plans (Basin Plans) (PRC §5096.827)
- ↪ Not be a part of the State Plan of Flood Control (SPFC) (PRC §5096.827)

Applicants should determine if their project is not part of the SPFC before developing a grant application. A definition of the SPFC is included in Appendix B. Applicants should use the following process to determine if their project is not part of the SPFC:

- ↪ Location of the project
 - ◆ If the project is located outside the Central Sacramento – San Joaquin Valley it is not part of the SPFC.
 - ◆ If the project is located within the Central Sacramento – San Joaquin Valley it may be part of the SPFC.
- ↪ Project Function and State Assurance
 - ◆ If the project is within the Central Sacramento – San Joaquin Valley the applicant should work with their local reclamation district/flood management agency to determine if by function or State assurance that the project is part of the SPFC.

If the applicant needs additional assistance to determine if their project is part of the SPFC, they should contact DWR using the contact information found in the Foreword for assistance. Please be prepared to provide a map showing the project location and facility to aid DWR in determining if the project is not part of the SPFC.

IV. GENERAL PROGRAM REQUIREMENTS

A. IRWM Plan Standards

IRWM Plan Standards are used to describe what must be in an IRWM Plan and can be used as criteria in both implementation and planning grant applications. Applicants should refer to the PSP for the specific function of the IRWM Plan Standards in each grant solicitation. The IRWM Plan Standards discuss specific aspects that must be part of an IRWM Plan. However, RWMGs are encouraged to pay attention to three concepts when incorporating plan standards into their IRWM plans:

1. **Ahwahnee Water Principles.** IRWM planning is planning that is not focused on a single use of a resource, but seeks to manage that resource based on all the ways that the resource can be used. As exhibited by the IRWM Plan Standards, many aspects of IRWM planning reflect the Ahwahnee Water

Principles, http://www.lgc.org/ahwahnee/h2o_principles.html. Commonalities between IRWM planning and the Ahwahnee Water Principles include multi-agency collaboration, stakeholder involvement and collaboration, regional approaches to water management, water management involvement in land use decisions, and project monitoring to evaluate results of current practices. Although IRWM Plan Standards can be seen as very separate and distinct items, RWMGs should be aware of the broader over arching shift to resource planning as presented in the Ahwahnee Water Principles and the practice of IRWM planning as opposed to single planning purpose (i.e. water supply or wastewater or watershed function).

2. **Flood Management.** Flood management should be integrated into IRWM Plans similarly to other types of water management. In review of IRWM Plans during past grant solicitations, it was not always apparent that flood management infrastructure, floodplain or other flood features and management were fully recognized as a viable IRWM component. Moreover, when a proposed project results in lowering the flood risk and reducing flood damage, it is advantageous to note this is an additional benefit to IRWM planning. Integrating flood management into a regional plan, as appropriate, may increase the ways a RWMG can achieve its IRWM Plan objectives.
3. **IRWM Plan Outline.** The IRWM Plan Standards are intended to ensure IRWM Plans include specific content. Although the IRWM Plan Standards name specific topics, explanations, and descriptions, these do not necessarily constitute an outline of an IRWM Plan. An IRWM Plan can be written in a format that is logical for the IRWM region. The IRWM Plan can use different titles to sections than those offered in these standards. What is important is that IRWM plans contain the proper contents that ensure effective, implementable planning.

Guidance, including the intent of each standard and additional references, can be found in Appendix C. The IRWM Plan Standards are as follows:

Table 2 – IRWM Plan Standards

<ul style="list-style-type: none"> • Governance • Region Description • Objectives • Resource Management Strategies (RMS) • Integration • Project Review Process • Impact and Benefit • Plan Performance and Monitoring 	<ul style="list-style-type: none"> • Data Management • Finance • Technical Analysis • Relation to Local Water Planning • Relation to Local Land Use Planning • Stakeholder Involvement • Coordination • Climate Change
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1. Governance

The IRWM Plan must document a governance structure that ensures the IRWM Plan will be updated and implemented beyond existing State grant programs. The IRWM Plan must include:

- ↪ The name of the RWMG responsible for development and implementation of the Plan. An RWMG must meet the definition of CWC §10539, which states:

“RWMG means a group in which three or more local agencies, at least two of which have statutory authority over water supply or water management, as well as those other persons who may be necessary for the development and implementation of a plan that meets the requirements of CWC §10540 and §10541, participate by means of a joint powers agreement, Memorandum of Understanding (MOU), or other written agreement, as appropriate, that is approved by the governing bodies of those local agencies.”

The IRWM Plan must include a description of the RWMG and explain how the makeup of the RWMG meets the definition of CWC §10539 (above), and is sufficient in breadth of membership and participation to develop and implement the IRWM Plan.

- ↪ The RWMG and individual project proponents who adopted the Plan
- ↪ A description of the IRWM governance structure
- ↪ A description of how the chosen form of governance addresses and ensures the following:
 - ◆ Public outreach and involvement processes
 - ◆ Effective decision making
 - ◆ Balanced access and opportunity for participation in the IRWM process
 - ◆ Effective communication – both internal and external to the IRWM region
 - ◆ Long term implementation of the IRWM Plan
 - ◆ Coordination with neighboring IRWM efforts and State and federal agencies
 - ◆ The collaborative process(es) used to establish plan objectives
 - ◆ How interim changes and formal changes to the IRWM Plan will be performed
 - ◆ Updating or amending the IRWM Plan

2. *Region Description*

An IRWM Plan must include a description of the region being managed by the RWMG. This description should include a comprehensive inclusion of the following:

- ↪ A description of the watersheds and the water systems, natural and anthropogenic (i.e. “man-made”), including major water related infrastructure, flood management infrastructure, and major land-use divisions. Also include a description of the quality and quantity of water resources within the region (i.e. surface waters, groundwater, reclaimed water, imported water, and desalinated water). As relevant, describe areas and species of special biological significance and other sensitive habitats, such as marine protected areas and impaired water bodies within the region
- ↪ A description of internal boundaries within the region including the boundaries of municipalities, service areas of individual water, wastewater, flood control districts, and land use agencies. The description should also include those not involved in the Plan (i.e. groundwater basin boundaries, watershed boundaries, county, State, and international boundaries).
- ↪ A description of water supplies and demands for a minimum 20-year planning horizon. Including a discussion of important ecological processes and environmental resources within the regional boundaries and the associated water demands to support environmental needs. This includes a description of the potential effects of climate change on the region.
- ↪ A descriptive comparison of current and future (or proposed) water quality conditions in the region. Describe any water quality protection and improvement needs or requirements within the area of the Plan.
- ↪ A description of the social and cultural makeup of the regional community. Identify important cultural or social values. Identify DACs in the management area. Describe economic conditions and important economic trends within the region. Describe efforts to effectively involve and collaborate with Tribal government representatives to better sustain Tribal and regional water and natural resources (if applicable).

- ↪ A description of major water related objectives and conflicts in the defined management region, including clear identification of problems within the region that focus on the objectives, implementation strategies, and implementation projects that ultimately provide resolution.
- ↪ An explanation of how the IRWM regional boundary was determined and why the region is an appropriate area for IRWM planning.
- ↪ Identification of neighboring and/or overlapping IRWM efforts (if any) and an explanation of the planned/working relationship that promotes cooperation and coordination between regions.

3. Objectives

The IRWM Plan must clearly present plan objectives and describe the process used to develop the objectives. Plan objectives must address major water-related issues and conflicts of the region. In addition, objectives must be measurable by some practical means so achievement of objectives can be monitored. The objectives may be prioritized for the region. The IRWM Plan must contain an explanation of the prioritization or reason why the objectives are not prioritized.

4. Resource Management Strategies

The IRWM Plan must document the range of RMS considered to meet the IRWM objectives and identify which RMS were incorporated into the IRWM Plan. The effects of climate change on the IRWM region must factor into the consideration of RMS. RMS to be considered must include, but are not limited to, the RMS found in Volume 2 of the [CWP Update 2009](#).

5. Integration

An IRWM Plan must contain structures and processes that provide opportunities to develop and foster integration.

6. Project Review Process

The IRWM Plan must contain a process or processes to select projects for inclusion in the IRWM Plan. The selection process(es) must include the following components:

- ↪ Procedures for submitting a project to the RWMG
- ↪ Procedures for review of projects considered for inclusion into the IRWM Plan. These procedures must, at a minimum, consider the following factors:
 - ◆ How the project contributes to the IRWM Plan objectives
 - ◆ How the project is related to resource management strategies selected for use in the IRWM Plan
 - ◆ Technical feasibility of the project
 - ◆ Specific benefits to DAC water issues
 - ◆ Environmental Justice (EJ) considerations
 - ◆ Project costs and financing
 - ◆ Economic feasibility, including water quality and water supply benefits and other expected benefits and costs
 - ◆ Project status
 - ◆ Strategic considerations for IRWM Plan implementation
 - ◆ Contribution of the project in adapting to the effects of climate change in the region

- ◆ Contribution of the project in reducing greenhouse gas (GHG) emissions as compared to project alternatives

↪ Displaying the list(s) of selected projects.

These factors must be evaluated for each project and compared for all projects in a systematic manner. The results should be used to promote and prioritize projects in the selection process, while keeping in consideration of the unique goals and objectives of the IRWM Region.

7. Impact and Benefit

The IRWM Plan must contain a discussion of potential impacts and benefits of Plan implementation. This discussion must include both impacts and benefits within the IRWM Region; between regions; and those directly affecting DAC, EJ related concerns, and Native American tribal communities.

8. Plan Performance and Monitoring

The IRWM Plan shall contain performance measures and monitoring methods to ensure the objectives of the Plan are met. Therefore, the IRWM Plan must describe a method for evaluating and monitoring the RWMG's ability to meet the objectives and implement the projects in the IRWM Plan.

9. Data Management

The IRWM Plan must describe the process of data collection, storage, and dissemination to IRWM participants, stakeholders, the public, and the State. Data in this standard includes technical information such as designs, feasibility studies, reports, and information gathered for a specific project in any phase of development including the planning, design, construction, operation, and monitoring of a project.

10. Finance

The IRWM Plan must include a plan for implementation and financing of identified projects and programs (CWC §10541.(e)(8)). The IRWM Plan must also identify and explain potential financing for implementation of the IRWM Plan. The financing discussion must, at a minimum, include the following items:

- ↪ List known as well as possible funding sources, programs, and grant opportunities for the development and ongoing funding of the IRWM Plan.
- ↪ List the funding mechanisms, including water enterprise funds, rate structures, and private financing options, for projects that implement the IRWM Plan.
- ↪ An explanation of the certainty and longevity of known or potential funding for the IRWM Plan and projects that implement the Plan.
- ↪ An explanation of how operation and maintenance (O&M) costs for projects that implement the IRWM Plan would be covered and the certainty of operation and maintenance funding.

11. Technical Analysis

The IRWM Plan must document the data and technical analyses that were used in the development of the IRWM Plan.

12. Relation to Local Water Planning

The IRWM Plan must document the local water planning documents on which it is based including:

- ↪ A list of local water plans used in the IRWM Plan.
- ↪ A discussion of how the IRWM Plan relates to planning documents and programs established by local agencies.
- ↪ A description of the dynamics between the IRWM Plan and local planning documents.

13. Relation to Local Land Use Planning

IRWM Plans must contain processes that foster communication between land use managers and RWMGs with the intent of effectively integrating water management and land use planning. IRWM Plans must document:

- ↪ Current relationship between local land use planning, regional water issues, and water management objectives
- ↪ Future plans to further a collaborative, proactive relationship between land use planners and water managers

14. Stakeholder Involvement

The IRWM Plan must contain the following items:

- ↪ A public process that provides outreach and an opportunity to participate in IRWM Plan development and implementation to the appropriate local agencies and stakeholders, as applicable to the region, including the following:
 - ◆ Wholesale and retail water purveyors
 - ◆ Wastewater agencies
 - ◆ Flood control agencies (including those agencies who submit applications for Prop 1E funded Stormwater Flood Management Grants)
 - ◆ Municipal and county governments and special districts
 - ◆ Electrical corporations
 - ◆ Native American tribes
 - ◆ Self-supplied water users
 - ◆ Environmental stewardship organizations
 - ◆ Community organizations
 - ◆ Industry organizations
 - ◆ State, federal, and regional agencies or universities
 - ◆ Disadvantaged community members
 - ◆ Any other interested group appropriate to the region
- ↪ The process used to identify, inform, invite, and involve stakeholder groups in the IRWM process, including mechanisms and processes that have been or will be used to facilitate stakeholder involvement and communication during development and implementation of the IRWM Plan.
- ↪ A discussion on how the RWMG will endeavor to involve DACs and Native American tribal communities in the IRWM planning effort.
- ↪ A description of the decision making process including IRWM committees, roles, or positions that stakeholders can occupy and how a stakeholder goes about participating in those committees, roles, or positions regardless of their ability to contribute financially to the Plan.
- ↪ A discussion regarding how stakeholders are necessary to address the objectives and resource management strategies of the IRWM Plan and are involved or are being invited to be involved in Plan activities.

- ↪ A discussion of how collaborative processes will engage a balance of the interest groups listed above in the IRWM process regardless of their ability to contribute financially to the IRWM Plan's development or implementation.

15. Coordination

The IRWM Plan must include:

- ↪ Identification of a process to coordinate water management projects and activities of participating local agencies and local stakeholders to avoid conflicts and take advantage of efficiencies (CWC §10541.(e)(13)).
- ↪ Identification of other neighboring IRWM efforts and the way cooperation or coordination with these other efforts will be accomplished and a discussion of any ongoing water management conflicts with adjacent IRWM efforts.
- ↪ Identification of areas where a State agency or other agencies may be able to assist in communication, cooperation, or implementation of IRWM Plan components, processes, and projects, or where State or federal regulatory decisions are required before implementing the projects.

16. Climate Change

The IRWM Plan must address both adaptation to the effects of climate change and mitigation of GHG emissions. The IRWM Plan must include the following items:

- ↪ A discussion of the potential effects of climate change on the IRWM region, including an evaluation of the IRWM region's vulnerabilities to the effects of climate change and potential adaptation responses to those vulnerabilities, and
- ↪ A process that discloses and considers GHG emissions when choosing between project alternatives.

Information regarding the legislative and policy context for the climate change standard, as well as guidance on assessing mitigation and adaptation options, is included in a detailed discussion in Appendix C of the Guidelines. A list of references that could assist IRWM practitioners in developing or revising IRWM plans can be found at the end of that discussion.

B. Conflict of Interest

All participants are subject to State and Federal conflict of interest laws. Failure to comply with these laws, including business and financial disclosure provisions, will result in the application being rejected and any subsequent grant agreement being declared void. Other legal action may also be taken. Before submitting an application, applicants are urged to seek legal counsel regarding conflict of interest requirements. Applicable statutes include, but are not limited to, California Government Code §1090 and PRC §10410 and §10411.

C. Confidentiality

Once the Proposal has been submitted to DWR, any privacy rights, as well as other confidentiality protections afforded by law with respect to the application package will be waived.

D. Labor Code Compliance

PRC §75075 requires the body awarding a contract for a public works project financed in any part with funds made available by Proposition 84 to adopt and enforce a labor compliance program pursuant to California Labor Code §1771.5(b). Compliance with applicable laws, including California Labor Code provisions, will become an obligation of the grant recipient and sub-recipients (i.e., individual project proponents that will receive grant funds) under the terms of the grant agreement between the grant recipient and the granting agency. California Labor Code §1771.8 states that the grant recipient's Labor

Compliance Program must be in place at the time of awarding of a contract for a public works project by the grant recipient.

Before submitting an application, applicants are urged to seek legal counsel regarding California Labor Code compliance. See Appendix A for web links to the California Department of Industrial Relations.

E. CEQA Compliance

Activities funded under the IRWM grant program regardless of funding source must be in compliance with the California Environmental Quality Act (CEQA) (PRC §21000 *et seq.*). See Appendix A for web links to CEQA information and the State Clearinghouse Handbook (CWC §79506).

Applicants seeking Proposition 84 funding should note that PRC §75102 requires lead agencies to notify tribal entities prior to adoption of Negative Declarations or Environmental Impact Reports (EIRs) if traditional tribal lands are within the area of the proposed project. Appendix D contains additional information on Tribal notification.

F. Monitoring Requirements

Projects that affect water quality shall include a monitoring component that allows the integration of data into Statewide monitoring efforts, including, but not limited to the SWRCB's Surface Water Ambient Monitoring Program (SWAMP). See Appendix A for web links to the SWRCB's monitoring and reporting requirements.

CWC §10927 requires various entities, including local agencies that are managing all or part of a groundwater basin pursuant to CWC §10750, to assume responsibilities for groundwater elevation monitoring and reporting, as required by CWC §10920 *et seq.*

V. PROPOSAL SELECTION

A. Solicitation Notice

DWR will solicit grant Proposals with the release of final PSPs. DWR shall develop new PSPs for each funding cycle for each grant type (PRC §75100(a)) and will only consider those applications received as part of the solicitation for each funding cycle. The PSPs provide detailed instructions on the mechanics of submitting Proposals and specific information on submittal requirements. PSPs will be made available on the DWR website listed in the Foreword. A solicitation notice will be emailed to all interested parties on the IRWM Grant Program mailing list and posted on the website listed in the Foreword. Applicants will be required to submit a new application for each funding cycle and DWR will not consider applications previously submitted, when making its funding decisions.

B. Applicant Assistance Workshops

Informational workshops will be conducted to address applicant questions and to provide general assistance to applicants preparing grant applications. The date and locations of the workshops are provided via the IRWM website, email distribution list, and news release. In addition to these informational workshops, applicants are encouraged to seek assistance from DWR staff in understanding IRWM Grant Program requirements and completing grant applications.

C. Proposal Submittal

Grant application processes will utilize electronic submittals when possible. Submission of applications will be through DWR's Bond Management System (BMS). The PSP for any given solicitation will contain specific instructions and links to the BMS.

D. Completeness Review

All information requested in the PSP must be provided. Each application will first be evaluated in accordance with the PSP for completeness. **Applications not containing all required information will not be reviewed or considered for funding.**

E. Eligibility Review

Complete applications will be evaluated for compliance with the Eligibility Criteria, Section III. **Applications that are determined to be ineligible will not be reviewed or considered for funding.**

F. IRWM Plan Quality

To ensure quality and completeness, a PSP may require the applicant to submit its IRWM Plan for review and evaluation.

G. Review Process

All complete and eligible Proposals will be organized by funding area and evaluated and scored by technical reviewers. The group of technical reviewers for each Proposal will include one representative each from DWR headquarters and the applicable DWR Region. At least two technical reviewers will be assigned to each eligible Proposal. DWR may also request technical reviewers from other agencies, such as the SWRCB and appropriate RWQCB, and will assign reviews based on technical elements of the Proposals.

The technical reviewers will individually score Proposals in accordance with scoring criteria. Each funding cycle may have slight variations in scoring criteria; so, applicants should be sure to review the specific criteria during each funding cycle. The review and score will be based on the merit of the entire Proposal as a whole versus the merit of an individual component. Following completion of the individual technical reviews, the reviewers will discuss the Proposals and develop a consensus review and score.

Each criterion will be scored on a scale of 0 to 5, with a 0 being “low” and a 5 being “high.” The score for each criterion will then be multiplied by the weighting factor shown in the Scoring Criteria of each PSP.

Where standard scoring criteria are applied, points will be assigned for a criterion as follows:

- ↪ A score of 5 points will be awarded where the criterion is fully addressed and supported by thorough and well-presented documentation and logical rationale.
- ↪ A score of 4 points will be awarded where the criterion is fully addressed but is not supported by thorough documentation or sufficient rationale.
- ↪ A score of 3 points will be awarded where the criterion is less than fully addressed and documentation or rationales are incomplete or insufficient.
- ↪ A score of 2 points will be awarded where the criterion is marginally addressed and documentation is incomplete and insufficient.
- ↪ A score of 1 point will be awarded where the criterion is minimally addressed and not documented.
- ↪ A score of 0 points will be awarded where the criterion is not addressed.

Following completion of the consensus scoring of all eligible Proposals, DWR will convene a Selection Panel to review the technical scores and comments. The Selection Panel will generate a preliminary ranking list, by hydrologic or funding area of the Proposals and make the initial funding recommendations. When developing the ranking list, the Selection Panel will consider the following items:

- ↪ Amount of funds available
- ↪ Consensus review and score

- ↪ Program Preferences (Section II.F)
- ↪ Distribution of funding within a funding area

The Selection Panel may recommend reducing grant amounts from that requested in order to meet funding targets (Section II.D) and available funding limitations.

H. Applicant Notification and Public Meeting

A list of Proposals recommended for funding and the recommended funding amounts will be posted on the DWR website and the applicants will be notified.

The recommended funding list will be presented at a public meeting held by DWR to solicit public comments on the proposed funding recommendations. Interested parties will be notified of the public meeting by email and news release informing the public of the date, time, and location of the meeting and by a notice placed on the DWR website listed in the Foreword.

I. Funding Awards

Based on the individual Proposal evaluations, the preliminary ranking list and initial funding recommendations developed by the Selection Panel, and the comments received during a public comment period, DWR's Director will approve a final funding list and the associated funding commitments. Following approval by the Director, the selected grant recipients will receive a commitment letter officially notifying them of their selection, the grant amount, and funding source(s).

J. Grant Agreement

Following funding commitment, DWR will execute a grant agreement with the grant recipient. Grant agreements are not executed until signed by the authorized representative of the grant recipient and DWR. Grant agreements for Proposition 84 funds will be executed with one grant recipient for the IRWM region, which will then provide funding to its project proponents that are responsible for implementation of the component projects.

Both the Fiscal Statement and CEQA Statement of conditions must be met **for at least one project** contained in the Proposal prior to execution of a grant agreement. For each remaining project(s), both conditions must be met prior to disbursement of grant funds.

In the event that an applicant is selected for grant funding, the following conditions will need to be met prior to executing a grant agreement:

- ↪ Fiscal Statements: The Grantee must submit copies of the most recent three years of audited financial statements, for each agency or organization proposed to receive grant funding for a selected Proposal. The submittal must also include: 1) balance sheets, statements of sources of income and uses of funds, a summary description of existing debts including bonds, and the most recent annual budget; 2) separate details for the water enterprise fund, if applicable to an agency or organization; 3) a list of all cash reserves, restricted and unrestricted, and any planned uses of those reserves; and 4) any loans required for project funding and a description of the repayment method of any such loans. Equivalent documentation may be considered at DWR's discretion.
- ↪ CEQA/NEPA: The Grantee must demonstrate that it has a plan to comply with all applicable requirements of CEQA and the National Environmental Policy Act (NEPA) and a schedule that outlines when the appropriate environmental documents will be completed. DWR staff will review the CEQA documentation available at the time of grant award for each project contained within the proposal. Each project subject to CEQA shall not proceed until documents that satisfy the CEQA process are received by DWR and DWR has completed its CEQA compliance review. Work that is subject to a CEQA document shall not proceed until and unless approved by DWR. Such approval is fully discretionary and shall constitute a condition precedent to any work for which it is required.

Once CEQA documentation has been completed, DWR will consider the environmental documents and decide whether to continue to fund the project or to require changes, alterations or other mitigation.

As part of the agreement, applicants will be required to provide information regarding their projects needed for Bond Accountability reporting.

Applicants are encouraged to review existing agreement templates for an understanding of responsibilities for applicants and project proponents. The agreement templates can be found at the website listed in the Foreword. Appendix E provides applicants with a summary of the minimum materials that will need to be maintained during the life of the grant agreement for State auditing purposes.

K. Funding Match Waiver

The requirement for funding match for Proposition 84 funded projects may be waived for projects that directly address a critical water supply or quality issue for a disadvantaged community within the IRWM planning area. Refer to each funding cycle's PSP for more information regarding funding match waivers.

L. Reimbursement of Costs

Reimbursable costs are as defined in Appendix B.

For IRWM planning grants and Regional Flood Management planning grants, only work performed **after** the grant is awarded will be eligible for reimbursement. Costs incurred after September 30, 2008, and before grant award are not eligible for reimbursement. However, these costs may be considered, at DWR's discretion, as a part of the applicant's funding match. **Advance funds cannot be provided.**

For IRWM Implementation Grants and SWFM Grants, only work performed **after** the grant is awarded will be eligible for reimbursement. Travel costs incurred on IRWM Implementation and SWFM Grants are not eligible as funding match or for reimbursement. **Advance funds cannot be provided.**

APPENDIX A USEFUL WEB LINKS

DWR

Home Page:	www.water.ca.gov/
FloodSAFE California	www.floodsafe.water.ca.gov/
California Water Plan	www.waterplan.water.ca.gov
Grants & Loans:	www.grantsloans.water.ca.gov/
Office of Water Use Efficiency	www.owue.water.ca.gov/finance/index.cfm
Bulletin 118 California's Groundwater:	www.groundwater.water.ca.gov/bulletin118
Groundwater Information Center:	www.groundwater.water.ca.gov
Floodplain Management Task Force:	fpmtaskforce.water.ca.gov/
Desalination Task Force:	www.owue.water.ca.gov/recycle/desal/desal.cfm
Recycling Task Force:	www.owue.water.ca.gov/recycle/index.cfm
Economic Analysis Guidebook:	www.water.ca.gov/economics/guidance.cfm

Regional Water Quality Control Plans (Basin Plans)

Region 1	www.waterboards.ca.gov/northcoast/water_issues/programs/basin_plan/basin_plan.shtml
Region 2	www.waterboards.ca.gov/sanfranciscobay/basin_planning.shtml#2004basinplan
Region 3	www.waterboards.ca.gov/centralcoast/publications_forms/publications/basin_plan/index.shtml
Region 4	www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/
Region 5	www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/
Region 6	www.waterboards.ca.gov/lahontan/water_issues/programs/basin_plan/references.shtml
Region 7	www.waterboards.ca.gov/coloradoriver/publications_forms/publications/docs/basinplan_2006.pdf
Region 8	www.waterboards.ca.gov/santaana/water_issues/programs/basin_plan/index.shtml
Region 9	www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/index.shtml
Bay-Delta	www.waterboards.ca.gov/water_issues/programs/bay_delta/wq_control_plans/index.shtml

State Water Board Information and Programs

Homepage	www.waterboards.ca.gov
Surface Water Ambient Monitoring Program:	www.waterboards.ca.gov/water_issues/programs/swamp/

CEQA Information

Environmental Information:	ceres.ca.gov/index.html
California State Clearinghouse Handbook:	ceic.resources.ca.gov/

Climate Change Information

IRWM Climate Change Clearinghouse:	water.ca.gov/climatechange/IRWMClimateChangeClearinghouse.pdf
Climate Change Scoping Plan:	arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm
Managing an Uncertain Future:	water.ca.gov/climatechange/docs/ClimateChangeWhitePaper.pdf
2009 California Climate Adaptation Strategy:	climatechange.ca.gov/adaptation/index.html

Department of Industrial Relations

www.dir.ca.gov/lcp.asp

California Native American Heritage Commission

ceres.ca.gov/nahc/

US Census Bureau

Homepage

www.census.gov

American Fact Finder

[factfinder.census.gov/home/saff/main.html? lang=en](http://factfinder.census.gov/home/saff/main.html?lang=en)

APPENDIX B

DEFINITIONS

Adopted IRWM Plan – an Integrated Regional Water Management Plan that has been formally accepted, as evidenced by a resolution or other written documentation by the governing bodies of each agency that is part of the regional water management group responsible for the development of the Plan and have responsibility for implementation of the Plan. At a minimum, each project proponent named in an IRWM grant application must also adopt the IRWM Plan. Adoption of an IRWM Plan must follow the notification process in CWC §10543.

Applicant – the entity that files an application for funding under the provisions of Proposition 84 or Proposition 1E with DWR.

Application – the electronic or hard copy submission to DWR that requests grant funding for a Proposal that the applicant intends to implement.

Basin Plan – also referred to as Water Quality Control Plan, identifies: 1) beneficial uses to be protected; 2) water quality objectives for their reasonable protection of beneficial uses; and 3) a program of implementation for achieving the water quality objectives as established by the RWQCBs or SWRCB.

Beneficial Uses – the uses of streams, lakes, rivers, and other water bodies, have to humans and other life. Beneficial uses are outlined in a Water Quality Control Plan (Basin Plan). Each body of water in the State has a set of beneficial uses it supports. Different beneficial uses require different water quality controls(s). Therefore, each beneficial use has a set of water quality objectives designed to protect that beneficial use. Beneficial uses may include: domestic (homes, human consumption, etc.), irrigation (crops, lawns), power (hydroelectric), municipal (water supply of a city or town), mining (hydraulic conveyance, drilling), industrial (commerce, trade, industry), fish and wildlife preservation, aquaculture (raising fish for commercial purposes), recreational (boating, swimming), stock watering (for commercial livestock), water quality, frost protection, heat control (water crops to prevent heat damage), groundwater recharge, agriculture, etc.

California Native American Tribe – all Indigenous Communities of California, which are on the contact list maintained by the Native American Heritage Commission, including those that are federally non-recognized and federally recognized, and those with allotment lands, regardless of whether they own those lands. Additionally, because some water bodies and Tribal boundaries cross State borders, this term may include Indigenous Communities in Oregon, Nevada, and Arizona that are impacted by water in California.

Disadvantaged Community – a community with an annual median household income that is less than 80 percent of the Statewide annual median household income (PRC §75005 (g)).

Environmental Justice – the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies (California Government Code §65040.12(e)).

Funding Match – funds made available by the applicant to assist in financing a project. Funding match consists of non-State funds and can include in-kind-services. In-kind services must relate directly to the scope of work funded in the grant proposal

Grant Applicant – the entity that is formally submitting a grant application. This is the same entity that would enter into an agreement with the State should the grant application be funded. The grant applicant must be a local agency or non-profit organization.

Grantee – a grant recipient.

Incidental Costs – reasonable administrative expenses that may be included as project costs and will depend on the complexity of the project preparation, planning, coordination, construction, acquisitions, implementation and maintenance. Such costs are the necessary costs incidentally but directly related to the project that are regularly assigned to all such projects in accordance with the standard accounting practices of the grantees.

Impaired Water Body – any waterbody of the United States that does not attain water quality standards (as defined in 40 Code of Federal Regulations (CFR) part 131) due to an individual pollutant, multiple pollutants, pollution, or an unknown cause of impairment, where a waterbody receives a thermal discharge from one or more point sources, impaired means that the waterbody does not have or maintain a balanced indigenous population of shellfish, fish, and wildlife. A list of impaired water bodies is compiled by the SWRCB pursuant to §303(d) of the Clean Water Act.

In Kind Services – work performed by the grantee, the cost of which is considered funding match in-lieu of actual funds from the grantee.

IRWM Plan – is defined in CWC §10534 as “a comprehensive plan for a defined geographic area, the specific development, content, and adoption of which shall satisfy requirements developed pursuant to this part. At a minimum, an Integrated Regional Water Management Plan describes the major water-related objectives and conflicts within a region, considers a broad variety of resource management strategies, identifies the appropriate mix of water demand and supply management alternatives, water quality protections, and environmental stewardship actions to provide long-term, reliable, and high-quality water supply and protect the environment, and identifies disadvantaged communities in the region and takes the water-related needs of those communities into consideration.” (CWC §10530 *et seq.*)

Local agency – any city, county, city and county, special district, joint powers authority, or other political subdivision of the State, a public utility as defined in Sections 216 of the Public Utilities Code, or a mutual water company as defined in Section 2725 of the Public Utilities Code (CWC §10535)

Low Impact Development (LID) – LID is a stormwater management strategy aimed at maintaining or restoring the natural hydrologic functions of a site or project to achieve natural resource protection objectives and fulfill environmental regulatory requirements; LID employs a variety of natural and built features that reduce the rate of runoff, filter pollutants out of runoff, and facilitate the infiltration of water into the ground and/or on-site storage of water for re-use.

Non-point Source Pollution – a diffuse discharge of pollutants throughout the natural environment.

Non-profit organization – any non-profit corporation qualified to do business in California and qualified under Section 501(c)(3) of the Internal Revenue Code.

Program Preferences – components of a Proposal that will be given preference, as defined in PRC §75026.(b) and CWC §10544.

Proposition 50 – “Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002” passed by California voters in November 2002, and as set forth in Division 26.5 of the CWC.

Proposition 84 – “Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006” passed by California voters on November 7, 2006, and as set forth in Division 43 of the PRC.

Proposition 1E – the “Disaster Preparedness and Flood Prevention Bond Act of 2006” passed by California voters on November 7, 2006, and as set forth in Division 5 of the PRC.

Region – also known as IRWM Region, means a geographic area. The physical area, efficacy, and benefits derived from a regional plan are impacted by many variables (physical, political, environmental, societal, and economic) therefore no physical size or dimension will be prescribed for this term. Rather the RWMG must define its region and explain why the geographic area encompassed is appropriate and yields effective, synergistic, efficient water management planning.

Regional Project or Program – as defined in CWC §10537 means projects or programs identified in an IRWM Plan that accomplish any of the following:

- (a) Reduce water demand through agricultural and urban water use efficiency.
- (b) Increase water supplies for any beneficial use through the use of any of the following, or other, means:
 - (1) Groundwater storage and conjunctive water management
 - (2) Desalination
 - (3) Precipitation enhancement
 - (4) Water recycling
 - (5) Regional and local surface storage
 - (6) Water-use efficiency
 - (7) Stormwater management
- (c) Improve operational efficiency and water supply reliability, including conveyance facilities, system reoperation, and water transfers.
- (d) Improve water quality, including drinking water treatment and distribution, groundwater and aquifer remediation, matching water quality to water use, wastewater treatment, water pollution prevention, and management of urban and agricultural runoff.
- (e) Improve resource stewardship, including agricultural lands stewardship, ecosystem restoration, flood plain management, recharge area protection, urban land use management, groundwater management, water-dependent recreation, fishery restoration, including fish passage improvement, and watershed management.
- (f) Improve flood management through structural and nonstructural means, or by any other means.

Regional Water Management Group – or RWMG means a group in which three or more agencies, at least two of which have a statutory authority over water supply or water management, as well as those persons who may be necessary for the development and implementation of an IRWM Plan that meets the requirements in CWC §10540 and §10541.

Reimbursable Costs – costs that may be funded under Proposition 84 and 1E. Reimbursable costs include the reasonable costs of engineering, design, land and easement, legal fees, preparation of environmental documentation, environmental mitigation, and project implementation including administrative costs and incidental costs. Costs that are not reimbursable with grant funding include, but are not limited to:

- a. Costs, other than those noted above, incurred prior to effective date of a grant award with the State
- b. Costs for preparing and filing a grant application belonging to another solicitation
- c. O&M costs, including post construction project performance and monitoring costs
- d. Purchase of equipment not an integral part of the project
- e. Establishing a reserve fund
- f. Purchase of water supplies
- g. Replacement of existing funding sources for ongoing programs
- h. Support of existing agency requirements and mandates (e.g. punitive regulatory agency requirements)
- i. Purchase of land in excess of the minimum required acreage necessary to operate as an integral part of the project, as set forth and detailed by engineering and feasibility studies, or land purchased prior to effective date of a grant award with the State
- j. Payment of principal or interest of existing indebtedness or any interest payments unless the debt is incurred after effective date of a grant award with the State, the granting agency agrees in writing to the eligibility of the costs for reimbursement before the debt is incurred, and the purposes for which the debt is incurred are otherwise reimbursable project costs
- k. Overhead not directly related to project costs

Scoring Criteria – set of requirements used by DWR to choose a project for a given program or for funding; the specifications or criteria used for selecting or choosing a project based on available funding.

Selection Panel – group of DWR representatives at the supervisory or management level assembled to review and consider proposal evaluations and scores developed by the Technical Reviewers and to make initial funding recommendations. Other agencies, such as the SWRCB or RWQCB, representatives at the supervisory or management level may also be invited to participate on the Selection Panel.

Stakeholder – an individual, group, coalition, agency or others who are involved in, affected by, or have an interest in the implementation of a specific program or project.

State Plan of Flood Control (SPFC) – State and Federal flood management works, lands, programs, plans, conditions, and mode of maintenance and operation of the Sacramento River Flood Control Project described in Section 8350 of the CWC, and of flood management projects in the Sacramento River and San Joaquin River watersheds authorized pursuant to Article 2 (commencing with Section 12648) of Chapter 2 of Part 6 of Division 6 of the CWC for which the Central Valley Flood Protection Board or DWR has provided the assurances of non-federal cooperation to the United States, which shall be updated by DWR and compiled into a single document entitled “The State Plan of Flood Control”(PRC §5096.805(j)).

State Waters – also known as “Waters of the State”, means all surface water, groundwater, and saline waters within the boundaries of the State of California (CWC §13050(e)).

Stormwater – water generated by runoff from land and impervious surfaces during rainfall and snow events.

Technical Reviewers – a group of agency representatives assembled to evaluate the technical competence of a proposed project and the feasibility of the project being successful if implemented.

303(d) List – refers to Section 303(d) of the Clean Water Act that requires each state to periodically submit to the U.S. Environmental Protection Agency a list of impaired waters.

Total Maximum Daily Load (TMDL) – identifies the maximum quantity of a particular pollutant that can be discharged into a water body without violating a water quality standard, and allocates allowable loading amounts among the identified pollutant sources.

Urban Water Supplier – supplier, either publicly or privately owned, that provides water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually (CWC §10617).

APPENDIX C

GUIDANCE FOR IRWM PLAN STANDARDS

This appendix contains additional information on each of the IRWM Plan Standards. For each standard the intent of the standard is stated as well as applicable background information, legislation, examples, and references.

Governance

Governance plays an important role in determining how many organizations function. A definition of governance is "the processes, structures and organizational traditions that determine how power is exercised, how stakeholders have their say, how decisions are taken and how decision-makers are held to account."

The intent of the Governance Standard is to ensure that an IRWM Plan has the structures and procedures that maximize functionality, participation in the Plan, and plan longevity.

DWR is not advocating any one governance structure or mechanism; rather it is up to the RWMG to determine what governance structure is best for the region. Existing IRWM Plans have used various governance forms, such as Joint Powers Authorities (JPA), Memorandums of Understanding (MOU), Resolutions, and Consensus. Some governance structures are housed within a local government agency, which fulfills the coordinating role, while others are driven by committees that are comprised of individuals from multiple agencies or interests. Access to contacts for IRWM Plans to examine a variety of governance models can be found at:

http://www.water.ca.gov/irwm/integregio_fundingarea.cfm

Clicking on a funding area label will call up a funding area map with contact information including web addresses on specific IRWM regional efforts.

Regardless of form, governance should be effective in updating and implementing the IRWM Plan, while safe guarding and supporting collaboration among stakeholders.

- ↪ Group responsible for development of Plan: The IRWM Plan must include a description of the RWMG responsible for the development and implementation of the Plan. RWMGs can include, but are not limited to, local public agencies, non-profit organizations, privately owned water utilities regulated by the Public Utilities Commission, tribal governments, and other stakeholders that are necessary to develop and implement the IRWM Plan. The description must include a listing of all entities responsible for development of the Plan and discuss their relationship to water management issues in the IRWM Region; in particular, the membership of the RWMG must be listed and those with statutory authority for water management (i.e. water use, water delivery, natural waters, water supply, water quality, flood waters, etc.) identified.
- ↪ Public Notice Requirements: A RWMG proposing to prepare or update an IRWM Plan shall publish a notice of intent to prepare the Plan in accordance with §6066 of the Government Code. Upon the completion of the IRWM Plan, the RWMG shall publish a notice of intention to adopt the Plan in accordance with §6066 of the Government Code and shall adopt the Plan in a public meeting of the governing board. (CWC §10543)
- ↪ Plan Adoption: The governing bodies of each agency that is part of the RWMG responsible for the development of the IRWM Plan and have responsibility for implementation of the Plan must adopt the Plan. At a minimum each project proponent named in an IRWM grant application must also adopt the IRWM Plan. Project proponents are permitted to adopt the Plan after it has been adopted by the

RWMG, until the submittal of an IRWM grant application. Proof of adoption is a resolution with signatory blocks for each governing body adopting the Plan.

- ◆ Types of Plans: While not part of the Governance Standard, the type of IRWM Plan written is the purview of the RWMG. Typically, RWMGs either write a new IRWM Plan that is based on multiple existing local plans or choose to produce a functionally equivalent plan (FEP). A FEP is a compilation of existing local water management and related plans that contain the components of an IRWM Plan and when used in a coordinated manner, operate as an integrated plan.

FEPs are recognized in Proposition 84 (PRC §75026 (a)). Both types of plans are held to the same standards. FEPs should take particular care to clearly document and communicate how the separate, single purpose plans fit together and how entities abide by each of the existing plans. For example, governance of the FEP will not typically exist in the individual plans that make up the FEP. Therefore, the governance of an FEP must be clearly documented and communicated in some manner, not only to DWR, but to stakeholders in the region. Similarly, existing plans written by a specific entity often do not address areas outside that entity's jurisdiction; yet, when applied to a FEP, the provisions of that specific plan may very well apply to another entity's jurisdiction. Such overlaps of FEP component plans need to be documented and agreed upon.

↪ Description of chosen governance structure: Because each RWMG decides on its own specific governance structure, the IRWM Plan needs to contain a description of that structure. The description needs to be detailed enough so that any stakeholder in the region understands how to communicate with the RWMG and participate in the Plan. While the mechanism of governance may be formalized in an MOU or JPA, there's more to the governance structure than formal documents. The description needs to include not only a discussion of the mechanism of relationship between entities (JPA, MOU, consensus, etc.), but also how the governance structure performs basic activities (see activities section below). This discussion should include listing of committees or groups that have focused activities within the RWMG and the description of how these groups support plan development and implementation. Additionally, describe how the group gathers the information and how the group communicates with other groups or committees. Also necessary is other participatory information, such as how does a person serve on a group or committee and for what duration, or how does the public or stakeholders talk to or interface with a specific group or committee. Regardless of form, governance should be effective in updating and implementing the IRWM Plan, while safe guarding and supporting collaboration among stakeholders, and the description of the governance structure should be used to demonstrate how that is accomplished.

↪ Description of how governance addresses and ensures various activities: A description of how the chosen governance structure addresses the following activities can be incorporated in the description of the chosen governance structure. There also may be additional activities specific to individual IRWM governance structures and IRWM plans are encouraged to include descriptions of those activities in their IRWM plans. The guidance in this section is provided to better explain DWR's concerns about each of the activities contained in the Governance Standard and are described below.

- ◆ Public Involvement Processes – The development and implementation of an IRWM Plan needs to include a public involvement process that outreaches to the public and provides an opportunity for the public to participate in Plan development and implementation. Public involvement processes should be direct to local agencies and stakeholders, as applicable to the region, including all of the following:
 1. Wholesale and retail water purveyors, including a local agency, mutual water company, or a water corporation as defined in Section 241 of the Public Utilities Code
 2. Wastewater agencies

3. Flood control agencies (including those agencies who submit applications for Prop 1E funded Stormwater Flood Management Grants)
4. Municipal and county governments and special districts
5. Electrical corporations, as defined in Section 218 of the Public Utilities Code
6. Native American tribes that have lands within the region
7. Self-supplied water users, including agricultural, industrial, residential, park districts, school districts, colleges and universities, and others
8. Environmental stewardship organizations, including watershed groups, fishing groups, land conservancies, and environmental groups
9. Community organizations, including landowner organizations, taxpayer groups, and recreational interests
10. Industry organizations representing agriculture, developers, and other industries appropriate to the region
11. State, federal, and regional agencies or universities, with specific responsibilities or knowledge within the region
12. DAC members and representatives, including environmental justice organizations, neighborhood councils, and social justice organizations
13. Any other interested groups appropriate to the region

↪ Effective decision making: Decision making occurs at different levels. The description of the governance structure should describe how decisions are made at the regional level and how decisions are made within the RWMG. In describing decision making, consider how information is collected and processed within the governance structure and how a decision is vetted with stakeholders in the RWMG.

↪ Balanced access and opportunity for participation: Regional planning efforts involve a diverse group of people with differing expertise, perspectives, and authority of various aspects of water management. The IRWM Plan should describe the manner in which the governance structure ensures a balance of interested persons or entities representing different sectors and interests (see Public Involvement Processes, Nos. 1-13, above), and provides them the opportunity to participate, regardless of their ability to contribute financially to the IRWM Plan. Depending on the type of governance structure or mechanism in place, it is possible that a RWMG may need more than one governance type in order to be inclusive of all interested stakeholders. For instance, decision making within a JPA might function at the exclusion of non-local agencies. Therefore, it might be necessary to include additional mechanisms, such as MOU's, to reasonably accommodate other entities, such as non-profit organizations, in the decision making of the IRWM processes. In addition, the IRWM Plan should address:

- ◆ Equal distribution of power and voice among stakeholders – what structures or procedures are in place that ensure there is an equal playing field for all stakeholders involved in the RWMG?
- ◆ Equal opportunity and representation of stakeholders in multiple roles (leadership, advisory) regardless of economic and power status within the RWMG – what roles are there in the governance structure and how does someone occupy that role? How does the governance structure invite participation in the workings of the RWMG?
- ◆ Terms of service for positions within the structure – what kind of time commitment do these positions require and how often do they turn over.

- ↪ Effective communication – both internal and external to the IRWM Region: Essential and inherent in any human organization is the need to communicate. In many collaborative efforts, great importance may be placed on being heard and valued in the process. Some communication efforts, such as websites, emails, or other distributed materials, may be one-way and not necessarily require an interactive discussion. However, some portion of the communication must be two-way. How does the governance structure foster communication with the different functional groups within the RWMG, with project proponents, with general stakeholders, with neighboring RWMGs, government agencies, and the general public? Each of those groups may require different intensities or types of communication. What mechanisms are available to accommodate adequate two-way communication?
- ↪ Long-term implementation of IRWM Plan: IRWM Plans are long-term planning documents. The description of region standard refers to a 20-year planning horizon. How does the governance structure help ensure implementation of the plan in the long-term?
- ↪ Coordination with neighboring IRWM efforts, State agencies, and federal agencies: How does the governance structure ensure coordination with neighboring RWMGs, State agencies, and federal agencies? Does the governance structure contain appropriate region-wide roles for such entities? Do the appropriate regulatory and resource agencies have advisory roles?
- ↪ The collaborative process used to establish Plan objectives: Does the governance structure show that a collaborative process was used for the development of IRWM Plan objectives? The groups that were involved in the process? And how the final decision was made and accepted by the RWMG?
- ↪ Interim changes and formal changes to the Plan: IRWM Plans need to include adaptive management processes for updating the Plan in response to changing conditions. This may include informal changes that reflect minor process, organizational, or water management changes that occur relatively frequently and do not necessitate a decision by the governing bodies of the RWMG. Formal changes may include those which reflect significant changes to processes, organizational structure, water management conditions, or routine periodic programmatic updates of the IRWM Plan. How does the governance structure ensure the Plan is formally updated periodically and how are changes to the Plan identified and made interim to the formal update period?
- ↪ Updating or amending the IRWM Plan: Does the IRWM Plan indicate the process used to informally and formally update or amend the Plan? What changes to the Plan would require it to be readopted? What is the frequency to formally amend and readopt the Plan? DWR encourages use of adaptive management processes to ensure that the IRWM Plan and associated objectives are current. Formal updates to the Plan may be resource and time intensive processes, but are necessary to ensure that the IRWM Plan is not a static document and that the Plan continues to be accepted by the RWMG and those entities necessary to implement the Plan. Therefore, DWR encourages IRWM planning efforts to formally review, revise, and adopt the IRWM Plan, no less frequently than every five years. In the Governance section, indicate if this information is contained in another part of the Plan, such as in the Project Performance section.

Region Description

The intent of the Region Description Standard is to document that the IRWM planning region is defined by the combination of the water systems being managed; common water issues; and that there is sufficient variety of interested parties included in the planning region. The region description contained in the IRWM Plan should closely follow the information required in the RAP whereby DWR accepts IRWM regions into the grant program.

IRWM regions vary widely in physical size for a variety of reasons. As a result, there is no single physical size definition that can be imposed on an IRWM region. However, CWC §10541(f) defines a region as follows:

“At a minimum, a region shall be a contiguous geographic area encompassing the service areas of multiple local agencies, and shall be defined to maximize opportunities for integration of water

management activities: and effectively integrates water management programs and projects within a hydrologic region defined in the California Water Plan, the Regional Water Quality Control Board region, or subdivision or other region specifically identified by DWR.” (PRC §75026.(b)(1)).

Each RWMG has the responsibility of defining its own IRWM region. IRWM Plans are a form of resource planning so describing the region focuses on the resource being managed. DWR has released CWP Update 2009 Final (<http://www.waterplan.water.ca.gov/cwpu2009/index.cfm>), which emphasizes the importance of describing the major water-related objectives and conflicts within an IRWM planning region.

The region description items described in the aforementioned list of standards have been arranged and are discussed below in order to assist RWMGs at the beginning of the IRWM development process to define their regional boundaries after considering these factors.

- ↪ Description of Watersheds/Water System: Consideration of watershed areas should be taken to describe all aspects of the system that are being managed including a description of natural and anthropogenic components of the region’s water system.

Watersheds are often at the level suitable for regional planning efforts. Some RWMGs manage multiple watersheds based on the similarity of water management issues. Conversely, some RWMGs separate the lower and upper watersheds (each belonging to a different IRWM Plan,) because water management issues in each area are different. Another advantage of using a watershed as a possible management unit is that there are often existing watershed planning efforts that can provide information or data on the watershed and that have existing relationships with important stakeholder groups operating in the watershed.

In describing the watersheds in the region, explain the characteristics of the watershed, including hydrology, groundwater, vegetation, fisheries, species and habitats of special concern, and management issues like invasive species. IRWM regions may want to utilize existing local plans that already have these characteristics described comprehensively. IRWM regions also should describe effects climate change may have on their watersheds, in addition to water supply and demand. The following link is to the California Watershed Portal where you may find additional resources: <http://cwp.resources.ca.gov/index.html>.

Sometimes, water is moved and used outside watersheds’ natural courses. There are many areas of the state that import water or have other infrastructure in addition to the natural watershed(s) in their regions. These systems are also part of the water system to be managed and need to be described in IRWM plans.

There are multiple types of water systems. The RWMG should consider more than just the water supply entry point to the IRWM region and the water supply system. The description should include water system infrastructure and diversions. In addition to water supply systems, there also may be wastewater, reclaimed water, desalination, floodwater, and natural water systems (surface water and groundwater). All these separate systems should be looked at collectively as part of the water system being managed as they often are interconnected.

- ↪ Description of Internal Boundaries: Describe and show on a map all the internal boundaries within the region. These internal boundaries should include the boundaries of municipalities; service areas of individual water, wastewater, flood control districts, and land use agencies; groundwater basins; watersheds; and county or other political boundaries. For land use agencies, make sure to include their boundaries even if they are not part of the RWMG, as it is important to know the agencies in the IRWM boundary that develop land use plans.
- ↪ Water Supply and Demand: Describe the water supply and demand projections for at least a 20-year planning horizon. Demand projections should include effects on demand by projected growth, projected land use changes, and environmental need for water. In estimating the water supply for the planning horizon, consider how that supply might change with factors, such as climate change. Typically, a water supply projection might be based on past water years. Using climate change as a

factor, it may no longer be adequate to simply rely on historical water years when projecting future supply. For this reason, describe what the prevailing climate change impact means to the future water supply and demand within the region. The Climate Change Standard has a detailed discussion on this matter and provides DWR's guidance on this topic.

To the extent possible, supply and demand projections should be expressed quantitatively. However, there is value in qualitative aspects of supply and demand projections so if available tools are not adequate to quantify all the future effects on supply and demand, quantify what can be, and also include qualitative descriptions for aspects that cannot be quantified.

- ↪ **Water Quality:** Describe the current and future (or proposed), water quality conditions in the region. Describe any protection and improvement of water quality within the area of the IRWM Plan. For current conditions include a discussion on the quality of the following water sources: groundwater, imported water, and water from storage facilities, both within and outside the region. Describe any Basin Plans, Watershed Management Initiatives, and the water quality goals and objectives for watersheds in the region. Describe any projects or examples within your region of matching water quality to water use.
- ↪ **Description of Major Water Related Objectives and Conflicts:** The description of region must include the major water management objectives and conflicts within the region (CWC §10541. (e)(3)). These should be based on the parts of the description that have been previously mentioned. The focus of the collaborative integrated regional planning and management effort should be both primary as well as prioritized on a shared vision of regional goals and objectives, rather than being driven by existing projects.
- ↪ **Explanation of Regional IRWM Boundary:** The IRWM Plan must include a description of the regional boundary, how it was determined, and why the chosen region is appropriate as an IRWM region. As stated previously, there are no size criteria that are mandated for an IRWM region. With the information determined from the aforementioned guidance items topics, the RWMG should generate enough information to formulate the regional boundaries focused more on water system, management of that system, and on common water management issues rather than using a political jurisdiction boundary.
- ↪ **Identification of Neighboring or Overlapping IRWM Regions:** Knowledge of and coordination with neighboring IRWM regions can help RWMGs define their region. Understanding these adjacent or overlapping regions may help confirm regional boundaries, indicate that multiple separate regions can function as one region instead of independently, and help identify inter-regional opportunities. Or, it may point to water management issues not yet considered. The description should explain the cooperation and coordination that occurs to foster a working relationship evidenced by establishing a reasonable and effective governance structure for developing and implementing its IRWM Plan.

Objectives

The intent of the Objectives Standard is to ensure IRWM regions establish the intent of their IRWM Plan. Clear objectives will demonstrate to the public which regional conflicts and water management issues the IRWM Plan is designed to address.

DETERMINING OBJECTIVES

Determining IRWM Plan objectives is the foundation of the planning process. Based on the Plan objectives, applicable RMS and implementation projects will be determined. Solid, regionally relevant objectives give focus to the IRWM Plan and are essential for successful plan implementation. Objectives may be determined once the character of the IRWM region (geography, stakeholder makeup, water management issues, conflicts, etc.) is identified. Objectives must be focused on addressing the water management issues, including flood management of the region. Keep in mind that all objectives should be precise enough to be measurable.

In developing IRWM Plan objectives, planning efforts must consider overarching goals that apply to their area. These include:

- ↪ Basin Plan Objectives
- ↪ 20x2020 water efficiency goals
- ↪ Requirements of CWC §10540(c)

IRWM planning efforts must ensure that Plan objectives are consistent with such overarching goals as they apply to specific regions. Planning efforts must consider the objectives in the appropriate basin plan or plans and strategies to meet applicable water quality standards, CWC §10541.(e)(2). California set a goal of a 20% reduction in per capita water use by the year 2020 (20x2020). Actions toward 20x2020 are furthered by the passage of SBx7-7 (CWC §10608 *et seq.*). SBx7-7 amended the CWC to contain provisions to move urban water users to 20x2020 as well as provisions to improve agricultural water use efficiency.

CWC §10540(c) states that, at a minimum, all IRWM Plans shall address all of the following:

- ↪ Protection and improvement of water supply reliability, including identification of feasible agricultural and urban water use efficiency strategies.
- ↪ Identification and consideration of the drinking water quality of communities within the area of the Plan.
- ↪ Protection and improvement of water quality within the area of the Plan consistent with relevant basin plan.
- ↪ Identification of any significant threats to groundwater resources from overdrafting.
- ↪ Protection, restoration, and improvement of stewardship of aquatic, riparian, and watershed resources within the region.
- ↪ Protection of groundwater resources from contamination.
- ↪ Identification and consideration of water-related needs of disadvantaged communities in the area within the boundaries of the Plan.

Although these items do not necessarily have to be included in the objectives, IRWM planning efforts should consider these points as they modify or develop Plan objectives.

DESCRIBING THE PROCESS

It is important to illustrate the collaborative process and tools used to establish objectives. This reinforces the regional relevance of the IRWM Plan, and will prevent readers of the Plan from concluding the objectives were arbitrarily assigned. The discussion does not have to be lengthy and may be as simple as referring to relevant sections of the governance text, if applicable. The text should give the reader a clear understanding of:

- ↪ How the objectives were developed
- ↪ What information was considered, i.e., water management or local land use plans, etc.
- ↪ What groups were involved in the process
- ↪ How the final decision was made and accepted by the IRWM effort

MEASURING OBJECTIVES

The Objectives Standard requires that objectives must be measurable. A measurable objective means there must be some metric the IRWM region can use to determine if the objective is being met as the IRWM Plan is implemented. Remember that IRWM Plans are implemented through projects, relevant to measuring

objectives, it implies that metrics must apply to projects which in turn relate back to Plan objectives. Objectives can be measured quantitatively or qualitatively.

Neither quantitative nor qualitative metrics are considered inherently better. What is vital is the chosen metric be the most appropriate for the given objective. For example, an IRWM effort may have a general objective of restoring ecological function to a local wetland. Depending on the region's available resources for measuring this objective, it may be easier to express the objective quantitatively or qualitatively:

Example 1

Objective	Qualitative Measurement	Quantitative Measurement
Restore ecologic function to a local wetland	Presence/absence of key wetland species	Number of acres restored to wetland conditions

In this case meeting the objective can be expressed either qualitatively, with the presence of wetland species indicating restored ecologic function; or quantitatively, with ecological function measured as acres restored. Both measurements could be appropriate. For some objectives, only one method may be appropriate.

Example 2

Objective	Qualitative Measurement	Quantitative Measurement
Meet TMDL requirements for nitrates in a local creek	N/A	Water quality sampling for nitrate concentration

In Example 2, a qualitative measurement will not provide the detail required to confirm that TMDL requirements have been met. A quantitative measurement is the most appropriate.

Example 3

Objective	Qualitative Measurement	Quantitative Measurement
Improve communication between groundwater management agencies and private well owners	Positive participation at public meetings; increased correspondence	N/A

In Example 3, a qualitative assessment is the most appropriate. Quantifying "improved communication" may not be practical for determining if the objective has been met.

A quantitative measurement could be constructed, such as counting the number of positive and negative comments at public meetings, or sending surveys to stakeholders to collect data, but these methods won't give much more insight than the qualitative expression. They would, however, require more effort and time from the RWMG to measure them.

PRIORITIZING PLAN OBJECTIVES

The IRWM Plan must contain an explanation of how objectives are prioritized or why objectives are not prioritized. Objectives, RMS selection, and Implementation Projects are all linked. To meet plan objectives, certain RMS may be used and specific projects may be implemented. Therefore, prioritizing objectives may help with prioritizing RMS and project implementation.

There is no required framework for prioritizing objectives. It is not necessary to establish a specific numerical priority. A RWMG may use the prioritization tools they perceive to best meet their planning needs such as the following:

- ↳ Tiered or grouped together as one priority for implementation

- ↪ Grouped as short-term and long-term priorities for implementation
- ↪ Grouped as spatial or temporal priorities for implementation
 - ◆ Reducing upstream erosion may be more important to address before addressing downstream sedimentation
 - ◆ Conducting surveys during appropriate seasons

Flexible priorities are fundamental to any adaptive management plan, such as an IRWM Plan. Priorities may change depending on a change in regulations, shift in regional water uses, or the fulfillment of a plan objective. Prioritizing the objectives can help guide the course of adaptive management. However, if a RWMG chooses not to prioritize plan objectives, the basis for this decision should be clearly stated in the IRWM Plan.

OBJECTIVES, GOALS, AND THE PLANNING HIERARCHY

During the Proposition 50 IRWM Program, the terms “goals” and “objectives” may have been used by some RWMGs interchangeably. No standard existed in the Proposition 50 IRWM Program for goals, so there has been no standardized use of the term. RWMGs may choose to use “goals” as an additional layer for organizing and prioritizing objectives, or they may choose to not use the term at all. It may be reasonable for some RWMGs to organize numerous objectives under one larger, more general objective or goal. Alternatively, the complexity of water management issues in some regions may require sub-objectives for better organization.

Whichever nomenclature a RWMG uses for describing objectives, the organization and the significance of the terms must be **clearly explained** and **remain consistent** throughout the Plan.

Resource Management Strategies

The intent of the RMS Standard is to encourage diversification of water management approaches as a way to mitigate for uncertain future circumstances and comply with PRC §75026.(a) and CWC §10541(e)(2).

A strategy as defined in the CWP Update 2009 is a project, program, or policy that helps local agencies and governments manage their water, and related resources.

An IRWM Plan must consider each RMS in the CWP Update 2009 which are listed below in Table 3.

Table 3 – Resource Management Strategies

Reduce Water Demand	Agricultural Water Use Efficiency Urban Water Use Efficiency
Improve Operational Efficiency and Transfers	Conveyance – Delta Conveyance – Regional/local System Reoperation Water Transfers
Increase Water Supply	Conjunctive Management & Groundwater Storage Desalination Precipitation Enhancement Recycled Municipal Water Surface Storage – CALFED Surface Storage – Regional/local
Improve Water Quality	Drinking Water Treatment and Distribution Groundwater Remediation/Aquifer Remediation Matching Quality to Use Pollution Prevention Salt and Salinity Management Urban Runoff Management
Improve Flood Management	Flood Risk Management
Practice Resources Stewardship	Agricultural Lands Stewardship Economic Incentives (Loans, Grants and Water Pricing) Ecosystem Restoration Forest Management Recharge Area Protection Water-Dependent Recreation Watershed Management
Other Strategies	Crop Idling for Water Transfers Dewvaporation or Atmospheric Pressure Desalination Fog Collection Irrigated Land Retirement Rainfed Agriculture Waterbag Transport/Storage Technology

The discussion in this section focuses on RMS as separate topics. In reality, the various RMS are often connected to one another, as well as to other activities such as land use planning. The operating assumption in this section is to intentionally find ways to diversify a water management portfolio. Also, considering differing RMS individually is helpful. Other IRWM Plan standards, such as Integration, address the relationships and synergies that can be gained by combining RMS. The RMS listed in Table 3 are separated into seven categories. The purpose of the seven categories in which all RMS fall into is to group RMS with similar characteristics towards achieving a common goal (e.g., Increase Water Supply). The purpose of the category “Other Strategies” highlights a variety of RMS that can potentially generate benefits but that are currently limited in their capacity to strategically address long-term regional water planning needs. Within each of these categories, the standard lists the specific RMS from the CWP Update 2009. The CWP Update 2009 also provides a detailed discussion of each individual RMS, so RWMGs may wish to use the CWP as information source to assist them in evaluating the various RMS. See Appendix A for a link to the CWP.

DOCUMENTING THE PROCESS

In light of the water issues described in the IRWM Plan Regional Description Section and considering the IRWM Plan Objectives, the RWMG must consider RMS that will help achieve those objectives. Considering RMS should be done from the perspective of maximizing the diversity of strategies versus relying on a single strategy. “Considering a RMS” means to review a strategy and to decide how applicable it is in meeting the IRWM Plan objectives. The review and decision processes should be performed according to the RWMG’s chosen governance. For each strategy considered, the IRWM Plan should document the reasoning behind the decision. This can be stated briefly, for example, if the IRWM region does not have brackish or saline waters then desalination as a strategy for increasing water supply is not applicable. From the IRWM Plan perspective what is important is:

- ↪ The IRWM Plan documents the process used to consider RMS
- ↪ What RMS were considered which must, at a minimum, include all of the RMS listed in Table 3
- ↪ Which RMS of those considered will be implemented to achieve the objectives of the IRWM Plan

Whatever process (i.e. technical advisory input, stakeholder input, etc.) is used to consider RMS, the value is in creating an intentional opportunity to diversify the RWMG’s water management portfolio.

RWMGs should note that in an IRWM Plan the Regional Description, Plan Objectives, and Governance Sections should support and be consistent with the decisions being made in the RMS section.

Integration

The intent of the Integration Standard is to ensure that RWMGs intentionally create a system where integration can occur. IRWM plans will likely not have a separate integration section. The standard and guidance are meant to draw particular attention to this aspect of IRWM planning. In general terms, integration is combining separate pieces into an efficiently functioning unit. Integration may occur on many levels. Here we discuss three types of integration – stakeholder/institutional, resource, and project implementation. The processes, structures, and procedures that foster integration will show up in other plan sections (i.e. governance, stakeholder outreach, data management, project review or selection). The development and implementation of the IRWM Plan should demonstrate the RWMG is forming, coordinating, and integrating separate efforts in order to function as a unified effort.

Stakeholder/Institutional Integration

IRWM Plans must contain governance structures and processes that enable diverse groups of stakeholders to participate in all levels of an IRWM planning effort. CWC §10541(h)(2) refers to ensuring that IRWM plans are developed collaboratively in a manner which balances interests and engages a variety of stakeholders regardless of their ability to contribute financially. Structures and processes that can be used to strike such a balance must be found in the governance, cooperation, and stakeholder involvement portions of the IRWM Plan. CWC §10541(g) provides examples of the breadth of stakeholders that can be included in an IRWM planning effort.

RESOURCE INTEGRATION

Resource integration can have multiple meanings. It can refer to the combining of multiple participant/agency resources to aid the regional planning effort. This can include how data is shared, common protocols to ensure data compatibility, sharing of differing expertise or technical capacity to aid the IRWM planning effort. Therefore processes and procedures that foster combining information, expertise, knowledge or help leverage other resources of the stakeholders involved in the IRWM planning effort must be contained in the IRWM Plan. These may be documented in the governance structure; may be part of internal agreements between participants; may be found in data collection protocols or the data

management section of the IRWM Plan. Resource integration can also mean considering the man-made and natural water resource infrastructure in the IRWM planning region; and how both aid in water management in the region. This may mean that watershed health as well as drinking water distribution systems are components of the water system being managed in the IRWM planning effort. IRWM regions must consider the multiple ways water enters and leaves their IRWM region as they determine IRWM boundaries and stakeholders to invite to participation.

PROJECT IMPLEMENTATION INTEGRATION

IRWM planning decisions can lead to existing or “off the shelf” projects being combined or replaced by new and/or different projects. Part of the advantage of regional planning is addressing similar objectives of local interests with a regional project. Resources of personnel, finance, and equipment to implement multiple smaller efforts may benefit from economy of scale when similar local interests can be met with a regional project. IRWM plans must contain provisions for reviewing project objectives and considering new, expanded, or even different solutions that meet multiple local needs. The planning decisions made in the IRWM Plan must consider integrating the needs of the region and not just the needs of specific entities in the RWMG.

Project Review Process

The intent of the Project Review Process Standard is to ensure the process used for submitting, reviewing, and selecting projects is documented and understandable for regional stakeholders and the public. The standard is intended to produce a list of prioritized implementation projects sufficiently developed and demonstrating appropriate need that can be funded through the IRWM grant program (PRC §75028 (a)).

While the specific review process is up to each RWMG to develop and document in their IRWM Plan, the process must include three components:

- (1) Procedures for submitting a project to the IRWM Plan
- (2) Procedures for review of projects to implement the IRWM Plan
- (3) Procedure for communicating the list(s) of selected projects

The review process may be a collection of different processes or a single procedure, whichever fits the IRWM region best. Additionally, the review process must include multiple factors. How each factor is applied in the process is up to each RWMG to decide.

It is essential to demonstrate a well thought-out process in the IRWM Plan for decision making and data management roles within the RWMG. Will a subcommittee be responsible for approving the project list? Will each of the projects be reviewed individually for accuracy if they are sorted automatically in a database? Through what mechanism will stakeholders provide input during the submittal, review, selection process to develop the project list? How and when is the list updated and does it require re-adoption of the Plan? The IRWM Plan must clearly document the project review process and demonstrate that the process meets this standard. The projects included in the IRWM Plan are the projects that will implement the Plan and achieve the Plan objectives. The projects should represent priorities of the planning effort and represent a wise investment for State grant funding. Hence, the process should not be designed to only select based on readiness to proceed.

PROCESS COMPONENTS

(1) Procedures for submitting a project for inclusion in the IRWM Plan

The process described in the IRWM Plan must include procedures for submitting projects to be considered for inclusion into the IRWM Plan. Documenting these procedures in the IRWM Plan will allow the RWMG and

stakeholders to understand and use the process. Some RWMGs continually accept projects for consideration while others may have specific periods of project submission. Project submittal procedures typically require standardized information so each project submits the necessary information for the review process.

Submittal processes must balance efficiency with accessibility. It is acceptable to use web based submittal tools to aid submission and management of information; however, if there are project sponsors that do not have access to such tools, projects of value may be excluded. In such cases, having an alternate submittal process may provide needed access.

Submittal processes must also specify what information is required to be submitted. Typically, we talk about projects as pieces that implement a plan. Should only projects at a certain stage be submitted? Are concepts, ideas, or needs for projects or programs allowed for submission? Remember that the product of the process is actions that will implement the IRWM Plan. Therefore, it may be wise to accept project concepts or ideas, as long as there is a process in place to take these concepts and ideas to fully developed implementation projects.

(2) Procedures for review of projects considered for inclusion into the IRWM Plan

The standard requires that certain factors be used in the process. The factors listed in this standard speak to important points to consider in the project review process. Factors are further explained in text below. RWMGs can use the factors in any part of the process they create and they may add various weights to factors within their process to tailor the process to their specific regional needs. **RWMGs are not limited to these factors but they must use, at a minimum, the factors listed in this standard.**

In developing a project review process, RWMGs are cautioned that the project review process contained in the IRWM Plan **should not** contain any specific grant program related selection criteria. The purpose of identifying projects in the IRWM Plan is to understand the needed action to meet the IRWM Plan objective. Projects should not be prioritized based on any specific grant program. It can be helpful to think of the project selection process as having, at least, two phases:

- ↪ Identify projects that will be necessary to implement the IRWM Plan and
- ↪ Identify projects that may qualify for a specific funding source.

The RWMG **may apply grant criteria** when moving from the overall list of projects in the IRWM Plan to a specific grant proposal.

(3) Procedure for communicating the list(s) of selected projects

The IRWM Plan must also contain the product of the project selection process, the project list(s). The project lists may be quite extensive or change over time. In such cases, it is acceptable for an IRWM Plan to contain a hyperlink or URL to where the list(s) can be viewed. At a minimum, the IRWM Plan needs to demonstrate that the selection process has been conducted and there are identified projects that will implement the IRWM Plan.

REVIEW FACTORS

The following is a discussion of the factors that a project review process should employ when considering projects for inclusion in the IRWM Plan:

A. How the project contributes to the IRWM Plan objectives

This factor asks RWMG to consider how a project relates to achieving plan objectives. As discussed in the plan standard on objectives, it is important to be able to measure how an objective is being met through projects.

B. How the project is related to resource management strategies

The IRWM Plan identifies RMS selected for use in the Plan with the goal of diversifying the water management portfolio used to meet plan objectives. Does the proposed project contribute to the diversification of the water management portfolio? If so how? If it does, that should be seen as a positive aspect of the project. If not, the project may still aid in obtaining the plan objectives; however, depending on specific circumstances of the region, a project that contributes to the diversification of the water management portfolio may be more valuable than one that does not.

C. Technical feasibility of the project

The RWMG needs to consider the technical feasibility of the projects. Technical feasibility is related to the knowledge of the project location; knowledge of the water system at the project location; or with the material, methods, or processes proposed to be employed in the project. Is there enough known about the geologic conditions, hydrology, ecology, or other aspect of the system where the project is located? Are there data gaps that require additional studies to develop the project? In examining the methods, materials, or equipment used in the project, are there sufficient technical data to indicate the methods and systems employed in the project will result in a successful outcome? Success of a project is the realization of claimed benefit. For example, if a project is claiming a certain amount of recharge to the aquifer, is there enough known about the hydrogeologic characteristics to support the project claim of the quantity of recharge, and is the proposed method of recharge supported by technical data that indicates those methods will be successful?

D. Specific benefits to critical DAC water issues

The project review process must consider if the project helps to address critical water supply and water quality needs of DACs within the IRWM region. CWC §10540.(c)(7) states that identifying and consideration of water-related needs of DACs in the area within the boundaries of a region is among the basic items an IRWM Plan must address. DAC projects may include work that leads to a formal project such as a needs assessment, initial engineering work (design or study) to define a project, or feasibility studies that may lead to a project. Projects that specifically address such needs should be promoted in the project selection process.

E. Specific benefits to critical water issues for Native American tribal communities

The project review process must consider if the project helps to address critical water supply and water quality needs of Native American tribal communities within the IRWM region. Such projects may include work that leads to a formal project such as a needs assessment, initial engineering work (design or study) to define a project, or feasibility studies that may lead to a project. Projects that specifically address such needs should be promoted in the project selection process.

F. Environmental Justice Considerations

As IRWM plans contain multiple projects that will affect stakeholders in the region, the project review process needs to include consideration of EJ concerns. EJ seeks to redress inequitable distribution of environmental burdens (i.e. pollution, industrial facilities) and access to environmental goods (i.e. clean water and air, parks, recreation, nutritious foods, etc.). EJ relies on willing awareness of impacts by project sponsors and participation in decision making by affected stakeholders. In terms of an IRWM effort, the engagement and participation of stakeholders including DACs in the decision making process can be a proactive step in understanding project impacts that can become EJ concerns. In the project review process, a project that has not been examined for EJ concerns, or a project that is discovered to have EJ concerns, should not be instantly dismissed from consideration. However, addressing the lack of EJ assessment or modifying the project to mitigate EJ concerns may allow the project to move forward.

G. Project Costs and Financing

Project costs need to be considered during the project review process. The basis for the project costs needs to be documented in the IRWM Plan. For example, a sewage treatment plant upgrade is based on a conceptual idea, feasibility study, partial design, etc. If a cost estimate has been prepared for the project, a link to that estimate needs to be included in the IRWM Plan. Discuss the funding sources for the project. Is it with a State grant funded program, through regional assessments, or another funding method?

H. Economic Feasibility

As part of the project review process, the economic feasibility of a project must be considered. DWR's "Economic Analysis Guidebook" (Guidebook), published in January 2008, outlines methods for economic analysis for water resources planning and can be downloaded from the link found in Appendix A.

A preliminary economic analysis must be included as part of the criteria in the project selection process based upon an original assessment of the proposed project or studies conducted within the past five years and updated to most current data available. Either a cost-effectiveness or benefit-cost analysis may be used for the preliminary assessment depending on the nature of the project. Both of these methods are outlined in Chapter 3 of the Guidebook. For example, a cost-effectiveness analysis may be preferable for habitat restoration projects for which it is difficult to assign monetary benefits. The chosen method of analysis must include the types of benefits and types of costs including capital costs, O&M costs, and potential adverse effects to others from the project, described in the Guidebook (See Guidebook pages 14 and 22).

Prior to submission of a suite of projects for grant funding, all proposed projects must have had a complete benefit-cost or cost-effectiveness analysis. Analysis period shall be 50 years and discount rate shall be 6 percent. Project ranking shall be adjusted based on the results of the benefit-cost or cost-effectiveness analyses.

I. Project Status

In reviewing projects for prioritization in the IRWM Plan, RWMG should consider the status of the project. Project status is equivalent to readiness to proceed. Readiness to proceed or project status is not necessarily a reason for project exclusion from an IRWM Plan. As the planning horizon for an IRWM Plan is 20-years, even a conceptual project should be considered as it may be projected to have benefits that would be worth realizing by developing the project or by leading towards an alternate, integrated, or modified project.

Project status may have to be reconsidered as implementation projects are matched with sources of funding. Funding sources may want projects completed within certain time limits. However, it is also true that some funding sources may cover some developmental phase of a project. RWMGs are encouraged to understand conditions of the specific funding sources they use so they can select appropriate projects tailored to a specific funding source.

J. Strategic considerations for IRWM Plan implementation

One of the advantages of IRWM planning is to use the regional perspective to leverage any efficiencies that might be gained by combining or modifying local projects into regional projects. In reviewing projects for inclusion in the IRWM Plan, the RWMG must consider a project's merit in light of strategic aspects of plan implementation such as:

- ↪ Purposefully restructuring or integrating projects
- ↪ Purposefully implementing a project as is
- ↪ Purposefully meeting project goals with an alternative project/modified project
- ↪ Plan objective priorities
- ↪ Purposefully implementing regional projects

Purposefully implementing projects with multi-benefits

Often times, an IRWM Plan in early development stages may focus on just getting project solicitations implemented and producing a project list. RWMGs are encouraged to go further and take a look at strategic considerations as there may be benefit for multiple stakeholders. This factor acknowledges that there may be benefit in integrating local projects or project goals in developing regional projects. There is also value in examining projects for potential integration efforts and then deciding that a project is best implemented as submitted to achieve plan implementation. DWR expects RWMGs to take advantage of regional planning and integrating projects where possible, and explaining when a single purpose project needs to be implemented in order to best implement an IRWM Plan.

K. Contribution of the project in adapting to the effects of climate change

In developing the picture of water management issues over the planning horizon, RWMGs must include potential effects of climate change on their region and consider if adaptations to their water management system are necessary. The standard on climate change contains more specific instructions assessing effects of climate change and adaptation to that change.

L. Contribution of the project in reducing GHG emissions as compared to project alternatives

The IRWM Plan must span at least a 20-year planning horizon. In the State's effort to adapt to climate change and reduce GHG emissions, the RWMG needs to consider a project's ability to help the IRWM region reduce GHG emissions as new projects are implemented. Considerations include energy efficiency and reduction of GHG emissions when choosing between project alternatives. See the guidance on Climate Change below, for more discussion on this topic.

Impacts and Benefits

The intent of this standard is to document potential impacts and benefits of implementation of the IRWM Plan and to clearly communicate those impacts and benefits to stakeholders. The IRWM Plan must contain a screening level discussion of the potential impacts and benefits of plan implementation. The screening level analysis should help any reader of the IRWM Plan begin to understand the potential impacts and benefits of implementing the IRWM Plan. This means the benefit/impact analysis does not have to be extensive or exhaustive.

In the development of an IRWM Plan, it is likely that participants understand the potential benefits to be gained by implementing a regional plan and some of the impacts that may occur. One assumption regarding this standard is that extensive impact and benefit analyses usually occur closer to project implementation than plan development. The list of implementation projects may change as the IRWM planning effort matures; consequently, it may be difficult if not impractical to provide an extensive analysis of impacts and benefits within the IRWM Plan.

The impact and benefit analysis in the IRWM Plan should also serve as a benchmark as the Plan is implemented and Plan performance is evaluated; that is, have the potential benefits been realized or have unanticipated impacts occurred? Since a simplified impact and benefit analysis is included in the IRWM Plan, the Plan must clearly state when more detailed project-specific impact and benefit analyses will occur and that the more detailed analysis will occur prior to any implementation activity.

Many IRWM Plans present and discuss tables of the potential impacts and benefits of Plan implementation. Often times the building blocks of this information are the potential impacts and benefits anticipated from implementing projects. RWMGs may want to organize potential impacts and benefits to emphasize different aspects of their Plan, such as regional benefits, local benefits, by resource management strategy, or objective.

In presenting impacts and benefits information in an IRWM Plan, RWMGs should consider using tables to convey the potential impacts and benefits in an organized, understandable fashion. An example of a table, which shows impacts and benefits specific to the IRWM Plan, is shown below:

Table 4 – Impacts and Benefits Example				
	Within IRWM Region		Interregional	
Program	Potential Impacts	Potential Benefits	Potential Impacts	Potential Benefits
Water Supply Enhancement				
Water Quality Improvement				
Groundwater Improvements				
Water Conservation and Reuse				
Watershed Rehabilitation				
Habitat Improvement				
Flood Management				

NOTE: Level of impacts or benefits can be discussed as primary and secondary, by qualitative indicators, using monetary values, or other methods to show relative degree of impact or benefit. Impacts and benefits to DAC and EJ concerns must be discussed.

In the example above, RMS, project types, objectives, or other similar categories that are named in the IRWM Plan could be used to replace “Program”. IRWM Plans have various approaches on how to discuss impacts and benefits. As a plan is implemented and Plan Performance data is gathered, the Impacts and Benefits section of the IRWM Plan must be reviewed and updated as part of the normal plan management activities (see Plan Performance). These updates should reflect changes to the Impacts and Benefits section from any data gathered, and any changes to the implementation projects listed in the IRWM Plan.

The following text provides examples of impacts and benefits for the programs used in the example table above.

WATER SUPPLY ENHANCEMENT

A program to increase water supply may include projects, such as:

- ↻ Rehabilitation of diversion structures
- ↻ Water supply pipelines and water systems
- ↻ Additional water system tie-ins/interconnections
- ↻ Construction of groundwater treatment and extraction facilities
- ↻ Conjunctive water management
- ↻ Aquifer storage and recovery
- ↻ New or upgrades to existing reservoirs
- ↻ Water storage facilities
- ↻ Production well construction

Possible impacts may include reduced in-stream flow, water quality degradation, habitat removal, species removal, flooding, loss of farmland, and construction related impacts. Some of the proposed projects may

have impacts on communities, including DACs. If so, these impacts need to be discussed. If there are any EJ impacts, they should be addressed as well. Water supply benefits may be characterized as increased water supply or range in water supply (i.e. acre-feet per year). Other anticipated benefits, such as improved water quality, increased recreational opportunities, decreased reliance on imported water, reduced groundwater overdraft, creation of wetlands and riparian habitat, and decreased operational costs.

WATER QUALITY IMPROVEMENT

A program to improve water quality may include projects, such as:

- ↪ Building or upgrading wastewater treatment plants/technology
- ↪ Conversion of septic tanks to a sewer system
- ↪ Construction of new and updating collection, sewer, and interceptor sewer facilities
- ↪ Capture and treatment of stormwater/urban runoff, including the construction of rain gardens
- ↪ Construction of wetlands for water quality treatment
- ↪ Contaminant removal
- ↪ Salinity management

Possible impacts may include construction related impacts including short-term, site-specific impacts related to site grading and construction, and long-term impacts associated with project operation. Construction-related impacts may include: traffic, noise, biological resources, water quality, public services and utilities, cultural resources, and aesthetics. Other impacts may include surface water and ocean habitat loss from new outflow locations, and waste discharge issues associated with brine management and brine disposal. Possible benefits from improved water quality projects may include increased water supply, improved aquatic and wetland species habitat and populations, increased cropland production, creation of wetlands and riparian habitat, improved recreation opportunities, and decreased treatment costs.

GROUNDWATER IMPROVEMENTS

Groundwater improvement programs may include projects to:

- ↪ Enhance conjunctive management and groundwater storage
- ↪ Capture and recharge Stormwater/Urban Runoff
- ↪ Install groundwater recovery wells
- ↪ Construct new and/or rehabilitate surface water recharge spreading grounds
- ↪ Perform aquifer storage and recovery
- ↪ Improve groundwater monitoring
- ↪ Conduct hydrogeologic investigations
- ↪ Model groundwater

Possible impacts may include construction related effects, changes in water quality, increased contaminant transport, increased pumping, and in-stream flow reduction. Possible benefits may include improved flood protection, decreased reliance on imported water, reduced surface water use, reduced pumping costs, and decreased or prevention of groundwater overdraft.

WATER CONSERVATION AND REUSE

Water conservation and reuse programs may include projects to:

- ↪ Upgrade wastewater treatment facilities to recycle water

- ↪ Landowner and homeowner incentive programs, such as rebate programs
- ↪ Improve agricultural drainage water reuse or management
- ↪ Construct recycled water systems and pipelines
- ↪ Improve urban landscape water use efficiency

Possible impacts may include construction related effects, loss of drainage flow to downstream water users, in-stream flow loss, groundwater and surface water quality effects associated with recycled water use, and reduced groundwater recharge. Benefits could be increased water saving, efficient reuse of wastewater, costs savings from reduced purchases of imported water, and saving construction of water storage facilities, and increased nutrient levels for plant and crop use from use of reclaimed wastewater.

WATERSHED REHABILITATION

A watershed rehabilitation program may include projects to:

- ↪ Decommission abandoned roads
- ↪ Enhance unimproved and county road systems for erosion control
- ↪ Restore sloughs and/or wetlands
- ↪ Manage Stormwater/Urban Runoff
- ↪ Conduct channel and riparian restoration and upland source control
- ↪ Conduct stream stabilization and other sediment load reduction projects
- ↪ Implement BMPs, including forestry BMPs
- ↪ Reduce non-point source pollution

Possible impacts could be introduction of non-native plants for erosion control and temporary increased turbidity in streams due to construction or related activities, including revegetation and forest regeneration activities and prescribed fires (to reduce undesirable trees and vegetation, etc.). Benefits may include long-term sediment reduction and temperature improvements, reduced surface water nutrient and bacteria concentrations (improved water supply quality), improved fish and wildlife habitat and passage, and enhanced public safety and recreational opportunities.

HABITAT IMPROVEMENT

A habitat improvement program may include projects to:

- ↪ Augment stream flows
- ↪ Preserve existing habitat
- ↪ Remove invasive, non-native species
- ↪ Restore wetlands and upland habitat
- ↪ Protect ecological reserves

Possible impacts could include short-term, site-specific impacts related to site grading and construction, loss of agricultural land protection and urban uses and associate local revenue. Benefits may be reduced surface water nutrient and bacteria concentrations (improved water supply quality), enhanced fish habitat, increased opportunities for recreational hunting and viewing, increased numbers of native species, reduced flood risks, and education opportunities.

FLOOD MANAGEMENT

Flood management programs may include projects to:

- ↪ Improve levees systems (i.e. floodwalls, raising levee heights, setback levees, etc)
- ↪ Preserve floodplains
- ↪ Development drainage master plans
- ↪ Remove invasive species from stream channels to improve surface flow
- ↪ Improve stormwater collection, diversion, or capture
- ↪ Improve infrastructure, including weir upgrades

Impacts may include short-term, site-specific impacts related to construction, land use restrictions, development moratoriums (with potential economic effects), and loss of riparian and/or wetland acreage. Benefits could include increased aquifer recharge, runoff reduction, improved surface water quality, natural resources preservation and restoration, reduced risk to life and property, and decreased flood insurance costs.

Plan Performance and Monitoring

The intent of the Plan Performance and Monitoring Standard is to ensure:

- ↪ The RWMG is efficiently making progress towards meeting the objectives in the IRWM Plan.
- ↪ The RWMG is implementing projects listed in the IRWM Plan.
- ↪ Each project in the IRWM Plan is monitored to comply with all applicable rules, laws, and permit requirements.

This standard is consistent with the PRC §75026.(a), which states that IRWM Plans “shall include performance measures and monitoring to document progress toward meeting plan objectives.”

Monitoring performance should be closely related to the implementation of projects. This discussion is written assuming the details of projects will be identified during planning, design, plans and specifications stages of development. Details related to implementation of specific projects in the IRWM Plan are not necessary. Rather, the IRWM Plan needs to contain the criteria that will be used to evaluate the progress to meet plan objectives and the process that will link project completion to IRWM Plan implementation.

To guide the RWMG in implementing IRWM projects, the IRWM Plan needs to:

- ↪ Contain an explanation of whom or what group within the RWMG will be responsible for IRWM implementation evaluation.
- ↪ List the frequency of evaluating the RWMG's performance at implementing projects in the IRWM Plan (monthly, semi-annual, yearly, etc).
- ↪ Explain how IRWM implementation will be tracked with a Data Management System (DMS), and who will be responsible for maintaining the DMS.
- ↪ Discuss how findings or “lessons learned” from project-specific monitoring efforts will be used to improve the RWMG's ability to implement future projects in the IRWM Plan. For example, after review of the RWMG performance measures, the RWMG may need to amend the resource management strategies or the actual IRWM objectives to account for new scientific data, and regional changes in conditions that can alter baseline assumptions or understanding of water management issues discussed in the IRWM Plan. Any amendments to the resource management strategies or objectives will need to adequately identify water demand, water supply, water quality protections, and environmental stewardship actions that provide long-term, reliable, and high-quality water supply; including water supply to DACs. The standards and guidance for amendments to the IRWM Plan are contained in Governance Standard.

- ↩ Identify who has the primary responsibility for development of the project-specific monitoring plans and who is responsible for project-specific monitoring activities.
- ↩ Specify the stage of project development that a project-specific monitoring plan will be prepared
- ↩ Provide an explanation of typically required contents of a project-specific monitoring plan including, but not limited to, the following:
 - 1) Clearly and concisely (in a table format) describe what is being monitored for each project. Examples include monitoring for water quality, water depth, flood frequency, and effects the project may have on habitat or particular species (before and after construction).
 - 2) Measures to remedy or react to problems encountered during monitoring. An example would be to coordinate with the Department of Fish and Game if a species or its habitat is adversely impacted during construction or after implementation of a project.
 - 3) Location of monitoring
 - 4) Monitoring frequency
 - 5) Monitoring protocols/methodologies, including who will perform the monitoring
 - 6) DMS or procedures to keep track of what is monitored. Each project's monitoring plan will also need to address how the data collected will be or can be incorporated into Statewide databases. Note that standards and guidance related to the integration of data into Statewide databases is included in Data Management Standard.
 - 7) Procedures to ensure the monitoring schedule is maintained and that adequate resources (funding) are available to maintain monitoring of the project throughout the scheduled monitoring timeframe

Data Management

The intent of the Data Management Standard is to ensure efficient use of available data, stakeholder access to data, and to ensure the data generated by IRWM implementation activities can be integrated into existing State databases.

As specified in Integration Standard, IRWM Plans should contain common protocols that gather data in a consistent manner, and processes for data and information sharing that assist all IRWM stakeholders in their local efforts, as well as regional efforts. Data integration is best achieved through the use of common and compatible methods for data gathering, analysis, monitoring, and reporting systems used by members of the RWMG. The data management description in the IRWM Plan should be of sufficient detail so that it is clear to stakeholders how data is collected, validated, and shared in the region. At a minimum, the data management description in the IRWM Plan should include the following:

- ↩ A brief overview of the data needs within the IRWM region
- ↩ A description of typical data collection techniques
- ↩ A description of how stakeholders contribute data to a DMS
- ↩ The entity responsible for maintaining data in the DMS
- ↩ A description of the validation or quality assurance/quality control measures that will be implemented by the RWMG for data generated and submitted for inclusion into the DMS
- ↩ An explanation of how data collected for IRWM project implementation will be transferred or shared between members of the RWMG and other interested parties throughout the IRWM region, including local, State, and federal agencies
- ↩ An explanation of how the DMS supports the RWMG's efforts to share collected data

- ↪ An outline of how the data saved in the DMS will be distributed and remain compatible with State databases including SWAMP, Water Data Library (WDL), Groundwater Ambient Monitoring and Assessment (GAMA) program, California Environmental Information Catalog (CEIC), and the California Environmental Resources Evaluation System (CERES).

The following section provides specific guidance on a variety of DMSs maintained by the State. These materials are not exhaustive, but are intended to provide RWMGs with general direction and useful web links for finding additional information on the subject of integrating data into State databases. In general, State databases have specific requirements for data submittal (format and procedural) that will need to be followed. RWMGs need to consider what State databases they may be contributing data to, because the legislation supporting a given grant program may specify a State database for data submittal.

For geospatial data collected by RWMG members, data maintained by the region should be accompanied by applicable metadata that describes each data set (including projection and datum information, dataset description, data lineage, etc.).

Water Data Library – DWR maintains the State’s WDL which stores data from various monitoring stations, including groundwater level wells, water quality stations, surface water stage and flow sites, rainfall/climate observers, and water well logs. Information regarding the WDL can be found at: <http://wdl.water.ca.gov/>.

Surface Water Ambient Monitoring Program – The SWRCB created the SWAMP. SWAMP has developed standards required for any group collecting or monitoring surface water quality data, using funds from Propositions 13, 40, 50, and 84. More information on the SWAMP Program is available at: http://www.swrcb.ca.gov/water_issues/programs/swamp

Groundwater Ambient Monitoring and Assessment program – GAMA provides a comprehensive assessment of water quality in water wells throughout the State. GAMA has two main components, the California Aquifer Susceptibility (CAS) assessment and the Voluntary Domestic Well Assessment Project. The CAS combines age dating of water and sampling for low-level volatile organic compounds to assess the relative susceptibility of public supply wells throughout the State. The Voluntary Domestic Well Assessment Project provides sampling of water quality in domestic wells, which will assist in assessing the relative susceptibility of California’s groundwater to contaminants. Because water quality in individual domestic wells is unregulated, the program is voluntary and will focus, as resources permit, on specific areas of the State. Constituents to be analyzed include nitrate, total and fecal coliform bacteria, methyl tert-butyl ether, and minerals. Additional information on the GAMA program is available at: <http://www.swrcb.ca.gov/gama>

California Environmental Information Catalog – The California Natural Resources Agency maintains the CEIC, which is a statewide metadata clearinghouse for geospatial data. The CEIC is accessible at: <http://gis.ca.gov/catalog/>. The online directory is used for reporting and discovery of information resources for California. Participants include cities, counties, utilities, State and federal agencies, private businesses, and academic institutions that have spatial and other types of data resources.

Integrated Water Resources Information System – DWR maintains the Integrated Water Resources Information System (IWRIS), which is a data management tool for water resources data and not a database. IWRIS is a web based GIS application that allows entities to access, integrate, query, and visualize multiple sets of data simultaneously. Information on IWRIS is available at: <http://www.water.ca.gov/iwris/>

California Environmental Resources Evaluation System – CERES is an information system developed by the California Natural Resources Agency to facilitate access to a variety of electronic data describing California’s rich and diverse environments. The goal of CERES is to improve environmental analysis and planning by integrating natural and cultural resource information from multiple contributors and by making it available and useful to a wide variety of users.

Finance

The intent of the Finance Standard is to ensure that financing of the IRWM Plan has been considered at a programmatic level by the RWMG; and that a snapshot of financing is documented for stakeholders. From the Proposition 50 IRWM Grant Program, it is clear that the need for funding substantially exceeds the grant funding available through recent bond measures. Most of the cost of developing, maintaining, and implementing an IRWM Plan must be borne by local entities with State grant funding providing a necessary, but relatively small, supplement in funds. With potentially multiple sources of funding being accessed to formulate, maintain, and implement an IRWM Plan, documentation of how the funding pieces fit together is necessary for the RWMG and its stakeholders to understand how the plan will be implemented.

SOURCES OF FUNDING

The IRWM Plan must contain the following items:

- ↪ A program-level description of the sources of funding, which will be utilized for the development and ongoing funding of the IRWM Plan.
- ↪ The potential funding sources for projects and programs that implement the IRWM Plan.

In addition to demonstrating potential funding for project construction, the IRWM Plan should also contain a discussion of the potential sources of funding for project O&M.

It may be useful for the IRWM Plan to present financing options in a tabular format. The table(s) should list sources of funding that the RWMG has obtained or may pursue to finance the IRWM Plan, the associated implementation projects, and O&M costs. Sources of funding may include, but are not limited to:

- ↪ Ratepayers
- ↪ Operating funds
- ↪ Water Enterprise funds
- ↪ Special taxes, assessments, and fees
- ↪ State or federal grants and loans
- ↪ Private loans
- ↪ Local bonds

CERTAINTY OF FUNDING

The table should also include an indication of the certainty and longevity of the funding sources. For example, if the RWMG indicates that it is targeting a State grant program to fund an implementation project, the RWMG should discuss the following items:

- ↪ Whether the funding has been secured via grant award with the State and the status of associated grant agreement.
- ↪ Whether an application for funding has or will be submitted at a future date.

The Table 5 below is one option for presenting information regarding IRWM Plan financing.

Table 5 – IRWM Plan Financing Example

Activity Description	Approx Total Cost	Funding Source & % of Total Cost	Funding: Certainty/Longevity	O&M Finance Source	O&M Finance Certainty
IRWM planning efforts	\$850,000	Local Partners – MOU, 100%	Contingent on continued success in grant programs. Secure through fall, 2011.	NA	NA
Implementation Project #1	\$10M	XY water agency, 50%	Secure, part of XY agency current capital improvement budget.	XY water agency budget	Secure- 2011 O&M budget.
		Grant-Prop 84, 30%	Application will be submitted FY 11/12	NA	NA
		Federal Grant, 20%	Tentative award, contingent on State funding.	NA	NA
Implementation Project #2	\$250,000	State Grant, DAC assistance, DWR, 100%	Application submitted, in review.	Agency YY, operational budget	Secure, rate increase covers O&M costs

The RWMGs may condense or expand activity descriptions as they see fit. As an example, it may be helpful for an RWMG to break the costs of the functional effort into categories if those categories have separate funding sources, or present only the priority projects that are well defined.

Although a table listing the information described may satisfy the standard, the RWMGs should include any additional explanatory text that would help a stakeholder understand how the IRWM Plan would be financed.

The list described in the table above should also contain information on how project O&M costs will be paid and the certainty of O&M funding. O&M costs are not eligible costs for grant reimbursement by State grant programs.

The purpose of this standard is not to document that all funding has been fully secured. DWR wants to see that the RWMG has thought through financing of the Plan and implementation projects and programs even though substantial uncertainty regarding funding may exist. It is recommended that RWMGs do not overly rely on grant awards, but look at other forms of consistent, secure, long-term sources of funding, such as general funds or rate-based funds.

Technical Analysis

The intent of this standard is to document that the IRWM Plan is based on sound technical information, analyses, and methods. The IRWM planning horizon is for a minimum of 20 years. The objectives, RMS, and implementation projects contained in the IRWM Plan are based on the water management needs forecasted within that planning horizon. The Technical Analysis Standard requires a discussion in the IRWM Plan that explains the technical information, methods, and analyses used by the RWMG to understand the water management needs over the planning horizon.

TECHNICAL INFORMATION

Provide a brief description of the technical information sources and/or data sets used to develop the water management needs in the IRWM Plan. Explain why this technical information is representative or adequate

for developing the IRWM Plan. For example, how the technical information represents the current conditions, the scope of historic highs and lows, or the best forecast for future years, etc.

Data sets may be from studies, historical records, monitoring activities, or investigations. It is not necessary to include the technical information and literature reviewed in the IRWM Plan development, but the Plan should provide references and brief descriptions.

The IRWM Plan should identify data gaps where additional monitoring or studies are needed, and should also describe how the Plan will help bridge these data gaps.

TECHNICAL ANALYSES AND METHODS

Provide a description of studies, models, or other technical methodologies used to analyze the technical information and data sets. Explain how such studies, models, or technical methodologies aid the RWMG's and stakeholders' understanding of the water management picture for the period of the planning horizon.

In describing technical analyses and studies, it is not necessary to have an exhaustive discussion of each type of analysis and study performed, nor all copies of raw input and output files, nor inclusion of every study used. Provide summary information, such as what the particular technical analysis does; what are the outcomes; what is the certainty or uncertainty involved in the analysis; or how the outcomes are applied to the planning horizon.

Examples of possible studies/data sets are shown in Table 4. The listed items in the table are examples only. For a specific IRWM Plan, there are likely to be more items to document. Any referenced data should be made available to the public upon request.

Table 6 – Possible Studies/Data Sets

Data or Study	Analysis Method	Results/Derived Information	Use in IRWM Plan	Reference or Source
Population Growth Study	Statistical Analysis	Future Population	Used to calculate future water demand.	Census Bureau
Surface Storage Capacity Study	HEC-ResSim	Current Reservoir Capacity	Used to calculate current surface capacity.	Army Corps of Engineers
Floodplain Analysis	HEC-RAS, HEC-FDA	Identify flood areas and potential damage	Used to prioritize levee repairs.	Army Corps of Engineers
Water Use Study	Review of existing records	Current water use	Used to evaluate current water supply system and as basis for future water supply needs.	Local Water Purveyor
Additional studies to be added as necessary:				

Relation to Local Water Planning

The intent of the Relation to Local Water Planning Standard is to ensure the IRWM Plan is congruent with local plans, and that the Plan includes current, relevant elements of local water planning and water management issues common to multiple local entities in the Region. Regional planning does not replace or supersede local planning, rather regional planning should appropriately incorporate local planning elements. Per CWC §10540(b), the IRWM Plan must describe how the RWMG has or will coordinate its water management planning activities to address or incorporate all or part of the following actions of its members:

- ↪ Groundwater Management
- ↪ Urban Water Management

- ↪ Water Supply Assessments
- ↪ Agricultural Water Management
- ↪ City and County General Planning
- ↪ Other resource management planning including:
 - ◆ Flood Protection
 - ◆ Watershed Management
 - ◆ Multipurpose Program Planning

Other resource planning efforts should also be considered including:

- ↪ Low Impact Development
- ↪ Stormwater Management
- ↪ Salt and Salinity Management
- ↪ Emergency Response, Disaster Plans

When describing how the local plan relates to the IRWM Plan and the dynamics of that relationship include the following:

- ◆ Jurisdiction of local plans and how they apply or not to the IRWM Plan
- ◆ When the local plan is updated and how/when any updates will be considered in the IRWM Plan
- ◆ How regional planning efforts may feed back to local planning efforts
- ◆ If inconsistencies between local and regional plans are identified, how those might be resolved

For example, a local GWMP may set extraction limits for a specific groundwater basin. The IRWM Plan should be consistent with those limits. Are there other groundwater basins in the region with or without GWMPs? If so, how does the IRWM Plan coordinate with those plans or lack of plans, and what does that mean to those adopting and implementing the IRWM Plan?

Therefore, the relationship between local plans and the IRWM Plan must consider and incorporate:

- ↪ Consistency and coordination regarding local plan content and the IRWM Plan content
- ↪ Relevant, accurate, and current local plan information and references upon which the IRWM Plan is based
- ↪ Water management issues and climate change adaptation and mitigation strategies from local plans into the IRWM Plan
- ↪ Limits, levels, management tools or criteria relevant to water management in local plans that are applicable to the IRWM Plan

Effective, integrated, and consistent water planning and management is imperative both now and in the future, as California faces increasing challenges in managing its water supply due to climate change, increasing water demand as California's population increases, and uncertainty regarding the availability of water from the Sacramento-San Joaquin Delta and other sources.

Relation to Local Land Use Planning

The intent of the Relation to Land Use Planning Standard is to require an exchange of knowledge and expertise between land use and water resource managers; examine how RWMGs and land use planning agencies currently communicate; and identify how to improve planning efforts between the RWMGs and land use planning agencies.

A goal of CWP Update 2009 is to ensure water managers and land use planners make informed, collaborative water management decisions on a Statewide basis. For land use planners and water managers, meeting this goal will require improved, effective coordination among all parties at the federal, State, and local levels with attention on the RMS identified in CWP Update 2009.

Every city and county in California must adopt a comprehensive long-term General Plan in accordance with Section 65300 of the California Government Code. There are seven required elements of a General Plan including Land Use, Circulation, Housing, Conservation, Open Space, Noise, and Safety, which provide a broad overview of the issues within a jurisdiction. Water-related supply and treatment issues are included in the Conservation element. Policies that must be addressed in the Conservation element include the following:

- ↪ SB 221 (Bus. and Prof. Code, §11010 as amended; Gov. Code, §65867.5 as amended; Gov. Code, §66455.3 and 66473.7) prohibits approval of subdivisions consisting of more than 500 dwelling units unless there is verification of sufficient water supplies for the project from the applicable water supplier(s). This requirement also applies to increases of 10 percent or more of service connections for public water systems with less than 500 service connections.
- ↪ SB 610 (CWC §10631, 10656, 10910, 10911, 10912, and 10915 as amended; PRC §21151.9 as amended) and AB 901 (CWC §10610.2 and 10631 as amended; CWC §10634) make changes to the Urban Water Management Planning Act to require additional information in UWMPs if groundwater is identified as a source available to the supplier. A key provision in SB 610 requires that any project subject to the CEQA and supplied with water from a public water system be provided a water supply assessment, except as specified in the law.
- ↪ State of California General Plan Guidelines (Governor's Office of Planning and Research (OPR) 2003) recommends facilitating SB 610 by having strong water elements in local general plans that incorporate coordination between the land use agency and the water supply agency.

Even with such advances in policy, efforts to link land use decisions and water management decisions remains an area of challenge. Land use decisions and water management decisions are often under the purview of different agencies, yet the resources each agency manages are inextricably linked. Often, the relationship among these agencies is characterized as reactive in that one agency must act to accommodate a decision the other agency has made. Early communication is vital in changing the relationship from reactive to proactive.

IRWM AND THE LINK BETWEEN WATER MANAGEMENT AND LAND-USE PLANNING

IRWM plans seek to solve regional water management issues through diversified water management portfolios and early water management input into and coordination with those responsible for making land use decisions and implementing land use changes. This relationship can significantly influence how both water management decisions and land use decisions are made.

Consider the opportunities RWMGs may provide to land use planners for input. Some instances where this may occur could be:

- ↪ Floodplain management
- ↪ Flood control planning
- ↪ Groundwater recharge and conjunctive water use
- ↪ Treatment and conveyance facilities

- ↪ Stormwater and runoff management
- ↪ Water conservation efforts
- ↪ Watershed management and restoration

Alternately, consider opportunities land use planners may utilize to provide input to RWMGs, such as:

- ↪ Municipal landscaping programs
- ↪ Public access and recreational area management
- ↪ Changes in land use that affect water resources
- ↪ General plan updates and long-term planning;
- ↪ Planning review
- ↪ Development review
- ↪ Water supply for public safety and emergency planning purposes
- ↪ Habitat management

These are merely a few, general examples where coordination among land use and RWMGs could result in more efficient IRWM planning and implementation. Since the IRWM planning effort often encompasses large regions and has an increased probability of including larger more costly projects, the importance of open lines of communication between land use planners and RWMGs is imperative to a successful IRWM effort.

DESCRIBING THE CURRENT RELATIONSHIP BETWEEN LOCAL LAND USE PLANNING ENTITIES AND WATER MANAGEMENT ENTITIES

The IRWM Plan must contain a description of how water management input is considered in land use decisions, and vice-versa, in the Region. When describing the relationship, include the following considerations:

- ↪ How land use planning entities and RWMGs interact. Describe any existing forums, policies, projects, etc. that illustrate this relationship. These interactions do not have to be specifically related to the IRWM, but in the description, clearly explain if the meetings or forums are part of IRWM meetings or part of other planning (land use) efforts within the Region. For example, do water managers and land use planners interact in a forum, such as planning commission meetings?
- ↪ Do water managers provide input at county supervisor or city council meetings regarding project or land use decisions that may impact water supply or water quality?
- ↪ Are land use planners a part of the IRWM governance structure or are they included on the RWMG's project selection committee? Do both groups openly exchange information pertinent to the other?

Characterizing the current land use-water use planning relationship in the IRWM Region will help illustrate the context in which IRWM activities are planned and implemented and where communication and coordination can be extended or improved.

DESCRIBING FUTURE EFFORTS IN THE PROCESS OF ESTABLISHING A PROACTIVE RELATIONSHIP BETWEEN LAND USE PLANNING AND WATER MANAGEMENT

With the current relationship identified, determine what opportunities exist in the future for a better working relationship between water managers and land use decision makers. Consider how the IRWM Plan could facilitate improvements to the relationship described in the section above. Some points to consider are:

- ↪ Internal planning and coordination changes that would need to occur within RWMGs.

- ↪ Improvements which could be made to the mechanisms for interacting with the land use planning community.
- ↪ Possible avenues for the RWMG to facilitate internal changes within the land use planning community.
- ↪ Future forums, policies, and projects that could improve water management efforts in IRWM Regions. For example, regular RWMG meetings between water managers and land use planners to discuss regional water issues and concerns.
- ↪ Water management projects that meet various water supply and water quality objectives while still being compatible with existing and planned future land use designations, and providing the type of projects the IRWM Program desires.
- ↪ The Ahwahnee Principles for Resource Efficient Land Use, developed by water resource policy and management experts, advocate a more proactive relationship between land use and water management. The first implementation principal of the Ahwahnee Principles is early consultation with water managers on land use decisions (http://www.lgc.org/ahwahnee/h2o_principles.html).
- ↪ How improved interaction between water managers and land use planners can advance the implementation of the IRWM Plan.
- ↪ Utilizing current land use and water issues and identify planning strategies which may be implemented or explored in the future through the IRWM process.

Focusing on and acting in a purposeful, collaborative, and informed manner regarding regional land use planning and water management will assist California in successfully managing multiple water demands throughout the State, as described in CWP Update 2009, adapting water management systems in regions to climate change, and potentially offsetting climate change impacts to water supply in California.

Stakeholder Involvement

The intent of the Stakeholder Involvement Standard is to ensure the RWMGs give the opportunity to all stakeholders to actively participate in the IRWM decision making process on an on-going basis.

Changes to the CWC have expanded the definition of a RWMG. CWC §10539 defines a RWMG as:

“a group in which three or more local agencies, at least two of which have statutory authority over water supply or water management, as well as those other persons who may be necessary for development and implementation of a [IRWM] Plan...”

This change in the CWC recognizes the collaborative nature of IRWM planning. IRWM Plans rely on stakeholder involvement to gather regional information and make regional decisions. It is important for RWMGs to pursue stakeholder involvement and use processes that support stakeholder inclusion and active participation.

The opportunity for a stakeholder to become involved is not limited to the beginning stages of plan development. A stakeholder may become involved later as their awareness of IRWM increases or new issues or concerns develop. Stakeholders cannot be forced to participate, but the IRWM Plan must contain and the RWMG must implement protocols to continually invite and involve stakeholders in the process. “Continually invite” does not mean that the RWMG must engage in a continuous, intense stakeholder solicitation campaign. DWR’s intent is that “continually invite” means that an RWMG adopts an open-door stance and has the processes in place so that any person can contact the RWMG and the RWMG will orient them to the various IRWM processes, encourage them to access information about the RWMG and its IRWM Plan, and inform them how they can participate.

STAKEHOLDERS COMPOSITION

The IRWM Plan should contain a listing of the stakeholders participating in the planning effort as documentation that the RWMG is a collaborative effort with participation from varied stakeholders. The stakeholder group should reflect a broad cross-section of stakeholders. CWC §10541(g) identifies the following as potential stakeholders in a region:

- ↪ Wholesale and retail water purveyors
- ↪ Wastewater agencies
- ↪ Flood control agencies
- ↪ Municipal and county governments and special districts
- ↪ Electrical corporations
- ↪ Native American tribes
- ↪ Self-supplied water users
- ↪ Environmental stewardship organizations
- ↪ Community organizations
- ↪ Industry organizations
- ↪ State, federal, and regional agencies or universities
- ↪ DAC members
- ↪ Any other interested group appropriate to the region

PROCESS USED TO IDENTIFY STAKEHOLDERS

The IRWM Plan must contain processes that provide outreach and an opportunity to participate in plan development and implementation. In order to meet this criterion, the IRWM Plan must have a means to identify potential stakeholders; share information; and invite and involve stakeholders in the IRWM process. While the processes used likely perform a combination of those functions in a single process, we discuss each function separately in these guidelines. Processes may be contained in a variety of sections in an IRWM Plan and do not have to exist in single separate section of the Plan. These processes can exist in a separate stakeholder outreach plan (outside of the IRWM Plan), but the IRWM Plan should contain a reference to the location of these protocols.

There are no DWR supplied protocols as each IRWM region will have differing relationships among the various stakeholders. However, the following guidance is provided in developing protocols specific to your IRWM region. When developing processes for identifying stakeholders, consideration must be given to not only the easily identified stakeholder, but also the less obvious stakeholder. Often, an initial list of stakeholders may unintentionally omit important segments of the IRWM region. These include stakeholder groups who are not usually well represented in the process of planning or project development. Multiple avenues of identifying stakeholders are needed in any IRWM Plan. Examples of processes used to identify stakeholders include, but should not be limited to the following items:

- ↪ Open announcements of IRWM meetings that invite new stakeholders (self identification)
- ↪ Recommendation of additional stakeholders from those already involved in the IRWM Plan
- ↪ Identification of stakeholders through water management issues in the region
- ↪ Targeted outreach to underrepresented groups

DISADVANTAGE COMMUNITIES

Multiple definitions of a DAC exist in California statutes. For the purposes of Proposition 84 funding, the PRC §75005.(g) defined a DAC as “a community with a median household income (MHI) less than 80% of the Statewide average.” There is a financial opportunity for most RWMGs to seek out DACs in their region, as most State grants either give special consideration or preferences for projects that serve DACs, or have funding percentages set-aside for projects that support DACs. There may be some regions, where there will be very few, if any, communities that meet the statutory definition of a DAC. However, even in such regions there will be communities that are well below the MHI for the region, and they should be specifically invited to participate in the IRWM planning and implementation process. The IRWM Plan should discuss how DACs in the region have been identified and what efforts have been/will be taken to include them in the RWMG.

TECHNOLOGY AND INFORMATION ACCESS

The processes that invite, inform, and seek to involve stakeholders in IRWM activities, must account for barriers to identified stakeholder participation. In this age of technology and information accessibility, we often unintentionally believe that all segments of our society have uniform access to all modern conveniences. When communication methods such as email or web postings are used, we often assume everyone has received and understood the invitation or the transfer of information. Particularly, when a RWMG has identified an often commonly overlooked group of stakeholders, extra efforts may be required to invite, inform, and involve stakeholders who may have different needs and perspectives than the majority. Those extra efforts may consist of special considerations such as access to public transportation when determining meeting places; shifting times of meetings so certain stakeholder groups can attend; or translation services, including telecommunications device for the deaf (TDD/TTY) services. Such outreach techniques should be part of the IRWM Plan’s written stakeholder involvement processes. Processes that invite, inform, and involve stakeholders should also consider that not all stakeholders will participate in the development of the IRWM Plan. Processes should include ways to orient and involve stakeholders whenever they approach the RWMG. This may be as simple as an available phone number and contact person that people new to the IRWM can call.

DECISION MAKING PROCESS

Part of involving stakeholders in the IRWM process is making clear how someone can participate. As such, the IRWM Plan must contain clear description of the following:

- ↳ Decision making processes
- ↳ The groups or committees involved
- ↳ The constitution of those groups
- ↳ The opportunities to contribute to those groups or the decision making process

From reading the IRWM Plan sections regarding decision processes, a stakeholder should understand the decision process, know how they can give input to the process, know if they can serve on committees or groups, and know who they should contact should they have questions about the process or involvement in the process. The IRWM Plan can include diagrams or graphics as necessary to illustrate the process. For more information regarding the decision making process to be included in an IRWM Plan, refer to the Governance Standard.

INVOLVING STAKEHOLDERS

The IRWM Plan must contain a discussion regarding how the stakeholders necessary to meet Plan objectives are either involved in Plan activities or are being invited to participate in Plan activities. This discussion is meant to inform readers of how input from a broad spectrum of stakeholders is necessary for effective plan implementation. There may be stakeholders that are not currently active in the planning effort, but whose input would increase the effectiveness of the IRWM Plan in meeting its objectives. Discuss what mechanisms

the Plan includes that describe how stakeholders not currently involved in the Plan will be invited to participate. This discussion would likely be inserted in the section of the IRWM Plan pertaining to objectives or stakeholder outreach. DWR is interested in seeing that RWMGs utilize a broad perspective and that they are aware of stakeholders who are not currently active, but whose input would benefit attainment of Plan goals. Access to Plan participation and involvement is not to be based on an individual's or group's ability to pay.

For more information on stakeholder involvement, refer to the following links:

<http://epa.gov/nps/toolbox/print/stakeholderguide.pdf>

dhs.wi.gov/managedLTC/grantees/pdf/info1stakeholder.pdf

<http://coastalsmartgrowth.noaa.gov/elements/encourage.html>

<http://www.uap.vt.edu/cdrom/tools/tools2.htm>

Coordination

The intent of the Coordination Standard is to ensure the following items:

- ↪ That a RWMG coordinates its activities with local agencies and stakeholders to avoid conflict within the region and to best utilize resources.
- ↪ That RWMGs are aware of adjacent planning efforts and are coordinating with adjacent RWMGs
- ↪ That the RWMGs are aware of State, federal and local agency resources and roles in the implementation of their plans and projects.

The IRWM Plan must identify a process for coordination of projects and activities and with local participants and stakeholders. The IRWM Plan must also discuss the various agencies and adjacent IRWM efforts identified for coordination. Through coordination among local agencies and between IRWM regions, IRWM efforts may reduce redundant actions; identify opportunities for cooperative projects; or discover that adjustments are needed in IRWM boundaries. Although the degree of coordination may vary among various RWMGs, DWR does expect that each RWMG have an understanding of the neighboring IRWM Plans and the way their management issues are similar or different. DWR also expects that the RWMG and project proponent's relationships be well enough established to take advantage of any cooperative project opportunities.

COORDINATION OF ACTIVITIES WITHIN AN IRWM REGION

The IRWM Plan must discuss the process by which a RWMG's local project proponents and stakeholders can coordinate their IRWM related activities and efforts. This process could include mechanisms such as the posting of proposed projects and stakeholder meetings on a website, a portion of every stakeholder meeting held by the RWMG set aside to discuss upcoming proposed projects and activities of interest to stakeholders, or the development of a team within the RWMG who would be responsible for bringing together local agencies and stakeholders groups in a setting where their projects and activities could be discussed. In doing so, opportunities for combining activities or eliminating redundant or overlapping efforts could be realized.

IDENTIFICATION AND COORDINATION WITH NEIGHBORING IRWM REGIONS

The IRWM Plan must identify neighboring IRWM efforts and describe the coordination between the various planning efforts. Although adjacent RWMGs may function independently, coordination is still essential. If there are no adjacent IRWM regions bordering the IRWM region, then the IRWM Plan should indicate such. In the IRWM Plan, submit a map showing the IRWM region and any adjacent IRWM regions. Describe how the adjacent IRWM regions have similar and different water management issues from your own. Describe how your RWMG coordinates with adjacent RWMGs. Additionally, discuss any joint project opportunities

and/or conflicts. If water management issues are similar to an adjacent IRWM region, explain if any discussions have taken place or are planned to consider consolidating into a single, larger, more regional IRWM region.

COORDINATION WITH AGENCIES

The IRWM Plan must contain a discussion of State, federal, and local agencies important to the development of the IRWM Plan and implementation of projects. Coordination with State, federal, or local agencies for implementation of projects may include, but is not limited to the following:

- ↪ State agencies, such as California Environmental Protection Agency (CalEPA), DWR, Department of Fish and Game, SWRCB, RWQCBs, California Coastal Commission, and the Department of Public Health.
- ↪ Federal agencies, such as U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, U.S. Bureau of Reclamation, and the U.S. Environmental Protection Agency.
- ↪ Local agencies, such as county flood control districts, public works departments, and environmental health departments.

Climate Change

California is already seeing the effects of climate change on hydrology (snowpack, river flows, storm intensity, temperature, winds, and sea levels). Planning for and adapting to these changes, particularly their impacts on public safety, ecosystem, and long-term water supply reliability, will be among the most significant challenges facing water and flood managers this century.

By design, IRWM planning efforts are collaborative and include many entities dealing with water management. These aspects make IRWM a good platform for addressing broad-based concerns like climate change where multiple facets of water management are affected.

The intent of the Climate Change Standard is to ensure that IRWM Plans, through existing plan standards, describe, consider, and address the effects of climate change on their regions and disclose, consider, and reduce when possible GHG emissions when developing and implementing projects. Climate change is a complex issue, however this guidance is meant to help RWMGs integrate climate change considerations into their existing IRWM planning process.

LEGISLATIVE AND POLICY CONTEXT

While there are numerous pieces of policy and legislation dealing with climate change, three pieces are important regarding the State's response to climate change, including how IRWM planning efforts analyze climate change on a project level.

- ↪ Executive Order (EO) S-3-05 and the California Global Warming Solutions Act of 2006 (AB 32; amending California Health and Safety Code Division 25.5, §38500, *et seq.*) lay the foundation for California's response to climate change.
- ↪ Senate Bill 97, signed by the Governor on August 24, 2007 initiated formal changes to the CEQA Guidelines that provides guidance for the way climate change is analyzed in CEQA documents by adding Section 21083.05 to the Public Resources Code.
- ↪ EO S-13-08, signed by the Governor on November 14, 2008, directed the preparation of a sea level rise impact study, a transportation systems vulnerability assessment, and preparation of the California Climate Adaptation Strategy.

EO S-3-05

EO S-3-05 made California the first state to formally establish GHG emissions reduction goals. EO S-3-05 includes the following GHG emissions reduction targets for California:

- ↪ By 2010, reduce GHG emissions to 2000 levels
- ↪ By 2020, reduce GHG emissions to 1990 levels
- ↪ By 2050, reduce GHG emissions to 80 percent below 1990 levels

The final emission target of 80 percent below 1990 levels would put the State's emissions in line with estimates of the required worldwide reductions needed to bring about long-term climate stabilization and avoidance of the most severe impacts of climate change (Intergovernmental Panel on Climate Change (IPCC), 2007).

EO S-3-05 dictates that the Secretary of CalEPA coordinate oversight of efforts to meet these targets with the Secretaries of the Business, Transportation and Housing Agency, Department of Food and Agriculture, and Natural Resources Agency; the Chairpersons of the Air Resources Board (CARB) and Energy Commission; and the President of the Public Utilities Commission. This group was subsequently named the Climate Action Team (CAT). As laid out in the EO, the CAT has submitted biannual reports to the governor and State legislature describing progress made toward reaching the targets.

AB 32

AB 32 further details and codifies the mid-term GHG reduction target established in EO S-3-05 (Reduce GHG emissions to 1990 levels by 2020). AB 32 also identifies CARB as the State agency responsible for the design and implementation of emissions limits, regulations, and other measures to meet the target.

- ↪ The statute lays out the schedule for each step of the regulatory development and implementation. By June 30, 2007, CARB had to publish a list of early-action GHG emission reduction measures.
- ↪ Prior to January 1, 2008, CARB had to: identify the current level of GHG emissions by requiring Statewide reporting and verification of GHG emissions from emitters and identify the 1990 levels of California GHG emissions.
- ↪ January 1, 2010, CARB must adopt regulations to implement those early-action measures.

In December 2007, CARB approved the 2020 emission limit (1990 level) of 427 million metric tons of CO₂ equivalents (CO₂e) of GHG. The 2020 target requires the reduction of 169 million metric tons of CO₂e, or approximately 30 percent below the State's projected 2020 emissions of 596 million metric tons of CO₂e. Also in December 2007, CARB adopted mandatory reporting and verification regulations pursuant to AB 32. The regulations became effective January 1, 2009, with the first reports covering 2008 emissions. The mandatory reporting regulations require reporting for major facilities, those that generate more than 25,000 metric tons/year of CO₂e.

In December 2008, CARB adopted the Climate Change Scoping Plan which outlines the State's strategy to achieve the 2020 GHG emissions limit. The Climate Change Scoping Plan also included 39 measures that were developed to reduce GHG emissions from key sources and activities while improving public health, promoting a cleaner environment, preserving natural resources, and ensuring that the impacts of the reductions are equitable and do not disproportionately impact low-income and minority communities.

SB 97

SB 97 directed the Governor's OPR to develop CEQA Guideline amendments for the analysis of climate change in CEQA documents for the approval of the California Natural Resources Agency (CNRA). On December 31, 2009, the CNRA adopted amendments to the CEQA Guidelines (Guideline amendments) for GHGs and sent them to the California Office of Administrative Law for approval and filing with the Secretary of State. <http://www.ceres.ca.gov/ceqa/guidelines/>. The CEQA GHG Guideline amendments became effective

March 18, 2010. The Guideline amendments for GHG emissions fit within the existing CEQA framework for environmental analysis, which calls for lead agencies to determine baseline conditions and levels of significance, and to evaluate mitigation measures. The Guideline amendments do not identify a threshold of significance for GHG emissions nor do they prescribe assessment methodologies or specific mitigation measures. The Guidelines amendments encourage lead agencies to consider many factors in performing a CEQA analysis, but preserve the discretion that CEQA grants lead agencies to make their own determinations based on substantial evidence.

Although California has taken the lead in Climate Change policy and legislation, there have been several recent important developments at the federal level. On September 22, 2009, USEPA released its final GHG Reporting Rule (Reporting Rule). Starting in 2010, facility owners that emit 25,000 metric tons of CO₂e or more per year are required to submit an annual GHG emissions report with detailed calculations of facility GHG emissions. On December 7, 2009, the USEPA Administrator signed two distinct findings regarding GHGs under §202(a) of the Clean Air Act. He found that the current and projected concentrations of the six key well-mixed GHGs in the atmosphere threaten the public health and welfare of current and future generations and that the combined emissions of these well-mixed GHG from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare.

EO S-13-08

On November 14, 2008, the Governor issued EO S-13-08, which directs the CNRA, DWR, OPR,CEC, SWRCB, State Parks, and California's coastal management agencies to participate in a number of planning and research activities to advance California's ability to adapt to the impacts of climate change. The order specifically directs agencies to work with the National Academy of Sciences to initiate the first California Sea Level Rise Assessment and to review and update the assessment every two years after completion; immediately assess the vulnerability of the California transportation system to sea level rise; and to develop a multi-sector California Climate Change Adaptation Strategy, which was finalized in December 2009.

GUIDING PUBLICATIONS AND AVAILABLE RESOURCES

While there are many sources of information on Climate Change, IRWM planning regions must keep three documents in mind as they assess the effects of Climate Change on their regions; consider adaptations to those effects; and seek to mitigate GHG emissions:

- ↪ The [Climate Change Scoping Plan](#) that was adopted by CARB in 2008 discusses different business sectors including water management and recommends specific strategies that may help reduce GHG emissions.
- ↪ DWR published a white paper, [Managing an Uncertain Future: Climate Change Adaptation Strategies for California's Water \(2008\)](#), that urges a new approach to managing California's water and other natural resources in the face of climate change. The recommendations from the White Paper are incorporated into Volume 1 Chapter 7 of CWP Update 2009.
- ↪ On December 2, 2009 CNRA posted a first iteration of a report entitled [2009 California Climate Adaptation Strategy](#) that discusses Statewide and sector specific vulnerability assessments.

IDENTIFY CLIMATE CHANGE IMPACTS AND DEVELOPING ADAPTATION STRATEGIES

The Integrated Regional Water Management Planning Act, CWC §10541(e)(10), states that IRWM plans must include an evaluation of the adaptability to Climate Change of water management systems in the region. The next few paragraphs and Table 8 provide direction as to the initial steps IRWM groups should be taking to address climate change adaptation within existing plan standards. More specific direction will come in the next solicitation of Prop. 84 IRWM funding.

Given the currently predicted effects of Climate Change on California's water resources, IRWM Plans should address adapting to changes in the amount, intensity, timing, quality and variability of runoff and recharge. Areas of the State that receive water imported from the Sacramento-San Joaquin River Delta, the area within

the Delta, and areas served by coastal aquifers will also need to consider the effects of sea level rise on water supply conditions and identify suitable adaptation measures.

Decisions about adapting water management systems, as well as, mitigating Climate Change through reductions in GHG emissions, should take into account the risks to the region of no action.

A key factor in assessing the effects of Climate Change and adapting to those changes is the use of adaptive management. IRWM plans should contain policies and procedures that promote adaptive management. As more effects of Climate Change manifest; new tools are developed; and new information becomes available, RWMGs must adjust their IRWM plans accordingly.

DESCRIBE AND CONSIDER THE EFFECTS OF CLIMATE CHANGE

CWC §10541(e)(10), states that IRWM plans must include an evaluation of the adaptability to Climate Change of water management systems in the region. However, tools to properly assess the risk of any one effect of Climate Change on a region are currently not well developed, and the abilities of different regions to use such tools vary considerably.

Chapter 3 of the *2009 California Climate Adaptation Strategy* discusses comprehensive State adaptation strategies, six in all, that would help coordinate adaptation efforts to increase cost and implementation efficiencies Statewide. Strategy 5 is to develop statewide, as well as by sector, a specific California Climate Vulnerability Assessment. Implementation of Strategy 5 will help unify the Climate Change scenarios that will influence the risk determined for specific Climate Change effects in specific IRWM regions. Another benefit of implementation of this strategy will be the development of tools to help local agencies determine specific risks in their IRWM planning regions. Once the vulnerability assessment and tools are available, RWMGs should use them to identify adaptations relevant to their IRWM regions.

In the interim, RWMGs are encouraged to consider and implement so-called “no regret” adaptations to general effects of Climate Change. Such adaptations are those that make sense in light of the current water management context for a region and also help in terms of effects of Climate Change. IRWM regions should pursue these “no regret” adaptations, such as increasing water use efficiency, practice integrated flood management, and seek to enhance and sustain ecosystems. Appropriately applied, these “no regret” adaptations can help a wide variety of water management situations.

IRWM plans must contain language in their Description of Region Section that describes likely Climate Change impacts on their region. These descriptions should be updated and become more specific to the region as vulnerability analysis tools become available and are applied. RWMGs are encouraged to become involved and should stay involved in CNRA’s California Adaptation Strategy process to help shape the document through their participation.

As IRWM plans document how the IRWM region has considered RMS in the [CWP Update 2009](#), consideration of the effects of Climate Change needs to be part of that discussion. Likewise, as projects are developed and selected to implement an IRWM Plan, consideration of adapting to the effects of Climate Change must be part of that process and should be explicitly stated in an IRWM Plan’s project review process.

CLIMATE CHANGE MITIGATION/GHG REDUCTION

In addition to responding to the effects of Climate Change, IRWM plans can also help mitigate Climate Change by reducing energy consumption, especially the energy embedded in water use, and ultimately reducing GHG emissions. Water management results in the consumption of significant amounts of energy in California and the accompanying production of GHG emissions, especially where water must be pumped from long distances; from the ground; or over significant elevations. According to [California Energy Commission November, 2005 CEC-700-2005-011 California’s Water – Energy Relationship Final Staff Report](#), 19% of the electricity and 30% of the non-power plant natural gas of the State’s energy consumption are spent on water-related activities, primarily related to end-uses of water (i.e. what the customer does with the water). The close connection between water resource management and energy is an important consideration for

helping the State meet its GHG emission reduction goals. All aspects of water resources management have an impact on GHG emissions, including the development and use of water for habitat management and recreation; domestic, municipal, industrial, and agricultural supply; hydroelectric power production; and flood control.

Mitigation of Climate Change is a factor to consider in an IRWM region's project review process, but only as a secondary criterion. Although energy consumption and GHG emissions are an important consideration for water projects for helping the State meet its GHG emission reduction goals, the primary objective of IRWM planning is to meet regional water management objectives. In evaluating different ways to meet IRWM Plan objectives, where practical, RWMGs should consider the strategies adopted by CARB in its AB 32 Scoping Plan, found at: http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf. In addition to offsetting emissions, RWMGs may also consider options for carbon sequestration where such options are integrally tied to supporting IRWM Plan objectives.

Agencies that are part of an IRWM effort should consider joining the California Climate Action Registry (CCAR), <http://www.climateregistry.org/>. The CCAR is a private non-profit organization that serves as a voluntary GHG registry to protect and promote early actions to reduce GHG emissions by organizations. The CCAR is migrating registry data to the Climate Action Registry (CAR) which incorporates all of North America. A comparison of the CCAR and the CAR can be found at the following link <http://www.climateregistry.org/resources/docs/misc/ca-voluntary-mandatory-reporting-matrix.pdf>.

Participation in these voluntary GHG registries, allows access to tools and consistent reporting formats which may aid RWMGs in understanding their GHG emissions and ways to reduce them.

CEQA project level analyses in the area of Climate Change may assist RWMGs with a means of disclosing and evaluating GHG emissions of project alternatives. DWR is *not* suggesting that a full project CEQA analysis need be performed before a grant application is submitted; rather, an analysis of GHG emissions on a project – performed so that it not only serves to evaluate that aspect of a project for the purposes of IRWM project selection, but also satisfies the requirements of CEQA – may be a useful analysis that satisfies multiple purposes. Projects incorporated into IRWM Plans are wide ranging. Project proponents should seek their own legal counsel in determining the appropriate level of analysis for their particular project.

DWR will usually act as a responsible agency for projects successful in obtaining grant funding. The guidance that follows is general guidance that may help project proponents understand how DWR will behave in that capacity specifically in the area of Climate Change analysis.

In preparing a project-level GHG emissions analysis, RWMGs and the project proponents should estimate GHG emissions from the project; establish significance criteria; identify those project components that may support carbon sequestration; and, if applicable, explain how the project may help in the adaptation to effects of Climate Change.

In most cases, a GHG emissions analysis for a project should be quantitative. Emission sources that are commonly applicable to projects include:

- ↪ Operation of construction equipment
- ↪ Passenger vehicle trips during construction and operation
- ↪ Transportation of construction materials and equipment
- ↪ Transportation of material inputs for O&M
- ↪ Transportation of material outputs or production
- ↪ Generation of electricity used for operation of projects
- ↪ Waste generation and disposal of materials during construction and operation

Some projects or components of projects cannot be quantified such as carbon sequestration ability of a restored habitat. Addressing such components should include such items as the current state of scientific

understanding, ongoing research, and potential ranges of emissions or sequestration. Project analysis should also consider all known applicable BMPs or other mitigation measures to reduce GHG emissions. In considering the appropriate level of analysis for a specific project, proponents may want to utilize the OPR Technical Advisory on CEQA and Climate Change, the CAPCOA White Paper, CARB's early action measures, and the six key elements and the 39 measures for GHG reduction from Climate Scoping Plan; the California Attorney General's Office website, and other relevant studies and resources, such as the website links that are listed below in the Additional Resources and References section.

For project level GHG emissions assessments, a useful emissions reporting protocol has been developed by the World Resources Institute (WRI) in cooperation with the World Business Council for Sustainable Development (WRI and WBCSD, n.d). This protocol was used as the basis for the CCAR. The WRI and CCAR emissions reporting protocols establish guidelines for voluntary accounting of GHG emissions and provide a peer reviewed and widely accepted methodology for calculating GHG emissions. WRI has also published several calculation tools to simplify and document the procedure, <http://www.ghgprotocol.org/calculation-tools/all-tools>. In general, the protocols outline how to estimate emissions from mobile combustion sources, electricity consumption, and industrial processes. Both the State and the federal government require reporting of emissions for regulated entities that emit 25,000 metric tons of CO₂e or more per year.

Once the emissions from a proposed project have been determined, the CEQA lead agency must assess the impacts of these emissions and make a determination of significance. A threshold of significance is used to gauge project effects. It may be a quantitative, qualitative, or performance level of a particular environmental effect above which impacts will normally be considered significant. The basic strategies have been outlined in the technical guidance documents published to date are: (1) establish a significance threshold of net-zero; (2) establish a non-zero significance threshold based on compliance with AB 32; or (3) utilize other established GHG reduction strategies. If a project proponent is considering a non-zero threshold, the following may be of assistance:

- 1) Does the project implement or fund its fair share of a mitigation strategy designed to alleviate Climate Change? This might be achieved through consistency with AB 32 and the early implementation strategies proposed by CARB.
- 2) How and in what ways does the project move California toward a lower carbon future?
- 3) How closely does the project's overall GHG emissions balance approach zero? Considerations here would include whether the emissions are under the reporting requirement for 25,000 metric tons of CO₂e or more per year
- 4) Are there process improvements or efficiencies gained by implementing the project?

IMPLEMENTATION OF THE STANDARD

The Climate Change Standard will be implemented in two phases. The specific PSPs will set the level of criteria that will be used to determine grant awards. DWR anticipates increasing the criteria levels as presented in Table 7. Because future appropriations of funding may include legislative clarifications, this table can only serve as general guidance.

Table 7 – Climate Change Criteria

First Solicitation	Subsequent Solicitations
Successful grantees must enter into an agreement with DWR to update their IRWM plans to the IRWMP Standards contained in this document within two years of the entering into an agreement with DWR (CWC §83002.(b)(3)(B)). This includes the Climate Change Standard. All applicants, as part of the application, will submit a signed consent form stating they understand that should they be awarded a grant they will sign an agreement to update their plans within two years from the time of agreement execution.	IRWM plans must meet the IRWM Plan Standards contained in this document. This includes: <ul style="list-style-type: none"> • Quantitative tools for vulnerability analysis • Specific actions identified for adaptation to effects of Climate Change with performance measures • Disclosure and consideration of quantitative analysis of project GHG emissions

Table 8 – Climate Change Standard Requirements

Region Description	IRWM plans must contain language in their Description of Region Section that describes likely Climate Change impacts on their region. These descriptions should be updated and become more region-specific as vulnerability analysis tools become available.
Plan Objectives	<p><u>Adapting to Climate Change:</u> In developing plan objectives, IRWM regions must consider the following:</p> <ul style="list-style-type: none"> • IRWM Plans should address adapting to changes in the amount, intensity, timing, quality and variability of runoff and recharge. • IRWM Plans need to consider the effects of sea level rise on water supply conditions and identify suitable adaptation measures. <p><u>Reducing Emissions</u></p> <ul style="list-style-type: none"> • IRWM plans can also help mitigate Climate Change by reducing energy consumption, especially the energy embedded in water use, and ultimately reducing GHG emissions. • In evaluating different ways to meet IRWM plan objectives, where practical, RWMGs should consider the strategies adopted by CARB in its AB 32 Scoping Plan. • In addition to offsetting emissions, RWMGs also may consider options for carbon sequestration where such options are integrally tied to supporting IRWM Plan objectives.
Resource Management Strategies	<p><u>Initial Steps:</u> Identify and implement “No-Regrets” Adaptation Strategies to the general effects of climate change, such as meadow and forest restoration, flood plain protection, and water use efficiency.</p> <ul style="list-style-type: none"> • Decisions about adapting water management systems, as well as, mitigating Climate Change through reductions in GHG emissions, should take into account the risks to the region of no action. • IRWM regions should pursue increasing water use efficiency, practice integrated flood management, and seek to enhance and sustain ecosystems. Appropriately applied, these “no regret” adaptations can help a wide variety of water management situations. <p><u>Next Steps:</u> Identify and implement, using vulnerability assessments and tools, Adaptation Strategies that address region-specific climate change impacts.</p> <ul style="list-style-type: none"> • IRWM Plans should address adapting to changes in the amount, intensity, timing, quality and variability of runoff and recharge. • IRWM Plans need to consider the effects of sea level rise on water supply conditions and identify suitable adaptation measures. • IRWM Plans also can help mitigate Climate Change by reducing energy consumption, especially the energy embedded in water use, and ultimately reducing GHG emissions. • An IRWM region must demonstrate how the effects of climate change on its region are factored into its resource management strategies.

Project Review Process	<p>The Project Review Process must include the following factors:</p> <ul style="list-style-type: none"> • <i>Contribution of the project to adapting to climate change:</i> RWMGs must include potential effects of climate change on their region and consider if adaptations to the water management system are necessary. • <i>Contribution of the project in reducing GHG emissions as compared to project alternatives:</i> The RWMG needs to consider a project's ability to help the IRWM region reduce GHG emissions as new projects are implemented over the 20-year planning horizon. Considerations include energy efficiency and reduction of GHG emissions when choosing between project alternatives. <p><i>CEQA project-level analyses:</i> In preparing a project-level GHG emissions analysis, RWMGs and the project proponents should estimate GHG emissions from the project; establish significance criteria; identify those project components that may support carbon sequestration; and, if applicable, explain how the project may help in adapting to effects of Climate Change.</p>
Relation to Local Water Planning	IRWM Plans must consider and incorporate water management issues and climate change adaptation and mitigation strategies from local plans into the IRWM Plan.
Relation to Local Land Use Planning	IRWM regions must demonstrate information sharing and collaboration with regional land use planning in order to manage multiple water demands throughout the state, as described in CWP Update 2009, adapt water management systems to climate change, and potentially offset climate change impacts to water supply in California.
Plan Performance and Monitoring	IRWM Plans should contain policies and procedures that promote adaptive management. As more effects of Climate Change manifest, new tools are developed, and new information becomes available, RWMGs must adjust their IRWM plans accordingly.
Coordination	<ul style="list-style-type: none"> • RWMGs should stay involved in CNRA's California Adaptation Strategy process to help shape the document through their participation. • Agencies that are part of an IRWM effort should consider joining the California Climate Action Registry (CCAR), http://www.climateregistry.org/.

ADDITIONAL RESOURCES AND REFERENCES

DWR Integrated Regional Water Management Climate Change Document Clearinghouse*: <http://www.water.ca.gov/climatechange/docs/IRWM-ClimateChangeClearinghouse.pdf>

*Contains brief summaries of 40 documents potentially relevant for IRWM practitioners

DWR's Climate Change Website: <http://www.water.ca.gov/climatechange>

State of California Climate Change Portal: <http://www.climatechange.ca.gov>

CARB website: <http://www.arb.ca.gov/cc/cc.htm>

The California CAT website: [http://climatechange.ca.gov/climate action team/index.html](http://climatechange.ca.gov/climate%20action%20team/index.html)

Association of Environmental Professionals. 2007. *Alternative Approaches to Analyzing Greenhouse Gas Emissions and Global Climate Change in CEQA Documents*.

[http://www.counties.org/images/public/Advocacy/ag_natres/AEP Global Climate Change June 29 Final%5 B1%5 D.pdf](http://www.counties.org/images/public/Advocacy/ag_natres/AEP_Global_Climate_Change_June_29_Final%5B1%5D.pdf)

California Climate Action Registry. (2009). *General Reporting Protocol Version 3.1*.

http://www.climateregistry.org/resources/docs/protocols/grp/GRP_3.1_January2009.pdf

Center for Biological Diversity. 2007. *The California Environmental Quality Act On the Front Lines of California's Fight Against Global Warming*.

<http://www.biologicaldiversity.org/publications/papers/CBD-CEQA-white-paper.pdf>

U.S. EPA. 2009. *Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2007*.

<http://epa.gov/climatechange/emissions/downloads09/InventoryUSGhG1990-2007.pdf>

World Resources Institute and World Business Council For Sustainable Development. N.d. *The Greenhouse Gas Protocol for Project Accounting*.

http://www.ghgprotocol.org/files/ghg_project_protocol.pdf

APPENDIX D

NATIVE AMERICAN TRIBE NOTIFICATION

PRC §75102 mandates a California Native American Tribe Notification requirement for projects funded with Proposition 84 funds. PRC §75102 states:

“Before the adoption of a negative declaration or environmental impact report required under Section 75070, the lead agency shall notify the proposed action to a California Native American tribe, which is on the contact list maintained by the Native American Heritage Commission, if that tribe has traditional lands located within the area of the proposed project.”

Native American Tribe Notification will be part of DWR’s CEQA review for projects requesting funding under Proposition 84. While IRWM planning efforts may have tribal involvement, formal notification required by PRC §75102 ensures that tribes have an opportunity to consult with lead agencies regarding impacts to cultural resources prior to the closing of the CEQA process. This requirement does not relieve the responsibilities of a lead agency of other cultural resource notification and preservation obligations. DWR recommends using the OPR’s procedures for tribal consultation for General Plans and Specific Plans as guidance to meeting the Native American Tribe Notification requirement. The notification process an RWMG uses may include the following steps:

- ↪ Determine if the proposed project is a project under CEQA.
- ↪ If the project will use a negative declaration or an EIR to comply with CEQA and the CEQA document has not been adopted as of March 1, 2009, tribal notification is required prior to adoption of the CEQA document.
- ↪ To determine which tribes may have traditional lands located within the project area, send a request to the Native American Heritage Commission (NAHC) using the NAHC request form which can be found at the following link: http://www.nahc.ca.gov/consult_request.html. Expect a reply within 30 days.
- ↪ Once tribal information from NAHC is received, notify tribes of the project nature and project location.
- ↪ Allow tribes 90 days to reply to the notification.
- ↪ Solicit input from tribes that respond to the notification.
- ↪ Consider tribal input to the project prior to adoption of a negative declaration or EIR.

The above notification process follows OPR’s procedures for tribal consultation for General Plans and Specific Plans. While an IRWM Plan is not a general or specific plan, the methods and considerations for consultation with tribes, may be helpful. Further information on tribal consultation can be found at the following link: [http://www.opr.ca.gov/programs/docs/09_14_05%20Updated%20Guidelines%20\(922\).pdf](http://www.opr.ca.gov/programs/docs/09_14_05%20Updated%20Guidelines%20(922).pdf)
Contact information for the NAHC is as follows:

Native American Heritage Commission
 915 Capitol Mall, Room 364
 Sacramento, CA 95814
 Phone: 916-653-4082
 Fax: 916-657-5390
<http://www.nahc.ca.gov>

APPENDIX E

GUIDELINES FOR GRANTEES AND BORROWERS

The lists below details the documents/records that State Auditors would need to review in the event of a grant or loan being audited. Grantees and borrowers should ensure that such records are maintained for each funded project.

↩ Internal Controls

- 1) Organization chart (e.g. Agency's overall organization chart and organization chart for the grant or loan funded Program/Project)
- 2) Written internal procedures and flowcharts for the following:
 - a) Receipts and deposits
 - b) Disbursements
 - c) State reimbursement requests
 - d) Grant or loan expenditure tracking
 - e) Guidelines, policy, and procedures on grant or loan funded Program/Project
- 3) Audit reports of the Agency internal control structure and/or financial statements within the last two years
- 4) Prior audit reports on grant or loan funded Program/Project

↩ Grants or Loans

- 1) Original grant or loan agreement, any amendment(s) and budget modification documents
- 2) A listing of all bond-funded grants or loans received from the State
- 3) A listing of all other funding sources for each Program/Project

↩ Contracts

- 1) All subcontractor and consultant contracts and related or partners documents, if applicable
- 2) Contracts between the Agency and member agencies as related to the grant or loan funded Program/Project

↩ Invoices

- 1) Invoices from vendors and subcontractors for expenditures submitted to the State for payments under the grant or loan
- 2) Documentation linking subcontractor invoices to State reimbursement, requests and related grant or loan budget line items
- 3) Reimbursement requests submitted to the State for the grant or loan

↩ Cash Documents

- 1) Receipts (copies of warrants) showing payments received from the State
- 2) Deposit slips (or bank statements) showing deposit of the payments received from the State
- 3) Cancelled checks or disbursement documents showing payments made to vendors, subcontractors, consultants, and/or agents under the grants or loans
- 4) Bank statements showing the deposit of the receipts

↩ Accounting Records

- 1) Ledgers showing entries for or loan receipts and cash disbursements
- 2) Ledgers showing receipts and cash disbursement entries of other funding sources

3) Bridging documents that tie the general ledger to requests for grant or loan reimbursement

↪ Administration Costs

1) Supporting documents showing the calculation of administration costs

↪ Personnel

1) List of all contractors and Agency staff that worked on the grant or loan funded Program/Project

2) Payroll records including timesheets for contractor staff and the Agency personnel who provided services charged to the program

↪ Project Files

1) All supporting documentation maintained in the project files

2) All grant or loan related correspondence

THE NATURAL RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
DIVISION OF INTEGRATED REGIONAL WATER MANAGEMENT

Appendix 5

California Department of Water Resources

California's Groundwater

Bulletin 118

Update 2003

Appendix C

**Recommended and Required Components of Local
Groundwater Management Plans**

Appendix C

Required and Recommended Components of Local Groundwater Management Plans

Section 10750 et seq. of the Water Code, commonly referred to as Assembly Bill 3030, stipulates certain procedures that must be followed in adopting a groundwater management plan under this section.

Amendments to Section 10750 et seq. added the requirement that new groundwater management plans prepared under Section 10750 et seq. must include component 1 below (SB1938 (Stats 2002, Ch 603)).

In addition, the amendments mandate that if the agency preparing the groundwater management plan intends to apply for funding administered by the California Department of Water Resources (DWR) for groundwater or groundwater quality projects, the agency must prepare and implement a groundwater management plan that includes components 2, 3, 6, 7 and 9 below. DWR recommends that all the components below be included in any groundwater management plan to be adopted and implemented by a local managing entity.

Consideration and development of these components for the specific conditions of the basin to be managed under the plan will help to ensure effective groundwater management. In developing these criteria, DWR recognizes that the goal of a groundwater management plan and the goal of an ordinance to manage groundwater should be the same—assurance of a long-term, sustainable, reliable, good quality groundwater supply. Such efforts can benefit greatly from cooperative management within the basin or region.

None of the suggested data reporting in the components below should be construed as recommending disclosure of information that is confidential under State law.

1. Include documentation that a written statement was provided to the public “describing the manner in which interested parties may participate in developing the groundwater management plan,” which may include appointing a technical advisory committee (Water Code § 10753.4 (b)).
2. Include a plan by the managing entity to “involve other agencies that enables the local agency to work cooperatively with other public entities whose service area or boundary overlies the groundwater basin.” (Water Code § 10753.7 (a)(2)). A local agency includes “any local public agency that provides water service to all or a portion of its service area” (Water Code § 10752 (g)).
3. Provide a map showing the area of the groundwater basin, as defined by DWR Bulletin 118, with the area of the local agency subject to the plan as well as the boundaries of other local agencies that overlie the basin in which the agency is developing a groundwater management plan (Water Code § 10753.7 (a)(3)).
4. Establish an advisory committee of stakeholders (interested parties) within the plan area that will help guide the development and implementation of the plan and provide a forum for resolution of controversial issues.
5. Describe the area to be managed under the plan, including:
 - a. The physical structure and characteristics of the aquifer system underlying the plan area in the context of the overall basin.

- b. A summary of the availability of historical data including, but not limited to, the components in Section 7 below.
 - c. Issues of concern including, but not limited to, issues related to the components in Section 7 below.
 - d. A general discussion of historical and projected water demands and supplies.
6. Establish management objectives (MOs) for the groundwater basin that is subject to the plan. (Water Code § 10753.7 (a)(1)).
7. Include components relating to the monitoring and management of groundwater levels, groundwater quality, inelastic land surface subsidence, and changes in surface flow and surface water quality that directly affect groundwater levels or quality or are caused by groundwater pumping. (Water Code § 10753.7 (a)(1)). Consider additional components listed in Water Code § 10753.8 (a) through (l).
8. For each MO, describe how meeting the MO will contribute to a more reliable supply for long-term beneficial uses of groundwater in the plan area, and describe existing or planned management actions to achieve MOs.
9. Adopt monitoring protocols for the components in Section 7 (Water Code § 10753.7 (a)(4)). Monitoring protocols are not defined in the Water Code, but the section is interpreted to mean developing a monitoring program capable of tracking changes in conditions for the purpose of meeting MOs.
10. Describe the monitoring program, including:
 - a. A map indicating the general locations of any applicable monitoring sites for groundwater levels, groundwater quality, subsidence stations, or stream gages.
 - b. A summary of monitoring sites indicating the type (groundwater level, groundwater quality, subsidence, stream gage) and frequency of monitoring. For groundwater level and groundwater quality wells, indicate the depth interval(s) or aquifer zone monitored and the type of well (public, irrigation, domestic, industrial, monitoring).
11. Describe any current or planned actions by the local managing entity to coordinate with other land use, zoning, or water management planning agencies or activities (Water Code § 10753.8 (k), (l)).
12. Provide for periodic report(s) summarizing groundwater basin conditions and groundwater management activities. The report(s), prepared annually or at other frequencies as determined by the local management agency, should include:
 - a. Summary of monitoring results, including a discussion of historical trends.
 - b. Summary of management actions during the period covered by the report.
 - c. A discussion, supported by monitoring results, of whether management actions are achieving progress in meeting MOs.
 - d. Summary of proposed management actions for the future.
 - e. Summary of any plan component changes, including addition or modification of MOs, during the period covered by the report.
 - f. Summary of actions taken to coordinate with other water management and land use agencies, and other government agencies.
13. Provide for the periodic re-evaluation of the entire plan by the managing entity.
14. For local agencies not overlying groundwater basins, plans should be prepared including the above listed components and using geologic and hydrologic principles appropriate to those areas (Water Code § 10753.7 (a)(5)).

Appendix 6

California Department of Water Resources

California's Groundwater

Bulletin 118

Update 2003

Appendix D

Groundwater Management Model Ordinance

Appendix D

Groundwater Management Model Ordinance

In developing this model ordinance, the California Department of Water Resources recognizes that the goal of a groundwater management plan and the goal of an ordinance to manage groundwater should be the same—assurance of a long-term, sustainable, reliable, good quality groundwater supply. Such efforts require cooperative management within the region or sub-region.

Chapter X

Groundwater Management Ordinance

Sections:

X.01 Declaration of Findings

X.02 Purpose

X.03 Declaration of Intent

X.04 Definitions

X.05 Groundwater Management Program

X.06 Management Objectives

X.07 Monitoring Program Network

X.08 Monitoring Frequency

X.09 Changes in Monitoring

X.10 Review of Technical Data

X.11 Data Dissemination

X.12 Actions when MO Noncompliance is Reported

X.13 Regional Coordination

X.14 Integrated Resource Management

X.15 Data Relating to Export and Substitution of Groundwater

X.01 Declaration of Findings - The Board finds that:

- A. The protection of the groundwater resource for its use within the County is of major concern to the residents of the County for the protection of their health, welfare, and safety.
- B. The reliability and sustainability of the groundwater supply for all beneficial uses are of critical importance to the economic, social, and environmental well-being of the County.
- C. A lack of effective groundwater management may have significant negative impacts, including, but not limited to:
 1. Lower groundwater levels leading to additional expenses from:
 - a) Increased energy consumption.
 - b) The need to deepen existing wells.
 - c) The need to build new wells.
 - d) The need to destroy non-functioning wells.
 2. Costly damage to public roads, bridges, canals, and other structures caused by land subsidence.
 3. Reduction of surface and subsurface flows leading to the potential loss of critical riparian and wetland habitat.
 4. Degradation of groundwater quality.

- D. It is essential for management purposes to adopt a monitoring program addressing groundwater levels, groundwater quality, land subsidence, and surface water flow and quality where it directly impacts or is impacted by groundwater.

X.02 Purpose - In support of the findings above, the County has determined that this groundwater management ordinance is necessary to ensure that:

- A. Groundwater continues to be a reliable and sustainable resource.
- B. The extraction of groundwater does not result in significant adverse economic, environmental, or social impacts.
- C. Groundwater quality is protected.
- D. Excessive land surface subsidence from groundwater extraction is prevented.

X.03 Declaration of Intent

- A. The County intends to foster prudent groundwater management practices by establishing a policy that encourages appropriate management of the resource based on recommendations by a committee of stakeholders.
- B. The County intends that its groundwater management activities occur as an open and public process that considers input from all stakeholders in the County.
- C. The County intends to work cooperatively with interested local agencies to further develop and implement joint groundwater management activities.
- D. The County does not intend to regulate, in any manner, the use of groundwater, except as a last resort to protect the groundwater resource.
- E. The County intends to act as an enforcing agency should the local resource become threatened.
- F. The County does not intend to infringe upon the rights of surface water users in the managed area.
- G. The County does not intend to limit other authorized means of managing groundwater within the County.

X.04 Definitions

- A. “Aquifer” means a geologic formation that stores groundwater and transmits and yields significant quantities of water to wells and springs. Significant quantity is an amount that that satisfies local needs and may range from thousands of gallons per minute to less than 5 gpm, depending on rock type and intended use.
- B. “Board” means the Board of Supervisors of the County.
- C. “District” means a district or municipality, located wholly or partially within the boundaries of the County, that is a purveyor of water for agricultural, domestic, or municipal use.
- D. “Enforcement Agency” means the Board as the enforcement agency under this chapter.
- E. “Groundwater” means all water beneath the surface of the earth below the zone of saturation, but does not include subterranean streams flowing in known and definite channels.
- F. “Groundwater Basin” means an aquifer or series of aquifers with a reasonably defined lateral and vertical extent, as defined in Bulletin 118 by Department of Water Resources. “Non-basin areas” are outside defined groundwater basins and contain smaller amounts of groundwater in consolidated sediments or fractured hard rock.
- G. “Groundwater Export” means the conveyance of groundwater outside of the boundaries of the County and outside of the boundaries of any district that is partially within the County.
- H. “Groundwater Substitution” means the voluntary use of an available groundwater supply instead of surface water for the purposes of using the surface water outside the County and outside the boundaries of any district that is partially within the County.

- I. “Land Subsidence” means the lowering of the ground surface caused by the inelastic consolidation of clay beds in the aquifer system.
- J. “Management Objective”(MO) means a condition identified for each subunit to ensure that the groundwater supply is reliable and sustainable. The MOs set acceptable conditions with respect to groundwater levels, groundwater quality, inelastic land surface subsidence, and surface water flows and quality. Compliance with the MO is tracked by a monitoring program and threshold values that are adopted for each Management Objective.
- K. “Recharge” means flow to groundwater storage from precipitation, and infiltration from streams, irrigation, spreading basins, injection wells, and other sources of water.
- L. “Reliability” means having an available, predictable, and usable groundwater supply at any given point in time.
- M. “Stakeholder” means an individual or an entity, such as a water supplier or a county resident, with a permanent interest in the availability of the groundwater resource.
- N. ”Subunit” means any subdivision of a groundwater basin or non-basin area in the County created for the purposes of representation of stakeholders and the establishment of local area management objectives.
- O. “Sustainable” means the groundwater resource is maintained for use by residents in the basin over a prolonged period of time.
- P. “Technical Advisory Committee” means a committee of persons knowledgeable in groundwater management, hydrology, and hydrogeology established for the purpose of providing technical guidance to the Water Advisory Committee.
- Q. “Threshold values” mean the limits established by the WAC for groundwater levels, groundwater quality, land surface subsidence, and surface water flow and quality that are not to be exceeded if the MOs are to be met.
- R. “Water Advisory Committee” (WAC) means a multimember advisory body established for the purpose of aiding the Board in providing effective management of the groundwater resources in the County, and representing all of the subunits that are identified.
- S. “Water Management Entities” means any local agency, or group of agencies, authorized to manage groundwater.

X.05 Groundwater Management Program

- A. The County recognizes that effective groundwater management is key to maintaining a reliable and sustainable resource. For the purposes of establishing an effective groundwater management program, the Board shall appoint a WAC to establish MOs and make recommendations to the Board to ensure that MOs are met.
- B. For purposes of establishing a WAC, the groundwater basins and non-basin areas of the County will be divided into subunits based on hydrogeologic principles and institutional boundaries. These subunits shall be established by the Board based on public input to address the groundwater management needs of the County. The WAC shall consist of members that represent each subunit. Upon establishment of the subunits, the Board shall appoint a member to represent each subunit on the WAC.
- C. The WAC shall have the following responsibilities to the Board:
 - 1. Recommend MOs for each groundwater management subunit.
 - 2. Recommend a groundwater monitoring network for purposes of tracking MOs.
 - 3. Recommend the frequency of monitoring.
 - 4. Propose changes in monitoring.
 - 5. Ensure monitoring data receive technical review.
 - 6. Ensure that monitoring data are made available to the public.

7. Recommend actions to resolve noncompliance with MOs.
- D. For the purposes of providing technical advice to the WAC in carrying out its responsibilities, a technical advisory committee (TAC) shall be established. The TAC shall consist of local experts or a combination of local expertise and technical consultants from private and public organizations that are nominated by the WAC and approved by the Board. Individuals appointed to the TAC should be highly knowledgeable in groundwater management, hydrology, and hydrogeology. The TAC shall review technical data collected by monitoring programs within the County and advise the WAC.

X.06 Management Objectives

- A. To ensure that the County maintains a reliable and sustainable groundwater supply, MOs for groundwater levels, groundwater quality, land subsidence, and surface water flow and quality shall be adopted for each subunit. Threshold values that are not to be exceeded shall be defined for each MO.
- B. Compliance with the MOs will be determined by evaluation of data collected from groundwater level, groundwater quality, land subsidence, and surface water flow and quality monitoring networks. Evaluation of these data with respect to threshold values shall be the basis for determining compliance with the MOs.
- C. Each WAC member shall recommend MOs for their subunit. The WAC shall develop a comprehensive set of recommendations for all subunits, and the Board shall adopt these MOs for the County. MOs may differ from subunit to subunit, but the established MOs shall be consistent with the overall goal of supply reliability for the County.
- D. Groundwater management practices based on the established MOs for one subunit of the County shall not adversely impact adjacent subunits.

X.07 Monitoring Program Network

The WAC shall develop County-wide monitoring programs to collect representative data on groundwater levels, groundwater and surface water quality, land surface subsidence, and stream flow and quality. Each subunit shall propose its own monitoring program, and the WAC shall adopt a comprehensive monitoring program for the County. The data collected, showing current conditions and changes over time as a result of groundwater extraction, shall be evaluated by the WAC in consultation with the TAC. The WAC will recommend policies and actions to ensure that MOs for each subunit are met. The collection and evaluation of the data shall be based on scientifically sound principles, and shall incorporate appropriate quality assurance and quality control protocols.

- A. **Groundwater levels:** The groundwater level monitoring network shall be proposed by the WAC and approved by the Board. The intent of the groundwater level monitoring network is to measure water levels in selected wells that can adequately determine representative conditions in the aquifer system for determination of compliance with the MOs. The network will include selected municipal, domestic, and irrigation wells owned by water districts, private parties, and municipal and industrial water suppliers. Where needed, dedicated monitoring wells may be installed. Participation by well owners will be voluntary.
- B. **Water Quality:** The groundwater quality monitoring network shall be proposed by the WAC and approved by the Board. The intent of the groundwater quality monitoring network is to monitor selected wells that can adequately determine representative groundwater quality conditions in the aquifer system for identification of compliance with the MOs. The network will include selected municipal, domestic, and irrigation wells owned by water districts, private parties, and municipal

and industrial water suppliers. Where needed, dedicated monitoring wells may be installed. Participation by well owners will be voluntary.

- C. Land Subsidence: The land subsidence program and network shall be proposed by the WAC and approved by the Board. The intent of the land subsidence monitoring is to detect land subsidence for determination of compliance with the MOs. The network may include benchmarks that are surveyed for changes in elevation throughout the County, based on the judgment of the WAC of the need for such a program.
- D. Surface Water Flow and Quality: The surface water flow and quality network shall be proposed by the WAC and approved by the Board. The intent of this network is to detect changes in surface water flow or surface water quality that directly affect groundwater levels or quality or are caused by groundwater pumping for evaluation of compliance with MOs.

X.08 Monitoring Frequency

The recommended frequency of collection of data for each of the parameters listed above shall be determined by the WAC. Initially, each parameter should be measured at the frequencies outlined below, unless the WAC notes upon evaluation of existing data that more frequent monitoring or additional analyses are called for.

- A. Groundwater levels should be measured at least three times during the year: one measurement prior to the period of highest groundwater use, one measurement during peak groundwater use, and one measurement following the period of highest groundwater use (approximately the months of _____, _____, and _____).
- B. Groundwater quality measurements of electrical conductivity, temperature, and pH should be obtained at least twice annually during the periods of highest and lowest groundwater use (approximately the months of _____ and _____). Upon evaluation of the data, the WAC may propose analyses for other constituents.
- C. Selected benchmarks in the County land subsidence monitoring network should be surveyed every five years at a minimum. These surveys should be conducted following aquifer recovery and prior to the period of highest groundwater extraction (approximately the month of _____).
- D. Measurement of surface water flow and quality in areas determined to directly affect groundwater levels or quality or that are affected by groundwater pumping shall be obtained at least ___ times per month as long as there are flows in the channel.

X.09 Changes in Monitoring

If evaluation of the groundwater level, groundwater quality, land subsidence, surface water flow, or surface water quality data indicates a need for more or less frequent measurements or analyses, the WAC may propose a change in the monitoring frequency. Similarly, if evaluation of the data indicates that additional monitoring sites are necessary, the WAC may propose an additional or a reduced number of sites for data collection. The Board shall adopt these changes when supported by credible evidence.

X.10 Review of Technical Data

- A. The TAC shall propose and the WAC shall adopt standard methods using scientifically sound principles for review and analysis of the collected data. The TAC will meet, as needed and requested by the WAC, to evaluate the technical data and shall report their findings at appropriate meetings of the WAC. The WAC shall meet at least ___ times per month during the period of maximum groundwater use (months of _____ through _____) and quarterly during the off season (months of _____ through _____), or as necessary.
- B. During the period of highest groundwater use, the WAC meetings will focus on data review and analysis with respect to compliance with the current MOs. During the period of low

groundwater use, the WAC meetings will focus on a review of compliance with MOs for the previous period of high groundwater use and consideration of the need for changes to the MOs.

X.11 Data Dissemination

The WAC, in addition to establishing methods for data collection and evaluation, shall establish methods for data storage and dissemination. The WAC shall disseminate the monitoring data and evaluation reports through public presentations and through a County-maintained groundwater Internet site. At a minimum, the WAC shall publicly present findings from the monitoring program to the Board twice annually.

X.12 Actions when MO Noncompliance is Reported

- A. Action by Technical Advisory Committee.** In the event that the TAC identifies an area that is not in compliance with the MOs, or if noncompliance is reported by any other means, the TAC shall report to the WAC on the regional extent and magnitude of the noncompliance. This information shall also be released to the public no later than ___ days from the time that noncompliance with MOs was identified. The TAC shall then collect all available pertinent hydrologic data, investigate possible causes for noncompliance with MOs, and recommend actions to the WAC to bring the area into compliance. These recommendations shall be made no later than ___ days after the report of noncompliance is released to the public. The TAC shall first make recommendations that focus on correcting the noncompliance through negotiations with all parties in the affected area.
- B. Action by Water Advisory Committee.** The WAC shall act as lead negotiator in re-establishing compliance with the MO. If negotiations with parties in the affected area do not result in timely and positive action to re-establish compliance with MOs for the basin, the WAC may recommend a plan to the Board to modify, reduce or terminate groundwater extraction in the affected area or take other necessary actions. Such a plan will be recommended to the Board only after the WAC has thoroughly reviewed the recommendations of the TAC at a public meeting. The modification, reduction, or termination of groundwater extraction in the affected area shall first be applied to wells involved in any export or substitution programs, and then to other wells if necessary. Domestic wells shall not be considered for any modification, reductions, or termination of groundwater extraction.
- C. Action by Board of Supervisors.** The Board of Supervisors, using its police powers, shall act as the enforcement agency for this ordinance. Any recommendation of the WAC may be appealed to the Board within __ working days.

X.13 Regional Coordination

Management decisions recommended by the WAC and adopted by the Board shall not deleteriously affect groundwater resources in any portions of groundwater basins or non-basin areas that share a common groundwater resource in adjacent counties. To accomplish this goal, the WAC shall meet and coordinate with water management entities outside the County that overlie a common groundwater basin at least twice per year once prior to the period of highest groundwater use and once following the period of highest groundwater use.

X.14 Integrated Resource Management

- A. To ensure integration of planning activities within the County, the WAC shall inform County departments involved with groundwater related activities, including but not limited to Land Use or Zoning, Planning, Public Works, Utilities, and Environmental Health, of all WAC meetings and actions regarding MOs. In turn, these County departments shall take into consideration the

adopted MOs when approving development or zoning changes or construction projects that may rely on or affect groundwater quantity or quality.

- B. To the greatest extent practicable, the WAC should also integrate resource management planning with other agencies within the basin. Resource activities that could benefit from integrated planning with groundwater management include, but are not limited to:
- Groundwater management planning by other agencies—agricultural, municipal, industrial, local government
 - Watershed management plans
 - Urban water management plans
 - Management and disposal of municipal solid waste and municipal sewage
 - Drinking water source assessment and protection programs
 - Public water system emergency and disaster response plans
 - Surface water and groundwater conjunctive management programs
 - Expansion of surface and groundwater facilities
 - Water efficiency programs
 - Water recycling programs
 - Environmental habitat construction or restoration programs
 - Water quality protection programs
 - Recharge programs
 - Transportation infrastructure planning

X.15 Data Relating to Export and Substitution of Groundwater

- A. Districts, persons, or contractors intending to operate a groundwater export or groundwater substitution program shall submit the following data to the WAC ___ working days prior to commencing the program:
1. A description of the project with the total amount of groundwater to be exchanged or substituted
 2. The dates over which the project will take place.
 3. A statement of the anticipated impacts of the project relative to adopted MOs.
 4. A discussion of possible contingencies in the event of MO noncompliance.
 5. A map showing the location of the wells to be used by the program.
 6. A summary of any monitoring program proposed.
 7. All required environmental documentation.
- B. While the program is in operation, the following information shall be provided to the WAC at least ___ times per month:
1. All static and pumping groundwater level measurements made in the pumping well during the period of extraction for the export or substitution program.
 2. The amount of groundwater extracted from each well per week.
 3. Static groundwater level measurements in at least ___ of the most proximal wells to the project pumping wells that can be practicably monitored.
- C. All costs for providing such information to the WAC shall be borne by the project participants.

Note: Although the terms “County” and “Board” are used throughout the model ordinance for clarity, the model could be used by any local government or agency with appropriate authority or powers.

Appendix 7

SBX7-6

**Statewide Groundwater Elevation
Monitoring Program**

Senate Bill No. 6

Passed the Senate November 4, 2009

Secretary of the Senate

Passed the Assembly November 3, 2009

Chief Clerk of the Assembly

This bill was received by the Governor this _____ day
of _____, 2009, at _____ o'clock ____M.

Private Secretary of the Governor

CHAPTER _____

An act to add Part 2.11 (commencing with Section 10920) to Division 6 of, and to repeal and add Section 12924 of, the Water Code, relating to groundwater.

LEGISLATIVE COUNSEL’S DIGEST

SB 6, Steinberg. Groundwater.

(1) Existing law authorizes a local agency whose service area includes a groundwater basin that is not subject to groundwater management to adopt and implement a groundwater management plan pursuant to certain provisions of law. Existing law requires a groundwater management plan to include certain components to qualify as a plan for the purposes of those provisions, including a provision that establishes funding requirements for the construction of certain groundwater projects.

This bill would establish a groundwater monitoring program pursuant to which specified entities, in accordance with prescribed procedures, may propose to be designated by the Department of Water Resources as groundwater monitoring entities, as defined, for the purposes of monitoring and reporting with regard to groundwater elevations in all or part of a basin or subbasin, as defined. The bill would require the department to work cooperatively with each monitoring entity to determine the manner in which groundwater elevation information should be reported to the department. The bill would authorize the department to make recommendations for improving an existing monitoring program, and to require additional monitoring wells under certain circumstances. Under certain circumstances, the department would be required to perform groundwater monitoring functions. In that event, prescribed entities with authority to assume groundwater monitoring functions with regard to a basin or subbasin for which the department has assumed those functions would not be eligible for a water grant or loan awarded or administered by the state.

(2) Existing law requires the department to conduct an investigation of the state’s groundwater basins and to report its findings to the Governor and the Legislature not later than January 1, 1980.

This bill would repeal that provision. The department would be required to conduct an investigation of the state’s groundwater basins and to report its findings to the Governor and the Legislature not later than January 1, 2012, and thereafter in years ending in 5 or 0.

(3) The bill would take effect only if SB 1 and SB 7 of the 2009–10 7th Extraordinary Session of the Legislature are enacted and become effective.

The people of the State of California do enact as follows:

SECTION 1. Part 2.11 (commencing with Section 10920) is added to Division 6 of the Water Code, to read:

PART 2.11. GROUNDWATER MONITORING

CHAPTER 1. GENERAL PROVISIONS

10920. (a) It is the intent of the Legislature that on or before January 1, 2012, groundwater elevations in all groundwater basins and subbasins be regularly and systematically monitored locally and that the resulting groundwater information be made readily and widely available.

(b) It is further the intent of the Legislature that the department continue to maintain its current network of monitoring wells, including groundwater elevation and groundwater quality monitoring wells, and that the department continue to coordinate monitoring with local entities.

10921. This part does not require the monitoring of groundwater elevations in an area that is not within a basin or subbasin.

10922. This part does not expand or otherwise affect the powers or duties of the department relating to groundwater beyond those expressly granted by this part.

CHAPTER 2. DEFINITIONS

10925. Unless the context otherwise requires, the definitions set forth in this section govern the construction of this part.

(a) “Basin” or “subbasin” means a groundwater basin or subbasin identified and defined in the department’s Bulletin No. 118.

(b) “Bulletin No. 118” means the department’s report entitled “California’s Groundwater: Bulletin 118” updated in 2003, or as it may be subsequently updated or revised in accordance with Section 12924.

(c) “Monitoring entity” means a party conducting or coordinating the monitoring of groundwater elevations pursuant to this part.

(d) “Monitoring functions” and “groundwater monitoring functions” means the monitoring of groundwater elevations, the reporting of those elevations to the department, and other related actions required by this part.

(e) “Monitoring groundwater elevations” means monitoring groundwater elevations, coordinating the monitoring of groundwater elevations, or both.

(f) “Voluntary cooperative groundwater monitoring association” means an association formed for the purposes of monitoring groundwater elevations pursuant to Section 10935.

CHAPTER 3. GROUNDWATER MONITORING PROGRAM

10927. Any of the following entities may assume responsibility for monitoring and reporting groundwater elevations in all or a part of a basin or subbasin in accordance with this part:

(a) A watermaster or water management engineer appointed by a court or pursuant to statute to administer a final judgment determining rights to groundwater.

(b) (1) A groundwater management agency with statutory authority to manage groundwater pursuant to its principal act that is monitoring groundwater elevations in all or a part of a groundwater basin or subbasin on or before January 1, 2010.

(2) A water replenishment district established pursuant to Division 18 (commencing with Section 60000). This part does not expand or otherwise affect the authority of a water replenishment district relating to monitoring groundwater elevations.

(c) A local agency that is managing all or part of a groundwater basin or subbasin pursuant to Part 2.75 (commencing with Section 10750) and that was monitoring groundwater elevations in all or

a part of a groundwater basin or subbasin on or before January 1, 2010, or a local agency or county that is managing all or part of a groundwater basin or subbasin pursuant to any other legally enforceable groundwater management plan with provisions that are substantively similar to those described in that part and that was monitoring groundwater elevations in all or a part of a groundwater basin or subbasin on or before January 1, 2010.

(d) A local agency that is managing all or part of a groundwater basin or subbasin pursuant to an integrated regional water management plan prepared pursuant to Part 2.2 (commencing with Section 10530) that includes a groundwater management component that complies with the requirements of Section 10753.7.

(e) A county that is not managing all or a part of a groundwater basin or subbasin pursuant to a legally enforceable groundwater management plan with provisions that are substantively similar to those described in Part 2.75 (commencing with Section 10750).

(f) A voluntary cooperative groundwater monitoring association formed pursuant to Section 10935.

10928. (a) Any entity described in subdivision (a) or (b) of Section 10927 that seeks to assume groundwater monitoring functions in accordance with this part shall notify the department, in writing, on or before January 1, 2011. The notification shall include all of the following information:

(1) The entity's name, address, telephone number, and any other relevant contact information.

(2) The specific authority described in Section 10927 pursuant to which the entity qualifies to assume the groundwater monitoring functions.

(3) A map showing the area for which the entity is requesting to perform the groundwater monitoring functions.

(4) A statement that the entity will comply with all of the requirements of this part.

(b) Any entity described in subdivision (c), (d), (e), or (f) of Section 10927 that seeks to assume groundwater monitoring functions in accordance with this part shall notify the department, in writing, by January 1, 2011. The information provided in the notification shall include all of the following:

(1) The entity's name, address, telephone number, and any other relevant contact information.

(2) The specific authority described in Section 10927 pursuant to which the entity qualifies to assume the groundwater monitoring functions.

(3) For entities that seek to qualify pursuant to subdivision (c) or (d) of Section 10927, the notification shall also include a copy of the current groundwater management plan or the groundwater component of the integrated regional water management plan, as appropriate.

(4) For entities that seek to qualify pursuant to subdivision (f) of Section 10927, the notification shall include a statement of intention to meet the requirements of Section 10935.

(5) A map showing the area for which the entity is proposing to perform the groundwater monitoring functions.

(6) A statement that the entity will comply with all of the requirements of this part.

(7) A statement describing the ability and qualifications of the entity to conduct the groundwater monitoring functions required by this part.

(c) The department may request additional information that it deems necessary for the purposes of determining the area that is proposed to be monitored or the qualifications of the entity to perform the groundwater monitoring functions.

10929. (a) (1) The department shall review all notifications received pursuant to Section 10928.

(2) Upon the receipt of a notification pursuant to subdivision (a) of Section 10928, the department shall verify that the notifying entity has the appropriate authority under subdivision (a) or (b) of Section 10927.

(3) Upon the receipt of a notification pursuant to subdivision (b) of Section 10928, the department shall do both of the following:

(A) Verify that each notification is complete.

(B) Assess the qualifications of the notifying party.

(b) If the department has questions about the completeness or accuracy of a notification, or the qualifications of a party, the department shall contact the party to resolve any deficiencies. If the department is unable to resolve the deficiencies, the department shall notify the party in writing that the notification will not be considered further until the deficiencies are corrected.

(c) If the department determines that more than one party seeks to become the monitoring entity for the same portion of a basin or

subbasin, the department shall consult with the interested parties to determine which party will perform the monitoring functions. In determining which party will perform the monitoring functions under this part, the department shall follow the order in which entities are identified in Section 10927.

(d) The department shall advise each party on the status of its notification within three months of receiving the notification.

10930. Upon completion of each review pursuant to Section 10929, the department shall do both of the following if it determines that a party will perform monitoring functions under this part:

(a) Notify the party in writing that it is a monitoring entity and the specific portion of the basin or subbasin for which it shall assume groundwater monitoring functions.

(b) Post on the department's Internet Web site information that identifies the monitoring entity and the portion of the basin or subbasin for which the monitoring entity will be responsible.

10931. (a) The department shall work cooperatively with each monitoring entity to determine the manner in which groundwater elevation information should be reported to the department pursuant to this part. In determining what information should be reported to the department, the department shall defer to existing monitoring programs if those programs result in information that demonstrates seasonal and long-term trends in groundwater elevations. The department shall collaborate with the State Department of Public Health to ensure that the information reported to the department will not result in the inappropriate disclosure of the physical address or geographical location of drinking water sources, storage facilities, pumping operational data, or treatment facilities.

(b) (1) For the purposes of this part, the department may recommend improvements to an existing monitoring program, including recommendations for additional monitoring wells.

(2) The department may not require additional monitoring wells unless funds are provided for that purpose.

10932. Monitoring entities shall commence monitoring and reporting groundwater elevations pursuant to this part on or before January 1, 2012.

10933. (a) On or before January 1, 2012, the department shall commence to identify the extent of monitoring of groundwater elevations that is being undertaken within each basin and subbasin.

(b) The department shall prioritize groundwater basins and subbasins for the purpose of implementing this section. In prioritizing the basins and subbasins, the department shall, to the extent data are available, consider all of the following:

- (1) The population overlying the basin or subbasin.
- (2) The rate of current and projected growth of the population overlying the basin or subbasin.
- (3) The number of public supply wells that draw from the basin or subbasin.
- (4) The total number of wells that draw from the basin or subbasin.
- (5) The irrigated acreage overlying the basin or subbasin.
- (6) The degree to which persons overlying the basin or subbasin rely on groundwater as their primary source of water.
- (7) Any documented impacts on the groundwater within the basin or subbasin, including overdraft, subsidence, saline intrusion, and other water quality degradation.
- (8) Any other information determined to be relevant by the department.

(c) If the department determines that all or part of a basin or subbasin is not being monitored pursuant to this part, the department shall do all of the following:

- (1) Attempt to contact all well owners within the area not being monitored.
- (2) Determine if there is an interest in establishing any of the following:
 - (A) A groundwater management plan pursuant to Part 2.75 (commencing with Section 10750).
 - (B) An integrated regional water management plan pursuant to Part 2.2 (commencing with Section 10530) that includes a groundwater management component that complies with the requirements of Section 10753.7.
 - (C) A voluntary groundwater monitoring association pursuant to Section 10935.

(d) If the department determines that there is sufficient interest in establishing a plan or association described in paragraph (2) of subdivision (c), or if the county agrees to perform the groundwater monitoring functions in accordance with this part, the department shall work cooperatively with the interested parties to comply with the requirements of this part within two years.

(e) If the department determines, with regard to a basin or subbasin, that there is insufficient interest in establishing a plan or association described in paragraph (2) of subdivision (c), and if the county decides not to perform the groundwater monitoring and reporting functions of this part, the department shall do all of the following:

(1) Identify any existing monitoring wells that overlie the basin or subbasin that are owned or operated by the department or any other state or federal agency.

(2) Determine whether the monitoring wells identified pursuant to paragraph (1) provide sufficient information to demonstrate seasonal and long-term trends in groundwater elevations.

(3) If the department determines that the monitoring wells identified pursuant to paragraph (1) provide sufficient information to demonstrate seasonal and long-term trends in groundwater elevations, the department shall not perform groundwater monitoring functions pursuant to Section 10934.

(4) If the department determines that the monitoring wells identified pursuant to paragraph (1) provide insufficient information to demonstrate seasonal and long-term trends in groundwater elevations, and the State Mining and Geology Board concurs with that determination, the department shall perform groundwater monitoring functions pursuant to Section 10934.

10933.5. (a) Consistent with Section 10933, the department shall perform the groundwater monitoring functions for those portions of a basin or subbasin for which no monitoring entity has agreed to perform the groundwater monitoring functions.

(b) Upon determining that it is required to perform groundwater monitoring functions, the department shall notify both of the following entities that it is forming the groundwater monitoring district:

(1) Each well owner within the affected area.

(2) Each county that contains all or a part of the affected area.

(c) The department shall not assess a fee or charge to recover the costs for carrying out its power and duties under this part.

(d) The department may establish regulations to implement this section.

10933.7. (a) If the department is required to perform groundwater monitoring functions pursuant to Section 10933.5, the county and the entities described in subdivisions (a) to (d),

inclusive, of Section 10927 shall not be eligible for a water grant or loan awarded or administered by the state.

(b) Notwithstanding subdivision (a), the department shall determine that an entity described in subdivision (a) is eligible for a water grant or loan under the circumstances described in subdivision (a) if the entity has submitted to the department for approval documentation demonstrating that its entire service area qualifies as a disadvantaged community.

10934. (a) For purposes of this part, neither any entity described in Section 10927, nor the department, shall have the authority to do either of the following:

(1) To enter private property without the consent of the property owner.

(2) To require a private property owner to submit groundwater monitoring information to the entity.

(b) This section does not apply to a county or an entity described in subdivisions (a) to (d), inclusive, of Section 10927 that assumed responsibility for monitoring and reporting groundwater elevations prior to the effective date of this part.

10935. (a) A voluntary cooperative groundwater monitoring association may be formed for the purposes of monitoring groundwater elevations in accordance with this part. The association may be established by contract, a joint powers agreement, a memorandum of agreement, or other form of agreement deemed acceptable by the department.

(b) Upon notification to the department by one or more entities that seek to form a voluntary cooperative groundwater monitoring association, the department shall work cooperatively with the interested parties to facilitate the formation of the association.

(c) The contract or agreement shall include all of the following:

(1) The names of the participants.

(2) The boundaries of the area covered by the agreement.

(3) The name or names of the parties responsible for meeting the requirements of this part.

(4) The method of recovering the costs associated with meeting the requirements of this part.

(5) Other provisions that may be required by the department.

10936. Costs incurred by the department pursuant to this chapter may be funded from unallocated bond revenues pursuant to paragraph (12) of subdivision (a) of Section 75027 of the Public

Resources Code, to the extent those funds are available for those purposes.

SEC. 2. Section 12924 of the Water Code is repealed.

SEC. 3. Section 12924 is added to the Water Code, to read:

12924. (a) The department, in conjunction with other public agencies, shall conduct an investigation of the state's groundwater basins. The department shall identify the state's groundwater basins on the basis of geological and hydrological conditions and consideration of political boundary lines whenever practical. The department shall also investigate existing general patterns of groundwater pumping and groundwater recharge within those basins to the extent necessary to identify basins that are subject to critical conditions of overdraft.

(b) The department shall report its findings to the Governor and the Legislature not later than January 1, 2012, and thereafter in years ending in 5 or 0.

SEC. 4. This act shall take effect only if Senate Bill 1 and Senate Bill 7 of the 2009–10 Seventh Extraordinary Session of the Legislature are enacted and become effective.

Approved _____, 2009

Governor

Appendix 8

**Neighboring County Groundwater Management
Plans and Ordinances**

Neighboring County Groundwater Management Plans and Ordinances

Statewide, twenty-nine counties have, or are considering, groundwater ordinances. The California Department of Water Resources' (DWR's) website lists the names of counties that have adopted ordinances. These ordinances are available on county web sites. Napa County's neighbors and near neighbors, such as Lake, Colusa, and Yolo Counties are included on DWR's list. Below are examples of preparation and implementation of integrated regional water management plans, groundwater management plans, and groundwater ordinances in nearby areas that were reviewed to gain an appreciation for the ways in which neighboring counties and regions have addressed groundwater resources in their planning documents or local ordinances.

Sonoma County

Sonoma County Water Agency

The Sonoma County Water Agency (Water Agency) considers itself to be a regional leader in water resources management. The Water Agency's mission is "to effectively manage the water resources in our care for the benefit of people and the environment through resource and environmental stewardship, technical innovation, and responsible fiscal management."

The Water Agency manages and maintains a water transmission system that provides naturally filtered Russian River water to nine cities and special districts that in turn delivers drinking water to more than 600,000 residents in portions of Sonoma and Marin Counties. Drinking water is provided to the following cities and special districts: City of Cotati, Marin Municipal Water District, North Marin Water District, City of Petaluma, City of Rohnert Park, City of Santa Rosa, City of Sonoma, Valley of the Moon Water District, and the Town of Windsor.

After 18 months of input from its customers and the public, on September 21, 2010, the Water Agency Board approved nine strategies (outlined in the Sonoma County Water Agency Water Supply Strategies Action Plan, 2010a), one of which is to implement integrated water management. The Action Plan outlines four Immediate Actions and three Near Term Actions for this strategy. For example, Immediate Action One includes: "Perform analyses required by Urban Water Management Planning Act to develop regional and local supply, conservation/demand management, and recycled water projects and programs to meet reasonable future needs of Water Agency customers." This action involves technical evaluations and discussions to develop the regional water supply portfolio. Once the portion of the water supply that Water Agency will provide through 2035 is established, the Water Agency and its water contractors will identify projects, costs, and financing mechanisms. The Water Agency and Water Contractors are commencing with this Urban Water Management Plan (UWMP) process.

Sonoma Valley

Groundwater resources play a highly significant role in the development, growth and sustainability of the Sonoma Valley, with more than half the water demand in a given year met by local groundwater resources (Water Agency, 2010a). Concerns have risen in response to the continuing and increasing demand on finite local groundwater supplies and the potential for their continued depletion unless proactive steps are taken. In response, a collaborative group of

twenty stakeholders, representing varied groundwater interests, has developed a Groundwater Management Plan for the Sonoma Valley. The collaborative process was sponsored by the Sonoma Valley Water Agency and was sponsored by the Agency and facilitated by the Center for Collaborative Policy, under contract to DWR. The collaborative group, called the Basin Advisory Panel, has representatives from local agriculture, dairies, government, local water purveyors, business, and environmental interests and started meeting in August 2006. The Panel developed and recommended the non-regulatory Groundwater Management Plan for adoption. The Sonoma County Water Agency, City of Sonoma, Valley of the Moon Water District, and the Sonoma Valley County Sanitation District adopted the plan in late 2007 (Water Agency, 2010a).

The Sonoma Valley Groundwater Management Plan area is the Sonoma Creek Watershed. The Groundwater Management Plan identifies a range of voluntary water management actions to sustain resources for future generations. A key component of the Plan is the monitoring program, which is strongly supported by participation in the volunteer groundwater level monitoring program that has been organized in part through and continues to be promoted with a comprehensive outreach, educational, and information sharing program.

Santa Rosa Plain

Similar to other areas described above, the Santa Rosa Plain, where half of the population of Sonoma County resides, faces the challenges associated with population growth and ensuring water supplies (primarily the Russian River and groundwater) are available to meet future water demands. Based on the progress and preliminary successes achieved related to the Sonoma Valley Groundwater Management Plan and related activities, the Water Agency directed its staff, with the assistance of the Center for Collaborative Policy (CCP), to investigate the feasibility of pursuing groundwater management for the Santa Rosa Plain, a subbasin of the Santa Rosa Valley Groundwater Basin (Water Agency, 2010b).

Similar to the interview process described in this Memorandum for Napa County, the CCP interviewed 55 individuals representing 37 organizations with an interest in groundwater between February and October 2009 to impartially assess issues and concerns related to groundwater management and to learn if and how stakeholders might want to address these issues.

The CCP's overall findings for the Santa Rosa Plain indicated competing interpretations on the value and potential of groundwater management planning, as well as a significant lack of technical understanding of the aquifer system beneath the Plain, including interaction between surface and groundwater resources. The CCP further concluded that collaborative groundwater planning for the Santa Rosa Plain Subbasin would require significant pre-planning steps to lay the foundation for a phased groundwater management planning process. These steps include convening a small, representative steering committee to guide pre-planning work and initiating a robust education effort and outreach campaign on the US Geological Survey (USGS) technical study and the groundwater management planning process (CCP, 2009).

The CCP also provided insights for success for preliminary groundwater management planning, which included (CCP, 2009): 1) raising interest in groundwater issues and highlighting success

stories, including the Sonoma Valley Groundwater Management Program; 2) sharing information, in particular providing information from the USGS technical study of the Santa Rosa Plain Subbasin as it becomes available; and 3) emphasizing the non-regulatory approach and local control aspects of groundwater management planning.

Solano County

The Solano County Water Agency (SCWA) is a wholesale water agency whose boundary covers the entire County area and also the property for the University of California at Davis in Yolo County, and a portion of Reclamation District No. 2068 (RD 2068) in Yolo County. SCWA provides untreated water to cities and agricultural districts in Solano County from the Federal Solano Project and the North Bay Aqueduct of the State Water Project. The agency also has a flood control function. SCWA's member agencies include (among others) RD 2068, Solano Irrigation District, Maine Prairie Water District, and the City of Vacaville.

SCWA IRWMP and Member Agencies Groundwater Management Plans

In 2005, SCWA prepared a Solano Agencies Integrated Regional Water Management Plan (IRWMP) on behalf of itself and its member agencies, including all the agencies overlying the Solano Subbasin (Solano Agencies, 2005). The IRWMP describes regional policies and projects for long-term water resources planning and management and identifies "Increased Use of Groundwater" and "Increase Opportunities for Conjunctive Use" as Tier 1 (the highest) priorities. The 2005 IRWMP has a very prominent groundwater management component. The IRWMP was developed through a broad stakeholder effort and public meetings which were held at several times during the plan development process. Groundwater management plans (GMPs) provided by some of SCWA's member agencies (including RD 2068, Solano Irrigation District, City of Vacaville and Maine Prairie Water District) were used as source documents for the development of the IRWMP and are consistent with the IRWMP. The GMPs include:

- Reclamation District No. 2068; GMP was adopted December 8, 2005.
- Solano Irrigation District; GMP was adopted January 16, 2006.
- City of Vacaville; the initial GMP was adopted February 28, 1995. Vacaville has updated their GMP to meet the requirements of SB 1938.
- Maine Prairie Water District; the GMP was adopted January 21, 1997. MPWD does not pump groundwater, so they have not updated their GWMP to satisfy SB 1938 requirements.

Agencies overlying the Solano area groundwater basins and subbasins have a history of collaboration and joint planning and management. The Solano Water Authority (SWA) as a joint powers authority established to perform water projects. One of the SWA projects is SWA No. 4 – Coordinated Groundwater Data Analysis Project. The purpose of this project is to collect groundwater data and monitor groundwater levels and water quality for the Solano Subbasin. Data for about 200 wells are reported. Reports are prepared biennially to document groundwater levels. SCWA prepares the reports and is the repository for groundwater data.

Each entity that has a GMP went through the required public process for adoption of the GMP. Notices were published, public hearings were held and adoption of the GMP was done at a public meeting of the governing boards of the agencies. No opposition to the GMPs was voiced at any of the public meetings. There is support for the GWMP's by all identified stakeholders in the Solano area basins and subbasins. Groundwater information to the public comes mainly from the agencies that use groundwater, including the Solano Irrigation District and City of Vacaville.

Local and regional cooperation and participation with other agencies in groundwater activities is evidenced by the collective groundwater management efforts through the Solano Water Authority and SCWA. Any disputes about groundwater management would be resolved through the Solano Water Authority forums or through SCWA acting as a neutral informed party with its member agencies.

Colusa County

Countywide Groundwater Management Plan

Colusa County's utilization of water resources to meet demands primarily focuses on surface water supplies, but groundwater also contributes to the total supply. Beginning in 2007, the County proactively embarked on groundwater management planning and associated programs to ensure long-term sustainability of the resource. A key objective of the development, and subsequent adoption, of the Colusa County Groundwater Management Plan is to demonstrate responsible stewardship of the water resources of Colusa County by avoiding adverse impacts that are irreversible or cannot be mitigated (UCD/Colusa County, 2010). The plan enables the County to be eligible for grant funding administered by DWR.

The Colusa County Groundwater Management Plan recognizes that it is not applicable to the land within the organized service areas. As stipulated in California Water Code Section 10750.8, ... "a local agency may not manage groundwater pursuant to this part within the service area of another local agency without the agreement of that other entity."

In Colusa County, it was important that more than two dozen water purveyors coordinate efforts and agree to participate in a single groundwater management plan that would serve the needs of all public and private water users in the County (Wood Rodgers, 2008). Only two of these purveyors had previously adopted groundwater management plans. As a result, adoption of the countywide plan provides an opportunity for the other water purveyors to participate in the plan process and save on the cost to prepare individual documents. It also affords those purveyors who decide to participate in the joint plan the opportunity to be eligible for DWR grant and loan funding.

With the adoption of the Colusa County Groundwater Management Plan in September 2008, its implementation applies to all portions of the County that are not served by another local agency. The purveyors without individual plans may still elect to develop their own plan at a later time; the countywide plan has no bearing on the local agencies authority. It is in the interest of the

county and local agencies to coordinate efforts and be consistent in their objectives and implementation.

Colusa County Groundwater Ordinance

Colusa County recognized that once its groundwater management plan had been adopted by the County Board of Supervisors, revision of the County's Groundwater Ordinance would be facilitated (Wood Rodgers, 2008). Revision to the County Groundwater Ordinance occurred in April 2009. The County's Code includes Chapter 43, Groundwater Management. This chapter delineates a long list of findings and its purpose for conserving and encouraging agricultural operations in the county. One of the many purposes of the ordinance is to protect the groundwater resources of the county from "harm resulting from the extraction of groundwater for use on lands outside the county..." The ordinance also recognizes the intent for the county and local agencies to jointly undertake the development of an integrated water resources management plan for each of the various regions of Colusa County. Importantly, the County's findings recognize "in adopting and codifying this groundwater management ordinance, the county does not intend to limit other authorized means of managing Colusa County groundwater, and intends to work cooperatively with interested local agencies to further develop and implement joint groundwater management practices."

Colusa County's Ordinance regulates the extraction and exportation of groundwater outside the county boundaries without first obtaining a permit. Groundwater extraction and substitution for surface water that has been, is being, or will be transferred for use outside the county is also included in the permit requirement. The County's Groundwater Commission is responsible for reviewing permit applications and determining whether the extraction activity would cause overdraft, will not cause any adverse effects on the groundwater aquifer(s) underlying the county, and will not exceed the annual yield of the aquifer underlying the county and will not otherwise cause injury to reasonable and beneficial use of the resource of overlying groundwater users.

Lake County

The Lake County Department of Water Resources has two branches. The first branch, the Lake County Watershed Protection District, plans and implements flood control projects including groundwater management planning and development of grant proposals among other things. The Watershed Protection District is responsible for maintaining levees and creeks, as well as a groundwater detention structure on Kelsey Creek (<http://www.co.lake.ca.us/Page0384.aspx>). The Watershed Protection District adopted a Resolution of Intent to Prepare a Groundwater Management Plan on October 4, 2005, which resulted in the Resolution Adopting the Lake County Groundwater Management Plan on April 11, 2006 (CDM and DWR, 2006). A total of 29 overlying agencies (local water districts, water companies, communities, etc.) agreed to be included in the Groundwater Management Plan at the time of the adoption.

In order to protect the groundwater resources within the county, Lake County regulates the extraction and exportation of groundwater through their Code of Ordinances (Lake County Code of Ordinances, Chapter 28). The Code requires a permit to export groundwater for use outside

the county, which includes groundwater substitution for surface water transfers in addition to extracted groundwater. The County's Commission is responsible for determining whether the extraction activity would cause overdraft, and will not cause any adverse effects on the groundwater aquifer(s) underlying the county. The county also regulates the construction, repair and reconstruction of wells and the destruction of abandoned wells to protect the health, safety and welfare of the citizens (Lake County Code of Ordinances, Chapter 9, Article VIII).

Lake County was initially involved in the development stages of the North Coast IRWMP; and, in 2008, Lake County signed on as a participant in that IRWMP (North Coast Regional Partnership, 2007). In addition, the Lake County Watershed Protection District works with the Yolo County Flood Control and Water Conservation District to address Clear Lake issues and to develop projects of mutual benefit with a focus on the Cache Creek watershed. Beginning in 2005, Lake County took initial steps toward developing an IRWMP for the county. Recently, for the portion of Lake County in the Cache and Putah Creek watersheds, Lake County plans to become part of the Westside IRWMP.

Yolo County

Groundwater Management Plans

Yolo County Flood Control and Water Conservation District (YCFCWD) published a Groundwater Management Plan in June, 2006. This Plan covers an area within the boundaries of YCFCWD, including parts of Cache Creek, West Yolo, East Yolo, and Dunnigan Hills groundwater subbasins. The main goal of the Plan is to 'maintain or enhance local groundwater quantity and quality, resulting in a reliable groundwater supply for beneficial uses and avoidance of adverse subsidence' (YCFCWD, 2006). The Plan sets forth basin management objectives that include minimizing the long-term drawdown of groundwater levels, protecting groundwater quality, minimizing changes to surface water flows and quality that directly affect groundwater levels or quality, facilitating groundwater replenishment and cooperative management projects, subsidence monitoring, and working with surrounding entities engaged in groundwater management. A major component of the YCFCWD Plan is the use of their WRID, or Water Resources Information Database, a comprehensive database constructed to manage groundwater data for all of Yolo County. The District houses and uses this database to manage information from YCFCWD monitoring wells as well as cooperating entities. The Plan sets forth three basin management objectives involving groundwater quantity, groundwater quality, and land subsidence.

Other AB3030 Groundwater Management Plans in Yolo County include: The City of Davis/UC Davis Joint Plan (2006); Dunnigan Water District's Plan (2007); City of Woodland's Plan (2008); Maine Prairie Water District's Plan (1997); Reclamation District 787's Plan (2005); Reclamation District 2068's Plan (2005); and the Groundwater Management Plan Update for Reclamation District 2035 (Conaway Ranch) (2008). Yolo County has had a grant-funded Groundwater Monitoring Program, which provides data that is used for developing and implementing the various management strategies in the County. The County has published a Budget Report and Proposal to the Water Resources Association of Yolo County (revised March, 2010) to maintain the Groundwater Monitoring Program with dedicated funding.

The Water Resources Association (WRA) of Yolo County published an IRWMP for the county in April 2007 (WRA, 2007). This document focuses on water management regarding water supply and drought preparedness, water quality, flood management and storm drainage, aquatic and riparian ecosystem enhancement, and recreation. The document discusses groundwater supplies, groundwater subbasin delineation, conjunctive management of surface water and groundwater, and contains an appendix that includes an assessment of groundwater quality.

The WRA supports the growing collaborative effort within the Westside Region and also neighboring regions. Therefore, the WRA does not plan to update the Yolo County IRWMP and instead has become a member of the Westside RWMG.

Yolo County Permits and Regulations

Yolo County also regulates the extraction and exportation of groundwater from the county, via a permitting process (Yolo County Code Title 10, Chapter 7). Yolo County also adheres to standards and regulations for the construction, abandonment, spacing, and water quality monitoring and reporting of public supply and domestic wells (Yolo County Code Title 6, Chapter 8).

San Francisco Bay Area

Bay Area Integrated Regional Water Management Plan

Napa County, as a member of the Association of Bay Area Governments (ABAG), along with the Napa Sanitation District and the City of Napa, has been involved in the development of an Integrated Regional Water Management Plan for the San Francisco Bay Area published November, 2006 (RMC et al., 2006). Groundwater extraction and recharge are discussed in the Plan, along with a brief section dedicated to groundwater management, which mentions Niles Cone Groundwater Basin Conjunctive Use Program, Zone 7 Groundwater Management Plan, and Santa Clara Valley Water District (SCVWD) Groundwater Management Program. The IRWM plan also discusses the protection and improvement of water quality in the Bay Area, including groundwater. For example, Zone 7 implements a Salt Management Plan that combines increased conjunctive use and shallow groundwater demineralization to reduce salt loading to the groundwater basin. The IRWM plan makes note of other efforts of conjunctive use occurring in the Bay Area, including Zone 7, SCVWD, San Francisco Public Utilities Commission's (SFPUC) Westside, Solano County Water Agency (SCWA), and Alameda County Water District (ACWD).

North Westside Groundwater Basin Management Plan

SFPUC published the North Westside Groundwater Basin Management Plan in April 2005 (SFPUC, 2005). This document contains information on groundwater basin conditions, current and projected water requirements and supplies, as well as four main management objectives or goals accompanied by thirteen plan elements. As part of the effort of groundwater resource management in the North Westside Basin, the SFPUC is currently monitoring groundwater withdrawal within the City of San Francisco using a permitting process to track and manage requests for non municipal groundwater pumping. San Francisco has municipal health codes

regarding soil boring and well regulations, including the construction, modification, operation, maintenance, inactivation, and destruction of groundwater wells (San Francisco Health Code, Article 12B).

Appendix 9

**Napa County Codes (Chapters 13.04, 13.12 and 13.15),
Water Availability Analysis Report (August 2007), and
Well Construction Application**

Napa County, California, Code of Ordinances >> Title 13 - WATER, SEWERS AND PUBLIC SERVICES >> Chapter 13.04 - APPROVED WATER SUPPLY SYSTEMS* >>

Chapter 13.04 - APPROVED WATER SUPPLY SYSTEMS*

Sections:

- [13.04.010 - Approved water supply system defined.](#)
- [13.04.020 - Connection required when.](#)
- [13.04.030 - Potability of water supply.](#)
- [13.04.040 - Minimum sustained yield for individual supply.](#)
- [13.04.050 - Determination of yield.](#)
- [13.04.060 - Compliance prerequisite to permit issuance.](#)
- [13.04.070 - Water storage tank requirement.](#)
- [13.04.080 - Resolution of conflicts with other regulations.](#)

13.04.010 - Approved water supply system defined.

An "approved water supply system" shall mean any of the following:

- A.** A public utility;
- B.** A public water system as defined in the California Health and Safety Code Section 116275 and approved by the appropriate authority, including a public water system for which a permit has been issued pursuant to the aforementioned code;
- C.** An individual water supply system consisting of a well, spring or any other source approved by the director of environmental management and developed in accordance with and meeting the standards of this division.

(Ord. 1252 § 8, 2005; Ord. 1159 § 1 (part), 1999)

13.04.020 - Connection required when.

Every new dwelling unit, for which a building permit is issued or for which an application for the issuance of a building permit is made, shall be connected to an approved water supply system. A dwelling unit, for purposes of this division, shall mean a room or connected rooms constituting a separate, independent, housekeeping establishment, physically separated from other rooms or dwelling units in the same structure and containing independent cooking or sleeping facilities.

(Ord. 1159 § 1 (part), 1999)

13.04.030 - Potability of water supply.

An individual water supply system shall provide water which is pure, wholesome and potable and does not endanger the lives or health of persons or otherwise adversely affect the public welfare.

(Ord. 1159 § 1 (part), 1999)

13.04.040 - Minimum sustained yield for individual supply.

The source of an individual water supply system shall have a sustained yield (as determined by Section 13.04.050) of not less than one gallon per minute per each dwelling unit.

(Ord. 1159 § 1 (part), 1999)

13.04.050 - Determination of yield.

- A. The determination of yield of any water supply source shall be made by continuous pumping until the production rate is established and the drawdown level stabilized for at least one hour. Wells with less than five gallons per minute shall be tested at maximum production for at least four hours. Other methods for the determination of yield may be required by the environmental management director and must receive prior approval by the environmental management director.
- B. The determination of yield of any water source under this division shall be made by the director of environmental management, and shall be supported by a record of tests performed by a person duly licensed to perform such tests in the state of California. The expense of such testing shall be borne by the applicant or the applicant's agent.
- C. The sustained yield of any water source shall be measured by bailing, pumping, air lifting, or by any manner that is generally accepted within the well-drilling industry. Determination of the sufficiency of such measurement and of the supporting records, however, shall rest solely with the director of environmental management. If a water source cannot maintain a minimum sustained yield as referenced in Section 13.04.040, it shall not be considered an approved water source. Water sources may not be combined for the purpose of meeting the required minimum sustained yield.

(Ord. 1159 § 1 (part), 1999)

13.04.060 - Compliance prerequisite to permit issuance.

The provisions of this division shall first be satisfied at applicant's expense, before the issuance of a building permit for any new dwelling unit.

(Ord. 1159 § 1 (part), 1999)

13.04.070 - Water storage tank requirement.

An individual water supply system having a sustained yield of at least one gallon but less than five gallons per minute shall have a water storage tank installed. Each storage tank shall have a minimum capacity of three thousand gallons for each dwelling unit. Each application for a permit shall be accompanied by a fee established by the board of supervisors. The installation of the water storage tank cannot be made until after the director of environmental management approves the installation and issues a permit for the installation.

(Ord. 1159 § 1 (part), 1999)

13.04.080 - Resolution of conflicts with other regulations.

Nothing in this division is intended to supersede the requirements of any applicable uniform building code or other statute, ordinance or regulation of any agency of government having superior or concurrent jurisdiction. In case of discrepancy between the requirements of this division and any other applicable standards, the stricter standard shall be observed.

(Ord. 1159 § 1 (part), 1999)

[Napa County, California, Code of Ordinances](#) >> [Title 13 - WATER, SEWERS AND PUBLIC SERVICES](#) >> [Chapter 13.12 - WELLS](#) >> [Article I. - General Provisions and Definitions](#) >>

[Article I. - General Provisions and Definitions](#)

- [13.12.010 - Purpose of provisions.](#)
- [13.12.020 - Ad hoc advisory committees.](#)
- [13.12.021 - Additives.](#)
- [13.12.022 - Applicant.](#)
- [13.12.030 - Annular space.](#)
- [13.12.040 - AWWA.](#)
- [13.12.050 - Bentonite clay.](#)
- [13.12.051 - Cathodic protection well.](#)
- [13.12.060 - Concrete.](#)
- [13.12.070 - Contamination or pollution.](#)
- [13.12.080 - Environmental management director \(director\).](#)
- [13.12.081 - Exploratory hole \(boring\).](#)
- [13.12.082 - Extraction well.](#)
- [13.12.083 - Geothermal heat exchange well.](#)
- [13.12.090 - Ground water.](#)
- [13.12.091 - Hazard.](#)
- [13.12.100 - Horizontal well.](#)
- [13.12.101 - Injection well.](#)
- [13.12.102 - Monitoring well.](#)
- [13.12.110 - Neat cement.](#)
- [13.12.120 - Sand-cement grout \(or grout\).](#)
- [13.12.130 - Sanitary well seal.](#)
- [13.12.140 - Sewage disposal system.](#)
- [13.12.150 - Sewer line.](#)
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- [13.12.190 - Tremie.](#)
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- [13.12.220 - Well.](#)
- [13.12.230 - Well cover.](#)
- [13.12.240 - Well destruction.](#)
- [13.12.250 - Well drilling contractor.](#)
- [13.12.251 - Well reconstruction.](#)

[13.12.010 - Purpose of provisions.](#)

This chapter is intended to regulate the drilling, construction, reconstruction, destruction, abandonment, maintenance and related activities, of all wells within the unincorporated portions of Napa County in such a manner that the groundwater or environment of the county will not be contaminated or polluted, for the protection of the public health, safety and welfare.

(Ord. 1194 § 3, 2002; Ord. 1159 § 1 (part), 1999)

[13.12.020 - Ad hoc advisory committees.](#)

The director of environmental management may, as is necessary, convene ad hoc advisory committees for the purpose of gathering information relevant to the subject matter of this division. Said committees may be composed of members of the Napa Chapter of the California Groundwater Association, qualified technical professionals, members of the community and other persons/organizations that may, in the discretion of the director, provide the aforementioned information.

(Ord. 1159 § 1 (part), 1999)

13.12.021 - Additives.

"Additives" means quick-setting cement, retardants, hydrated lime (up to ten percent of the volume of the cement) and bentonite (up to five percent) used in neat cement, sand-cement grout or concrete.

(Ord. 1159 § 1 (part), 1999)

13.12.022 - Applicant.

"Applicant" means a licensed (State Contractor's C-57 license) well-drilling contractor who has been hired to perform the work on behalf of the legal property owner(s). A copy of such license, and when applicable, a current certificate of insurance for workers compensation must be on file with the environmental management director.

(Ord. 1159 § 1 (part), 1999)

13.12.030 - Annular space.

"Annular space" means the space between an excavation and the casing of a well or the space between two concentric casings.

(Ord. 1159 § 1 (part), 1999)

13.12.040 - AWWA.

"AWWA" means American Water Works Association.

(Ord. 1159 § 1 (part), 1999)

13.12.050 - Bentonite clay.

"Bentonite clay" means a commercially prepared powder, granular, pelletized or crushed sodium montmorillonite clay. The largest dimension of pellets or chips shall be less than one-fifth the thickness of the annular space into which they will be placed. Bentonite clay mixtures shall be composed of Bentonite clay and clean water, thoroughly mixed before placement so that a uniform slurry is achieved. Bentonite clay materials are subject to approval by the environmental management director.

(Ord. 1159 § 1 (part), 1999)

13.12.051 - Cathodic protection well.

"Cathodic protection well" means any artificial excavation constructed by any method for the purpose of installing equipment or facilities to protect metallic objects in contact with the ground.

(Ord. 1159 § 1 (part), 1999)

13.12.060 - Concrete.

"Concrete" means Portland cement and aggregate mixed at a ratio of at least six ninety-four pound sacks of Portland cement per cubic yard of aggregate. In no case shall the size of the gravel in the aggregate be greater than one-fifth the radial thickness of the annular seal.

(Ord. 1159 § 1 (part), 1999)

13.12.070 - Contamination or pollution.

"Contamination" or "pollution" shall have the meanings ascribed to them in California Water Code Section 13050.

(Ord. 1159 § 1 (part), 1999)

13.12.080 - Environmental management director (director).

"Environmental management director" ("director") means the county director of the environmental management department or an authorized representative.

(Ord. 1159 § 1 (part), 1999)

13.12.081 - Exploratory hole (boring).

"Exploratory hole (boring)" means an uncased temporary excavation whose purpose is the immediate determination of hydrologic or geologic conditions at a site.

(Ord. 1159 § 1 (part), 1999)

13.12.082 - Extraction well.

"Extraction well" means an artificial excavation constructed by any method for the purpose of removing groundwater to be used either for permanent dewatering or for the removal of ground water for cleanup of contamination.

(Ord. 1159 § 1 (part), 1999)

13.12.083 - Geothermal heat exchange well.

"Geothermal heat exchange well" (including ground source heat pump wells) means any artificial excavation by any method, that uses the heat exchange capacity of the earth for heating and cooling (such as for air conditioning units) in which excavation the ambient ground temperature is eighty-six degrees Fahrenheit (thirty degrees Celsius) or less. A closed loop fluid system may be incorporated in the design.

(Ord. 1159 § 1 (part), 1999)

13.12.090 - Ground water.

"Ground water" means water below the surface of the ground at a depth such that it has been protected from surface pollution or contamination by an impervious soil stratum, or which has received an acceptable degree of natural treatment by filtration through a considerable amount of soil as generally understood in industry standards.

(Ord. 1159 § 1 (part), 1999)

13.12.091 - Hazard.

"Hazard" means a well which threatens to, or which contaminates or pollutes the ground water in such a way that it jeopardizes the health and safety of the public. A hazard also means anything which creates an unsanitary or unsafe condition resulting from a well.

(Ord. 1159 § 1 (part), 1999)

13.12.100 - Horizontal well.

"Horizontal well" means a water well drilled horizontally or at an angle different from vertical.

(Ord. 1159 § 1 (part), 1999)

13.12.101 - Injection well.

"Injection well" means an artificial excavation constructed by any method for the purpose of introducing water, nutrient solutions, treated water, or reclaimed water into the ground as a means of replenishing groundwater basins, or enhancing recovery of chemical constituents, or establishing hydrologic control over local ground water.

(Ord. 1159 § 1 (part), 1999)

13.12.102 - Monitoring well.

"Monitoring well" means any artificial excavation by any method for the purpose of monitoring fluctuations in ground water levels, quality of underground waters, or the concentration of contaminants in underground waters. For the purpose of this division, injection wells, vapor extraction wells and extraction wells for the purpose of removing ground water for the cleanup of contamination shall be considered monitoring wells.

(Ord. 1159 § 1 (part), 1999)

13.12.110 - Neat cement.

"Neat cement" means a mixture composed of one sack of Portland cement (ninety-four pounds) to not less than five nor more than seven gallons of water.

(Ord. 1159 § 1 (part), 1999)

13.12.120 - Sand-cement grout (or grout).

"Sand-cement grout" means a mixture composed of not more than two parts of sand and one part of Portland cement, and not less than five nor more than seven gallons of water per sack (ninety-four pounds) of cement.

(Ord. 1159 § 1 (part), 1999)

13.12.130 - Sanitary well seal.

"Sanitary well seal" means a device placed into the topmost part of a well casing which, by means of an expanding gasket, excludes foreign material from entering the well and may be provided with a means for introducing disinfecting agents directly into the well, or a device producing an equivalent effect. Such device shall be watertight to prevent the entrance of surface water and other contaminants into the well.

(Ord. 1159 § 1 (part), 1999)

13.12.140 - Sewage disposal system.

"Sewage disposal system" means a septic tank and subsurface disposal field or other type of system or appurtenance thereto, including sewage sump tanks and distribution boxes, whether individual, public or private, as defined in Chapter 13.16 of the Napa County Code, receiving domestic or industrial sewage waste. "Sewage disposal system" does not include a sewer line.

(Ord. 1159 § 1 (part), 1999)

13.12.150 - Sewer line.

"Sewer line" means a line conveying sewage waste matter from any building or premises to a point of disposal, such as to a septic tank or sewage treatment or disposal plant.

(Ord. 1159 § 1 (part), 1999)

13.12.160 - Shallow water well.

"Shallow water well" means any water well thirty feet or less in depth.

(Ord. 1159 § 1 (part), 1999)

13.12.170 - Spring.

"Spring" means a naturally occurring flow of ground water reaching the surface of the ground which may be developed as a water supply system.

(Ord. 1159 § 1 (part), 1999)

13.12.180 - Surface water.

"Surface water" means all those waters found on or immediately below the surface of the ground and that have not been filtered through any considerable amount of soil, as defined by industry standards, and which normally do not meet California drinking water standards and are not protected so as to exclude real or potential sanitary hazards. In the event that a conflict of opinion arises as to whether or not any waters are "surface waters," within the meaning of this division, the burden and expense of proving that such waters are not surface waters shall be upon the person or persons making such claim, and in the absence of findings to the contrary, the opinion and/or findings of the director shall be final.

(Ord. 1159 § 1 (part), 1999)

13.12.190 - Tremie.

"Tremie" means a tubular device or pipe used to place the sealant in the annular space.

(Ord. 1159 § 1 (part), 1999)

13.12.200 - Vapor extraction well.

"Vapor extraction well" means an artificial excavation constructed by any method for the purpose of injection, monitoring or extraction of vapors, into or from the predominantly unsaturated zone above the water table.

(Ord. 1159 § 1 (part), 1999)

13.12.210 - Water well.

"Water well" means any artificial excavation constructed by any method for the purpose of extracting water from, or injecting water into, the ground. This definition shall not include the following: (1) oil and gas wells; (2) geothermal wells constructed under the jurisdiction of the California Department of Conservation (except those wells converted to use as water wells) or (3) wells used for the purpose of dewatering excavations during construction, or stabilizing hillsides or earth embankments.

(Ord. 1159 § 1 (part), 1999)

13.12.220 - Well.

"Well" shall mean any artificial excavation constructed by any method for the purpose of extracting water from, or injecting water into, the ground. In addition, for the purpose of this division, the following structures are also defined as wells: abandoned wells, geothermal heat exchange wells (pumps), cathodic protection wells, exploratory holes (borings), extraction wells, horizontal wells, injection wells, monitoring wells, vapor extraction wells and water wells.

(Ord. 1159 § 1 (part), 1999)

13.12.230 - Well cover.

"Well cover" means a temporary device to cover the topmost part of a well casing. The device must be so constructed to be structurally sound, impervious, and prevent the entrance of foreign material.

(Ord. 1159 § 1 (part), 1999)

13.12.240 - Well destruction.

"Well destruction" means certain work done to an existing well, the intent of which is to effectively seal the entire well up to the ground surface, in such a manner that each intersected water stratum is sealed and isolated from every other stratum and from surface water. Destruction of wells shall be completed in accordance with the procedures outlined in Article IV of this division, or as otherwise specified by the director.

(Ord. 1159 § 1 (part), 1999)

13.12.250 - Well drilling contractor.

"Well drilling contractor" means a person who possesses a valid C-57 contractor's license in accordance with the provisions of the California Business and Professions Code, Section 7000, et. seq. and Water Code Section 13750.5.

(Ord. 1159 § 1 (part), 1999)

13.12.251 - Well reconstruction.

"Well reconstruction" means certain work done to an existing water well in order to restore its production, replace defective casing, seal off certain strata or surface water, or similar work. Well reconstruction does not include the cleaning out of sediments, surging or work related to a well's pump.

(Ord. 1159 § 1 (part), 1999)

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[Article II. - Permits and Inspection](#)

- [13.12.260 - Permit requirements.](#)
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[13.12.260 - Permit requirements.](#)

No construction, destruction or reconstruction of any well shall be commenced on any property until a permit to do such work has first been obtained from the director, except in the event of an emergency as set forth in Section 13.12.310.

(Ord. 1159 § 1 (part), 1999)

[13.12.270 - Water wells—Classes of permits.](#)

There shall be five types of water well permits, namely Class IA, Class IB, Class II, well reconstruction and well destruction.

- A. Class IA permits shall be obtained for the installation of a water well where such well location conforms with the minimum distances set forth in Section 13.12.340, and where the director deems no conditions exist which may result in a pollution or contamination of the ground water.
- B. Class IB permits shall be obtained for the installation of a water well where such well location is closer than the minimum distances set forth in Section 13.12.340, or where the director deems conditions exist which may result in contamination or pollution of the ground water unless special construction features are included in the well construction. A Class IB well permit shall not be issued until (1) after a reasonable effort, as determined by the director, to obtain a Class IA permit has been made, or unless (2) there exists on a parcel a size constraint which prohibits the construction of a Class IA well. At a minimum, special construction features shall include the following:
 - a. An annular seal having a minimum thickness of three inches.
 - b. An annular seal having a minimum depth of fifty feet or into the first impervious layer, whichever is greater.
 - c. The sealing material to be placed in the annular space by means of a tremie pipe, so as to fill the annular space from the bottom.
 - d. The well log must be made available to the director prior to sealing the annular space.
In no case shall a Class IB well permit be issued when the distance to any part of a sewage disposal system is less than fifty feet.
- C. Class II permits may be issued for replacement wells serving existing residential structures if it is determined by the director that special circumstances exist whereby the criteria for a Class IB permit cannot be met due to existing constraints on the property. Special construction requirements as determined by the director will be imposed.
- D. Reconstruction permits shall be obtained for any well reconstruction work.
- E. Destruction permits shall be obtained for any well destruction work.

(Ord. 1159 § 1 (part), 1999)

13.12.280 - Application requirements.

- A. Any person legally entitled, as defined in Section 13.12.300, to apply for and receive a permit shall make such application on forms provided for that purpose. Such person shall give a description of the character of the work proposed to be done, and the location and ownership of the job site. The director may require plans, specifications or drawings and such other information as deemed necessary, including but not limited to, all improvements on the parcel, and the location of sewage disposal systems and sewer lines on all adjoining parcels.

If a proposed well is to be located in a floodway, floodplain, or riparian zone as defined in the Napa County Code (Sections 16.04.250, 16.04.290, and 16.04.410), no permit to construct a well shall be issued until a permit has been obtained from Napa County public works department. The well and related equipment including the pressure tank, electrical box, air vent and other devices shall be constructed in such a manner as to prevent the entrance of flood waters into the well or related equipment.

- B. If the director determines that the plans, specifications, drawings, descriptions or information furnished by the applicant are in compliance with this chapter and other applicable requirements, said director shall issue the permit applied for upon payment of the required fee, as hereinafter fixed.
- C. All well permits shall be valid for a period of two years from the date of issue. The director, upon notification to the property owner, may enforce the same expiration deadlines as noted above on well permits issued prior to the effective date of this ordinance.

(Ord. 1159 § 1 (part), 1999)

13.12.290 - Fees.

Applications for a permit for well installation, reconstruction or destruction shall be accompanied by that fee established by resolution of the board of supervisors.

(Ord. 1159 § 1 (part), 1999)

13.12.300 - Issuance conditions.

No permit shall be issued to construct, reconstruct or destroy a well except to a licensed well-drilling contractor (or an authorized agent), as defined in Section 13.12.250 of this division.

(Ord. 1159 § 1 (part), 1999)

13.12.310 - Starting work without permit—Emergency work.

Any person who commences any work for which a permit is required by this division without first having obtained a permit therefor shall, if subsequently allowed to obtain a permit, pay double the permit fee for such work; provided, however, that this provision shall not apply to emergency work when proved to the satisfaction of the director that such work was urgent and necessary and that it was not practical to obtain a permit before commencement of the work. In all cases where such work was determined by the director to be an emergency, a permit must be obtained as soon as it is possible to do so, and if there is an unreasonable delay, as determined by the director, in obtaining such permit, a double fee as herein provided shall be charged.

(Ord. 1159 § 1 (part), 1999)

13.12.320 - Inspection of work required.

All wells for which a permit has been obtained may be inspected by the director to insure compliance with all the requirements of this division.

(Ord. 1159 § 1 (part), 1999)

13.12.321 - Proper disposal of drilling fluids and soil cuttings.

The applicant is required to see that safe and appropriate measures are taken in the handling and disposal of drilling fluids, soil cuttings, and other materials used or generated in connection with the permitted work. All drilling wastes must be controlled so as not to create conditions which violate applicable local, state and federal laws and regulations. Discharge of drilling wastes into the sanitary sewer or storm drain is prohibited unless authorized by the director. This provision does not modify the measures for proper handling, storage, and disposal of hazardous waste set forth in the California Health and Safety Code, Division 20, Chapter 6.5 and by the California Code of Regulations, Title 22, Division 4.5. In addition, mud pits created to confine drilling fluids shall be maintained during the well drilling operation so as not to be a nuisance. It shall be the applicant's responsibility to see that the mud pit is properly evacuated, or backfilled, or both, upon completion of the job.

(Ord. 1159 § 1 (part), 1999)

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Article III. - Construction Specifications

- [13.12.330 - Materials and workmanship—Standards.](#)
- [13.12.340 - Location—Distance from other facilities.](#)
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- [13.12.360 - Protection of wells during construction.](#)
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- [13.12.430 - Completion report—Driller responsibilities.](#)
- [13.12.440 - Protection of water supply.](#)
- [13.12.441 - Reconstruction of existing water wells.](#)

13.12.330 - Materials and workmanship—Standards.

All materials and workmanship shall be no less than the quality specified in this division. The requirements of these standards are minimal only, and any material or method determined by the director to give equivalent or better results may be required. Materials or methods not covered by these standards must meet the standards of the California Water Well Standards Bulletin 74-81 and the supplement thereto, bulletin 74-90, and must receive the written approval from the director prior to use. In the event of conflicting or contradictory requirements, the provisions of this division shall prevail. Except as otherwise contradictory, the California Water Well Standards Bulletin 74-81 and 74-90 and any subsequent supplements and revisions thereto are hereby incorporated by reference.

(Ord. 1159 § 1 (part), 1999)

13.12.340 - Location—Distance from other facilities.

- A. All water wells, geothermal heat exchange wells, extraction wells for the purpose of permanent dewatering, and horizontal wells shall be located as follows:

Minimum Distances	
From property line	5 feet
From septic tank and/or any portion of a sewage disposal system or sewage disposal system expansion area	100 feet
From public or private approved sewer line	25 feet
From a public road	SEE NAPA COUNTY CODE CHAPTER 18.112
From river, creeks	See Section 13.12.280

As determined by the director, special setback distances may be required when the above wells are located near the following: regulated or unregulated underground fuel or storage tanks; contaminated sites, sanitary landfills and large scale animal or fowl operations.

- B. Monitoring and cathodic protection wells, and exploratory borings shall maintain setbacks from potential sources of contamination as approved by the director. Such setbacks shall be dependent on the source of contamination, the depth of the monitoring or cathodic protection well, the depth and type of the annular seal, the formations which are penetrated, and the proposed usage.

(Ord. 1159 § 1 (part), 1999)

13.12.350 - Location—Exemptions.

A well may be located closer than the minimum distances prescribed in Section 13.12.340 if the director finds that compliance is impractical because of unusual conditions, or if the director finds that special standards may be applied to the well construction so that no danger of contamination or pollution to the ground water will result. Such special standards of construction shall be approved by the director, and additional inspections may be required to assure strict compliance with such special standards. Such a well shall require a Class IB or a Class II permit. The setback distances may be increased when a special hazard exists as determined by the director.

(Ord. 1159 § 1 (part), 1999)

13.12.360 - Protection of wells during construction.

At all times during the progress of the work, or whenever there is an interruption in work on a well, the well shall be protected to prevent ground water contamination.

(Ord. 1159 § 1 (part), 1999)

13.12.370 - Casing specifications.

- A. All materials used for well casings shall be approved by the director and shall be structurally capable to perform the functions for which it is designed; i.e., to maintain the hole by preventing its walls from collapsing, to provide a channel for conveyance of the water, and to provide a measure of protection of the quality of the water pumped.
- B. All casings shall be placed with sufficient care to avoid damage to casing sections or joints.
- C. The casing shall extend at least eight inches above the ground surface, and at least two inches above the surface of any surrounding concrete slab, or as determined by the director.

(Ord. 1159 § 1 (part), 1999)

13.12.380 - Sealing of annular space.

- A. The annular space of Class IA wells shall be filled with acceptable sealant having a minimum thickness of two inches.
- B. The sealing material shall consist of neat cement, sand-cement grout, bentonite clay, concrete or a mixture of such approved by the director. Used drillers' mud, cuttings or chips from drilling shall not be used as sealing material.
- C. The sealing material shall extend from two inches above the ground surface to at least twenty feet below the ground surface, or at least two feet into impervious soil, whichever is the greater, except in the case of shallow water wells where no water-bearing stratum is encountered below twenty feet, the seal shall extend to a minimum depth of ten feet, and except for water wells which will serve a public water system, the seal shall extend to a minimum depth of fifty feet or two feet into impervious soil, whichever is greater. If bentonite clay is used, the uppermost three feet of the annular space must be neat cement, sand-cement grout, or concrete and shall be placed only after the bentonite has had sufficient time to settle. The requirements of this subsection do not apply to monitoring wells, cathodic protection wells and exploratory holes.
- D. For monitoring wells, cathodic protection wells and exploratory holes, refer to Bulletin 74-90 for grouting requirements.
- E. The grout shall be applied in one continuous process either by pressure or by gravity in such a manner as to exclude surface and other undesirable water from the well. Sealing material shall be placed by methods (such as the use of a tremie pipe or equivalent) that prevent bridging or dilution of the sealing material or separation of sand or aggregate from the sealing material. Annular sealing materials shall not be installed by freefall unless the interval to be sealed is dry and no deeper than thirty feet below the ground surface.
- F. Prior to grouting the annular space, a bentonite clay seal consisting of pellets or other approved material may be placed at the bottom of the annular space.

(Ord. 1159 § 1 (part), 1999)

13.12.390 - Access openings into well casings.

Access openings into the well casing for air release, disinfection and any other purpose necessary for maintenance and operation of the well are permitted, but must have a watertight seal.

(Ord. 1159 § 1 (part), 1999)

13.12.400 - Well pits and below-ground discharge pipes.

- A. Well pits or below-ground discharge pipes may be permitted only when determined to be absolutely necessary by the director. Where the well casing terminates in a pit below the ground surface, the pit shall be constructed of monolithic, reinforced concrete, watertight in all respects. The top of such pit shall be covered with a concrete slab or equal material, or with a housing of satisfactory construction. The casing shall extend at least eight inches above the pit floor. The well pit shall be so constructed and protected so that flood, rain or surface waters cannot enter the pit. Additional requirements may be imposed where it is determined necessary by the director.
- B. The pit shall be provided with a drainage sump and an automatic sump pump and audio type alarm (or, if topography permits, a "free" discharge protected against entrance of rodents, insects or flooding). The discharge from the sump pump shall not be connected to any sewer or pipe drain. Pits shall have easy access for proper operation, maintenance and inspection of the equipment, and shall have a locked hatch. Doorways or hatches shall at all times effectively keep water out of the pit.

(Ord. 1159 § 1 (part), 1999)

13.12.410 - Disinfection requirements.

Newly constructed or repaired water wells shall be adequately treated in such a manner as to disinfect all parts of the well before or as the pump is set, with chlorine or an equal disinfecting chemical, to a strength of at least fifty parts per million of available chlorine, but not more than two-hundred parts per million, and held for at least eight hours, after which time the well shall be pumped to reduce the disinfecting chemical to a safe level.

(Ord. 1159 § 1 (part), 1999)

13.12.420 - Pump installation.

All pumps shall be installed so as to prevent contamination of the ground water supply by surface water or other contaminants. The pump shall be mounted through a sanitary well seal. There shall be an access opening for introduction of chlorine into the well and gravel pack.

(Ord. 1159 § 1 (part), 1999)

13.12.430 - Completion report—Driller responsibilities.

Upon completion of a well, the driller shall be responsible for the placing of a sanitary well seal, or if the pump is not installed immediately, a watertight and tamper-proof well cover shall be installed. The driller shall submit a report of completion within the time frame required by state law, made out in detail on the State Department of Water Resources reporting form to the director.

(Ord. 1159 § 1 (part), 1999)

13.12.440 - Protection of water supply.

- A. No person shall install or maintain a well in any manner that will result in the pollution or contamination of the ground water, or which allows the entrance of surface waters into the ground water.
- B. If evidence is presented to the satisfaction of the director that any existing well is polluting or contaminating the ground water, the director shall require that such well be destroyed in accordance with

the provisions of this division, or repairs be made to such well to eliminate the pollution or contamination or the entrance of surface water into the ground water.

- C. At a minimum, all water wells must be provided with a sanitary well seal. In circumstances where chemicals or other deleterious materials are injected into the water system, as a minimum an approved reduced pressure principle device or an approved air gap must also be provided at the well head.
- D. In the case of a flowing artesian well, the well head shall be sealed and vented to prevent the continuous discharge of well water on to the surface of the ground.

(Ord. 1159 § 1 (part), 1999)

13.12.441 - Reconstruction of existing water wells.

- A. In no case shall a reconstruction permit be issued for a water well where a sewage disposal system is located less than fifty feet away. For additional information regarding this matter, refer to Section 13.12.270(C) for Class II wells.
- B. If a water well is located greater than one hundred feet to a sewage disposal system, a reconstruction permit may be issued provided all efforts are made to meet the construction requirements of a Class IA well. If a well is located between fifty and one hundred feet from a sewage disposal system, a reconstruction permit may be issued if all efforts are made to meet the construction requirements for a Class IB well.

(Ord. 1159 § 1 (part), 1999)

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[Article IV. - Destruction of Abandoned Wells](#)

[13.12.460 - Abandoned wells.](#)

[13.12.480 - Destruction of wells.](#)

[13.12.490 - Alternative well or test hole destruction methods.](#)

[13.12.460 - Abandoned wells.](#)

- A. The owner of any property shall be responsible for destroying any abandoned well located thereon. A well is considered to be abandoned when it has not been connected for service to any structure and/or not used for a period of one year. An abandoned well also includes a well which is in such a state of disrepair that no water can be produced.
- B. The well will not be considered abandoned if all of the following occur: (1) the owner declares his or her intention to the director, in writing, to use such well again for supplying water or for other approved purposes, (2) the well has no defects in construction which would cause pollution or contamination to the ground water by surface water, (3) the well is covered with a safe well cover, (4) the well is marked so as to be clearly seen, and (5) the ground area surrounding the well is sloped away from the casing and kept clear of brush and debris.

(Ord. 1159 § 1 (part), 1999)

[13.12.480 - Destruction of wells.](#)

- A. Prior to destroying a well, a detailed evaluation and report on the well shall be submitted to the director by a licensed well driller (as defined in Section 13.12.250). Such report shall indicate the type of well to be sealed, all known information of the geological conditions of the soil, and the methods and material to be used in the destroying and sealing process. The methods and materials used in destroying wells shall be such that the ground water is protected from pollution or contamination.
- B. When a water well or an abandoned water well is to be destroyed, it shall be destroyed as follows:
 1. Any obstructions in said well, including pipes, pump, etc. shall be removed when possible.
 2. As much casing shall be removed as possible, but not less than three feet below grade or as determined by the director.
 3. The well shall be filled with concrete, or "p" gravel to thirty feet or below the first impervious layer (if known), whichever is deeper. If the well is less than thirty feet deep, proceed to step 4.
 4. Fill well with concrete, neat cement or sand-cement grout to surface.
 5. The placement of the material shall be done in such a way as to assure a dense seal, free of voids, in order to exclude surface water. Gravity installation of sealant without the aid of a tremie or grout pipe shall not be used unless the interval to be sealed is dry.
- C. For the destruction of monitoring wells, cathodic protection wells or exploratory holes, refer to Bulletin 74 -90 for requirements.

(Ord. 1159 § 1 (part), 1999)

[13.12.490 - Alternative well or test hole destruction methods.](#)

Other methods of destroying wells, including large diameter wells and wells considered to pose a higher degree of risk to the ground water, may be approved by the director if in his opinion an equivalent effect will result, and no contamination or pollution to the ground water will occur.

(Ord. 1159 § 1 (part), 1999)

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[Chapter 13.15 - GROUNDWATER CONSERVATION*](#)

Sections:

- [13.15.010 - Title, purpose and definitions.](#)
- [13.15.020 - Groundwater permit required.](#)
- [13.15.030 - Classification of applications.](#)
- [13.15.040 - Agricultural activities exempt from groundwater permitting requirements.](#)
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- [13.15.060 - Application for groundwater permit.](#)
- [13.15.070 - Processing of groundwater permit applications.](#)
- [13.15.080 - Exceptions.](#)
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[13.15.010 - Title, purpose and definitions.](#)

- A.** Title. This chapter implements the Napa County Groundwater Conservation Ordinance.
- B.** Purpose. This chapter is intended to regulate, to the maximum extent possible, the extraction and use of groundwater resources in Napa County and to prohibit extraction for wasteful, unreasonable or non-beneficial purposes in order to promote groundwater conservation and the use of Best Management Practices and maximize the long-term beneficial use of the county's groundwater resources, thus serving to enhance environmental quality and protect the public health, safety and welfare of the citizens of Napa County.
- C.** Definitions. For the purpose of this chapter, the following definitions shall apply:
- "Agricultural land development" means the development, new plantings, or other improvement of a property greater than one-quarter of an acre for the purposes of farming a crop, orchard, vineyard or other agricultural product.

"Agricultural land re-development" means the re-development or replanting of an existing crop, orchard, vineyard or other agricultural product of greater than one-quarter of an acre.

"Aquifer" means a geologic formation, underground layers of porous rock that are saturated from above or from structures sloping toward it, that stores, transmits and yields significant quantities of water to wells and springs. Aquifer capacity is determined by the porosity of the subsurface material and its area.

"Best Management Practices (BMP)," as used in this chapter, means structural, nonstructural and managerial techniques generally recognized to be the most effective and practical means to reduce contamination and consumption of groundwater while still allowing productive use of the resource, including, but not limited to: low flow fixtures, drip in lieu of broadcast irrigation, irrigation during hours of least evaporation loss, timers on irrigation systems, use of pool and spa covers to reduce evaporation, use of xeriscape landscaping, use of recycled water for landscaping purposes, and monitoring of wells.

"Conservation" means the conscious effort to prevent waste and minimize the consumption of groundwater by utilizing reasonable and economically justifiable methods to improve its delivery and use, thus increasing water supplies for optimum long-term benefits. When referring to landscaping or agricultural uses of groundwater this term includes water reuse, processes to reduce the amount of water irretrievably lost to moisture deficient soils, water surface evaporation, or evapotranspiration.

"Contiguous parcel" means parcels which abut, adjoin or otherwise touch each other at more than one point along a common boundary or which would do so except for separation by a strip of land over which some person or entity, other than the owner of the parcels, has some property interest, including fee title or some lesser interest, such as a leasehold or easement. Examples of such strips of land include but are not limited to roads, streets, utility easements, railroad rights-of-way, canals and drainage channels.

"Convenience improvement" means an addition, change, upgrade, improvement or replacement of a site's existing well or water supply and distribution system (including the addition of plumbing fixtures) which is for purposes of rendering the system more efficient and is not intended to supply water or make plumbing

fixtures available to additional users of said system and does not increase the total consumption of groundwater at that site. If a replacement well is permitted, the existing well must be destroyed under permit by the Department of Environmental Management and the new well must be drilled to the same or smaller diameter as the existing well.

"Department" means the Napa County Department of Environmental Management.

"Director" means the Napa County Director of Environmental Management or the designee of the director.

"Director of public works" means the Napa County Director of Public Works or the designee of the director.

"Efficient use" means those management measures that result in the most effective use of water so as to prevent its waste or unreasonable use or unreasonable method of use.

"Evapotranspiration" means the loss of water from the soil through both evaporation and transpiration from plants.

"Graywater" means domestic wastewater other than that containing human excrete such as sink drainage, washing machine discharge or bathwater.

"Groundwater" means all water beneath the surface of the earth within the zone below the water table in which the soil is completely saturated with water.

"Groundwater deficient area" means an area where the amount of groundwater is inadequate to meet particular demands at a particular time, as shown in Map 13-1 at the end of this chapter.

"Groundwater permit" means a permit issued pursuant to this chapter to use groundwater.

"Harvested water" means the collection and use of rainwater as a means to augment or replace other sources of water.

"Improvement" or "improve," as related to a well or water supply system, means the construction, reconstruction, replacement, or addition to, any portion of a water supply and distribution system for the purposes of providing water for a new use or an additional use (unless specifically exempt under this chapter). This definition is not intended to include simple plumbing repairs to existing fixtures, pipes or equipment such as replacing or repairing existing faucets, hoses, drains, sinks, toilets, tubs, showers, washing machines, swimming pool and spa filter pumps, irrigation equipment, and the like, unless such repair or replacement will potentially increase the rate and/or amount of groundwater extraction.

"Minor improvement" means a modification to an existing water supply that involves simple repair or replacement of pipes, fittings, faucets, hoses, pumps, meters, components of irrigation systems, sinks, tubs, toilets, showers, washing machines, and all other elements of the water supply and delivery system that will not potentially increase the amount of groundwater extraction at that site. For the purposes of this definition, swimming pools (if filled with trucked in water from a supply source that does not include groundwater from a groundwater deficient area and is provided with a cover), replacement dwellings (when an existing legal dwelling unit had previously existed on the property) and additional potential bedrooms whether or not attached to the single-family dwelling unit are considered minor improvements. Any modification or improvement that will increase the amount of groundwater extracted is not a minor improvement.

"Overdraft" means the withdrawal of water from an aquifer in excess of the amount of water that recharges the basin over a period of years during which water supply conditions approximate the average, and which, if continued over time, could eventually cause the underground supply to be exhausted, cause subsidence, cause the water table to drop below economically feasible pumping lifts, cause a detrimental change in water quality, or produce other adverse environmental impacts.

"Parcel" means a legal lot of record.

"Potential bedroom" means any room with a floor area equal to or greater than seventy square feet, including lofts, sewing rooms, offices, game rooms, etc., that meet building codes for a sleeping room. A closet or lack thereof is not used in determining whether a room is a potential bedroom.

"Public water supply" means a water supply provided by a local agency, publicly owned corporation, or approved utility company.

"Recharge" means replenishment of groundwater by flows to groundwater storage from precipitation, irrigation, infiltration from streams, a spreading basin or other sources of water.

"Recycled water" means the reclamation and reuse of wastewater or graywater for beneficial use.

"Single-family dwelling unit" means a dwelling unit containing not more than one kitchen, designed to be occupied by not more than one family, and includes a manufactured home as defined in Section 18.08.360 which is installed on a permanent foundation and certified under the National Manufactured Housing Construction and Safety Standards Act of 1974.

"Site" means the location of a system to extract and distribute groundwater, such as a well and connecting plumbing which supplies water to a residence or other structure or use.

"Subsidence" means lowering or sinking of the land surface as a result of the extraction of groundwater.

"Transpiration" means the process by which water absorbed by plants (usually through the roots) is evaporated into the atmosphere from the plant surface.

"Water supply system" means any system including the water source the purpose of which is to extract and distribute groundwater.

"Water table" means the surface or level where groundwater is encountered in an unconfined aquifer.

"Xeriscaping" means a form of landscaping that uses a variety of indigenous and drought-tolerant plants, shrubs and ground cover to provide environmental benefits.

(Ord. 1294 § 1 (part), 2007; Ord. 1230 § 3, 2003)

13.15.020 - Groundwater permit required.

- A. No applications filed pursuant to Division I (Water) of this title for development of a new water system or improvement of an existing water system within Napa County that may use groundwater as a water source shall be approved by any employee, department or body of Napa County unless it is specifically exempted by this chapter or unless a groundwater permit is obtained as required by this chapter.
- B. Prior to the issuance of a building permit pursuant to Section 15.08.040, or any other permit or administrative approval facilitating the development or use of any parcel that may utilize a groundwater supply, a groundwater permit must be obtained unless specifically exempted by this chapter.
- C. Prior to the final approval of a subdivision, a groundwater permit must be obtained if required by this chapter and an existing, new or improved water system will provide groundwater to the subdivision.
- D. No application filed pursuant to Chapter 18.108 (Conservation Regulations) shall be approved by any employee, department or body of Napa County until the applicant has obtained a groundwater permit if required by this chapter.
- E. Agricultural land development or re-development that is located on parcels included within those groundwater deficient areas depicted on Map 13-1 which will utilize groundwater and which is not subject to the requirements of subsection (D) of this section or Chapter 18.108 is subject to review and approval by Napa County in the form of a groundwater permit.
- F. No application filed pursuant to Chapter 17.46 (Lot Line Adjustments) shall be approved by any employee, department or body of Napa County when the resultant parcel configuration increases the intensity of groundwater use of any parcel unless specifically exempted by this chapter.
- G. A groundwater permit shall be waived if a new water using activity or use on a parcel will be supported by water from an outside source and will not utilize groundwater. The property owner shall, if and when requested by the county, provide evidence that such an outside source of water is actually available and being used.

(Ord. 1294 § 1 (part), 2007; Ord. 1230 § 3, 2003)

13.15.030 - Classification of applications.

Applications described in Section 13.15.020 shall be classified as follows for the purpose of determining whether a groundwater permit is required by this chapter:

- A. Applications Exempt from Groundwater Permit Requirement.
 - 1. In the case of uses permitted without a use permit under any provision of this code, the applications or development set forth in Section 13.15.020 are exempt from the requirement that a groundwater permit must be obtained unless the application or development:

- a. Is for a project located on a parcel included within those groundwater deficient areas depicted on Map 13-1 and is not otherwise specifically exempted;
 - b. Is to develop or improve an on-site or off-site water supply serving more than a single contiguous parcel; or
 - c. Where the development or improvement, regardless of the number of parcels served, is able to connect to a public water supply.
 2. Applications to develop or improve an on-site or off-site water source serving agriculture are also exempt from the requirement of a groundwater permit under this chapter to the extent provided in Section 13.15.040.
 3. Applications to construct or develop rainwater harvesting or graywater recycling systems when that is the sole purpose of the project and the resulting harvested or recycled water will be used to augment existing groundwater sources or as the sole source of water for use at that site.
 4. Minor improvements to a water system.
 5. Convenience improvements to a water system.
 - B. Applications Requiring Use Permits. In the case of a proposed development requiring the issuance of a use permit pursuant to any provision of this code, applications which propose to develop, improve or utilize an on or off-parcel groundwater source in conjunction with such development are not required to obtain a groundwater permit under this chapter. Groundwater review of such applications shall occur in accordance with the county's procedures to obtain a use permit.
 - C. Applications Involving a Ministerial Approval.
 1. Applications for a single-family dwelling unit and associated landscaping on parcels two acres in size or less, when such residence will be the only use on the parcel, shall be issued a groundwater permit providing they install a meter on the well serving the parcel, read the meter every six months, and report these meter readings to the public works department when requested by that department. If the parcel is greater than two acres, a ministerial permit shall be issued providing they meet the following requirements:
 - a. The permittee shall install a meter on the well serving the parcel to measure all groundwater used on the parcel. The configuration of the installation shall conform to a drawing prepared by the permittee and shall conform to the technical standards set forth by the director of public works.
 - b. On or near the first day of each month the permittee shall read the water meter and provide this data to the director of public works during the first week of April and October of each year. The permittee shall also grant to the director of public works the right to access and verify the operation and readings of the meters and well levels at any reasonable time during regular working hours.
 - c. The permittee shall be limited to 0.60 acre feet of water per year or such other amount as may be adopted by the board by resolution.

This groundwater permit shall not be available when other dwellings, accessory uses, agricultural development or other discretionary uses exist on the property or when water from an approved public water system is available to the property. In such cases, a groundwater permit must first be obtained pursuant to the procedures set forth in Section 13.15.060 et seq. Any permittee that qualifies for a groundwater permit issued pursuant to this section may instead apply for a groundwater permit pursuant to the procedures set forth in Section 13.15.060 et seq.
 2. Applications for agricultural land redevelopment that will utilize groundwater on parcels included within those groundwater deficient areas depicted on Map 13-1 shall be issued a groundwater permit without any additional requirements providing the size of the replant is two acres in size or less. If the replant is greater than two acres, a ministerial permit will be issued providing that they meet the following requirements:
 - a. The permittee shall install a meter on all wells or water supply and distribution systems serving the parcel to measure all groundwater used on the parcel. The configuration of the installation shall conform to a drawing prepared by the permittee and shall conform to the technical standards set forth by the director of public works.
 - b. On or near the first day of each month the permittee shall read the water meter and provide this data to the director of public works during the first week of April and October of each year. The permittee shall also grant to the director of public works the right to access and verify the operation and readings of the meters and well levels at any reasonable time during regular working hours.
 - c. The permittee shall be limited to an average of 0.30 of acre feet of water per acre per year or such amount as may adopted by the board by resolution. This limitation shall be calculated as the average water used over a three-year period with no

yearly use exceeding the acre foot of water per acre per year allotment by more than fifteen percent.

Any permittee that qualifies for a groundwater permit issued pursuant to this section may instead apply for a groundwater permit pursuant to the procedures set forth in Section 13.15.060 et seq.

- D.** Applications for a minor modification or cancellation of an existing groundwater permit.
- 1.** Applications for a minor modification or a cancellation of an existing groundwater permit shall be made through a ministerial permit process.
 - 2.** Applications for a minor modification or cancellation of an existing groundwater permit shall be made to the department in writing on a form prescribed by the department. The application shall state the grounds for the application, the specific modification being requested and shall include any information or evidence needed to support the request. The application shall also demonstrate that the proposed use complies with the standards required for issuance of a groundwater permit as set forth in this chapter.
 - 3.** An application for an administrative permit for a minor modification or cancellation of an existing groundwater permit shall be accompanied by a fee in the amount established by resolution of the board of supervisors.
 - 4.** Issuance Prerequisites. An application for a minor modification or cancellation of an existing groundwater permit shall be considered only if the following standards are met:
 - a.** Minor Modification. The proposed modification does not increase water use over the existing permitted use and the resultant water use request meets the fair share standard for the parcel as established in the Department of Public Works Water Availability Policy Report (even if the original permit allowed a higher water use) and the application does not request a modification to a ministerial permit that would have otherwise been processed through the groundwater permit process outlined in Section 13.15.060; or
 - b.** Cancellation. The cancellation of a groundwater permit shall only be allowed if evidence is submitted that the project which triggered the groundwater permit has been cancelled and is no longer being pursued.

If the modification request is not able to meet the above standards, the applicant has the option of applying for a new groundwater permit pursuant to Section 13.15.060.

(Ord. 1294 § 1 (part), 2007; Ord. 1254 § 7, 2005; Ord. 1230 § 3, 2003)

13.15.040 - Agricultural activities exempt from groundwater permitting requirements.

- A.** Applications to develop or improve a water source serving agriculture, as defined in Section 18.08.040 of this code, shall be exempt from the requirement of a groundwater permit under this chapter where the water would only serve the property where the water source is located, or contiguous property. For purposes of this section only, "contiguous property" refers to property in common ownership that is joined at more than one common point to the property the water source is located, or connected in a pattern of parcels, each joined to another, that includes the property where the water supply system is located. If the contiguous property consists of more than one parcel, all parcels must be in agricultural production, in order to qualify for an exemption pursuant to this section. To qualify for the exemption in this section, in the case of parcels designated Agricultural Resource ("AR") or Agriculture, Watershed and Open Space ("AWOS") at least eighty percent of the allowable, plantable land of each parcel must be in agricultural production.
- B.** Developments or improvements in water sources serving agriculture on any other properties, including adjacent property not qualifying as "contiguous" for purposes of this section, shall be subject to the same permitting criteria and standards identified in Sections 13.15.030 and 13.15.070.
- C.** Notwithstanding subsection (A) of this section, developments or improvements in water sources located on parcels included within those groundwater deficient areas depicted on Map 13-1 shall be subject to those permitting criteria and standards identified in Sections 13.15.030 and 13.15.070.

(Ord. 1294 § 1 (part), 2007; Ord. 1230 § 3, 2003)

13.15.050 - Application for determination of exemption.

- A.** Prior to any employee, department or body of Napa County issuing any permit or approval as set forth in Section 13.15.020, said employee, department or body must first make a preliminary determination if a

groundwater permit is required (or must be provided with such preliminary determination from another employee, department or body). Said determination shall consider if the permit or approval:

1. Is for a specific exemption as set forth in this chapter; or
 2. Falls within the definition of a minor improvement or convenience improvement; or
 3. Is eligible for a groundwater permit issued pursuant to subsection (C) of Section 13.15.030.
- B.** If the proposed project is determined to be exempt from the requirement of a groundwater permit for reasons other than an agricultural exemption, no further groundwater review shall take place and a determination of exemption shall be issued by the director.
- C.** If the proposed project is claiming an agricultural exemption, the applicant must submit to the department an application for a groundwater permit agricultural exemption. The director shall respond, in writing, to the applicant on or before the end of fifteen days from the date of submittal. If the proposed project is determined by the director to be exempt from the requirement of a groundwater permit on the basis of the agricultural exemption authorized by Section 13.15.040 the holder of the exemption shall be required to file with the department a biennial report demonstrating that the parcel continues to be in at least eighty percent agricultural production of the allowable, plantable land. If the proposed project is determined not to be exempt from the groundwater review process, the determination of the director shall serve as notice to the applicant that a groundwater permit must be issued before the proposed project is begun.
- D.** If the proposed project is determined not to be exempt based on a preliminary determination, the employee, department or body of Napa making such determination shall provide written notice to the applicant that a groundwater permit must first be issued.

(Ord. 1294 § 1 (part), 2007: Ord. 1230 § 3, 2003)

13.15.060 - Application for groundwater permit.

Each applicant determined not to be exempt or eligible for a groundwater permit issued pursuant to subsection (C) of Section 13.15.030 shall be required to obtain a groundwater permit and shall submit a groundwater permit application to the director, using a form provided by the director. That application shall:

- A.** Identify any present and future uses of any existing water system, including whether and to what extent groundwater is or will be used as a water source on the affected property. For the purposes of this chapter, when an applicant identifies the existing water uses on a parcel to establish the existing water use level on that parcel, those existing uses which will be considered by the director are only those legitimate water using activities such as residential structures, other legal uses (wineries, etc.), vineyards, or other viable agricultural crop or animal operation which were not discontinued for more than two years prior to the date of the application for the groundwater permit. Random irrigation practices that serve no beneficial use (e.g., watering pasture when no animal or crop is dependent on that water) will not be considered as an existing water use. For the purposes of the application, future uses are those for which permits will be secured or improvements completed within two years of the application;
- B.** Identify any water sources other than groundwater intended to be used;
- C.** If the proposed application is for the development of a new water system or improvement to an existing water system, state the number of parcels and service connections the new water system or improvement are intended to serve, identify the location of the structures and improvements to be served by that new or improved water system, and identify existing and future uses and users to be served by that new or improved water system;
- D.** Whether the intent is to transfer some or all of the groundwater extracted pursuant to the permit to a public agency for use by a public agency following issuance of the groundwater permit; and
- E.** In the form of a Water Availability Analysis-Phase I, as outlined in the Department of Public Works Water Availability Policy Report, as it may be amended from time to time, provide sufficient information and supporting documentation to enable the director of public works to determine whether it is likely the new water system, improvement or addition might significantly affect the impacted groundwater basin within Napa County, whether or not the proposed improvement or new system may be reasonably expected to adversely affect reasonable and beneficial uses of groundwater, interfere with surface water flows, or cause other adverse changes to the physical environment adversely affecting the impacted groundwater basin.

(Ord. 1294 § 1 (part), 2007: Ord. 1230 § 3, 2003)

13.15.070 - Processing of groundwater permit applications.

The following procedures and standards shall govern the review and disposition of applications requiring groundwater permits other than groundwater permits issued pursuant to subsection (C) of Section 13.15.030:

- A.** The director shall review an applicant's groundwater declaration submitted under this chapter for compliance with the requirements of this chapter and any other applicable provisions of law.
- B.** Following the director's determination that the groundwater declaration complies with Section 13.15.060, the director shall furnish a copy of the applicant's declaration to the director of the Department of Public Works to obtain the written comments of that department on the application. The director of public works shall instruct the applicant to perform any required phase II or III water availability analysis required by the written procedures established by the Department of Public Works. The Department of Public Works, in assessing any required phase II or phase III analysis, shall take into consideration the potential changes in static water levels of neighboring wells prior to submitting its comments. The director of public works shall submit its comments in the form of a written appraisal of the application to both the director of the Conservation, Development and Planning Department and the director. That appraisal shall assess the potential for significant negative impacts on the affected groundwater table, and assess potential adverse effects on reasonable and beneficial uses of groundwater, interference with surface water flows, or other adverse changes to the physical environment. The director of the Conservation, Development and Planning Department shall review the application and the written comments and appraisal from the director of public works for the purposes of conducting the required environmental review and shall submit their written comments to the director.
- C.** The director shall consider approving a groundwater permit only after reviewing the declaration, the environmental determination, and any written comments received regarding the application, including the written appraisal of the Department of Public Works. After that review, the director shall only approve a groundwater permit after making any necessary environmental determination and concluding, based on substantial evidence in the record, that the new water system, improvement or addition would not significantly affect the impacted groundwater basin in Napa County. In making this determination, the director shall consider, but is not limited to, the following factors: impact on the affected groundwater table; adverse effects on the reasonable and beneficial uses of groundwater; implementation of Best Management Practices; or other adverse changes to the physical environment.
- D.** In approving a groundwater permit, the director may impose reasonable conditions on the permittee as needed to satisfy the requirements of this chapter, minimize groundwater use and to protect the public health, safety and welfare including but not limited to requiring implementation of Best Management Practices, plumbing retrofits, installation of meters, monitoring and reporting, limits on groundwater consumption, and requirements that groundwater consumption be reduced in the future if the basin develops an overdraft condition. Additionally, any groundwater permit granted to a public agency, or granted to a person or persons who, subsequent to the issuance of the groundwater permit, intends to transfer some or all of the groundwater extracted pursuant to the permit to a public agency for use by a public agency, shall be valid for a maximum of three years. The grant of a permit subject to this three-year limitation shall include conditions relating to the termination and renewal of the permit; provided, however, that such conditions shall include, at a minimum, a condition that the permit may be renewed only upon the approving authority's finding that the renewal would not cause significant adverse effects on the affected groundwater basin or the surrounding agricultural operations.
- E.** If the director determines after review that the applicant's groundwater declaration satisfies the groundwater permitting requirements of this chapter, and any other applicable provisions of law, the director shall issue a tentative decision setting forth the conclusions reached in making the determination, and approving or conditionally approving a groundwater permit. If the director determines the application and groundwater declaration do not meet the permitting requirements of this chapter, or any other applicable provisions of law, the director shall issue a tentative decision denying the groundwater permit and setting forth the reasons therefore. Any tentative decision will be issued within thirty days of the date comments are received from the directors of public works and Conservation, Development and Planning.
- F.** Within seven calendar days of the issuance of the tentative decision, the director shall give notice of its issuance, including the date on which a tentative decision will become final if a written request for a public hearing is not requested, which date shall be not less than ten calendar days following the date notice of the tentative decision is mailed. The notice shall be given by all of the following means:

 - 1.** Notice shall be personally delivered or placed in the mail to the applicant seeking approval of a groundwater permit under this chapter.
 - 2.** Notice shall be placed in the mail to each public entity with jurisdiction over any portion of the groundwater basin in which the proposed extraction would be expected to occur.
 - 3.** Notice shall be personally delivered or placed in the mail to the owners of all real property, including businesses, corporations, or other public or private entities, as shown on the latest equalized assessment roll, within three hundred feet of the outer perimeter of the

properties that will utilize the extracted groundwater. In lieu of utilizing the assessment roll, the records of the county assessor or tax collector may be used if they contain information more recent than the assessment roll.

4. Notice shall be mailed to any person who has filed a written request therefor with the director. Such requests may be submitted at any time during the calendar year and shall apply for the balance of such calendar year.
- G. The tentative decision shall become final once the period identified in the notice during which a public hearing may be requested has expired without such written request for a public hearing having been received.
- H. If a public hearing is requested in a timely manner, the tentative decision shall be a nullity, in which case the director shall set the hearing date and personally deliver or mail a notice of the time, place and date of the hearing, in the same manner and to the same persons as the notice of the tentative decision was mailed or delivered. This notice shall be mailed not less than ten and not more than thirty calendar days prior to the date of the hearing. Any required hearing shall be de novo and shall commence within ninety days of receipt of a request for a hearing.
- I. The Director shall Conduct the Public Hearing. Any member of the public may attend and present oral testimony, written or other evidence, or both. The proceedings shall be electronically recorded and the tapes thereof retained in the director's custody for three years after the hearing except during such time as they may be undergoing transcription for preparation of the record on appeal.
- J. Within five calendar days following the conclusion of the public hearing, the director shall issue a final decision approving, conditionally approving, or denying the request to issue a groundwater permit. The director shall give notice of the final decision to all persons who appeared and presented testimony at the hearing.
- K. Final determinations of the director (or on appeal, the Board of Supervisors) are discretionary for purposes of the California Environmental Quality Act (Pub. Res. Code, Section 21000, et seq.) except that determinations of exemption pursuant to subsection (A) of Section 13.15.030 or the issuance of a groundwater permit pursuant to subsection (C) of Section 13.15.030 are deemed ministerial acts and are exempt from the California Environmental Quality Act.

(Ord. 1294 § 1 (part), 2007; Ord. 1230 § 3, 2003)

13.15.080 - Exceptions.

Notwithstanding any other provisions of this chapter:

- A. No groundwater permit shall be denied where the director (or on appeal, the Board of Supervisors) determines, after reviewing the entire record, that a denial would constitute an unconstitutional taking of property without just compensation, or would effect an unreasonable use or waste of water.
- B. The groundwater review and permitting requirements of this chapter shall be waived when applying them would delay effective response to a general emergency declared by the Governor of the State of California or the Napa County Board of Supervisors. "General emergency," as used herein, refers to a sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or other essential public services.

(Ord. 1294 § 1 (part), 2007; Ord. 1230 § 3, 2003)

13.15.090 - Appeals.

Any person may appeal a final decision of the director made, following a request for hearing pursuant to subsection (H) of Section 13.15.070, in accordance with the procedures set forth in Chapter 2.88 of this code. Appeals of tentative decisions that become final because no request for a hearing was received, are not permitted.

(Ord. 1294 § 1 (part), 2007; Ord. 1230 § 3, 2003)

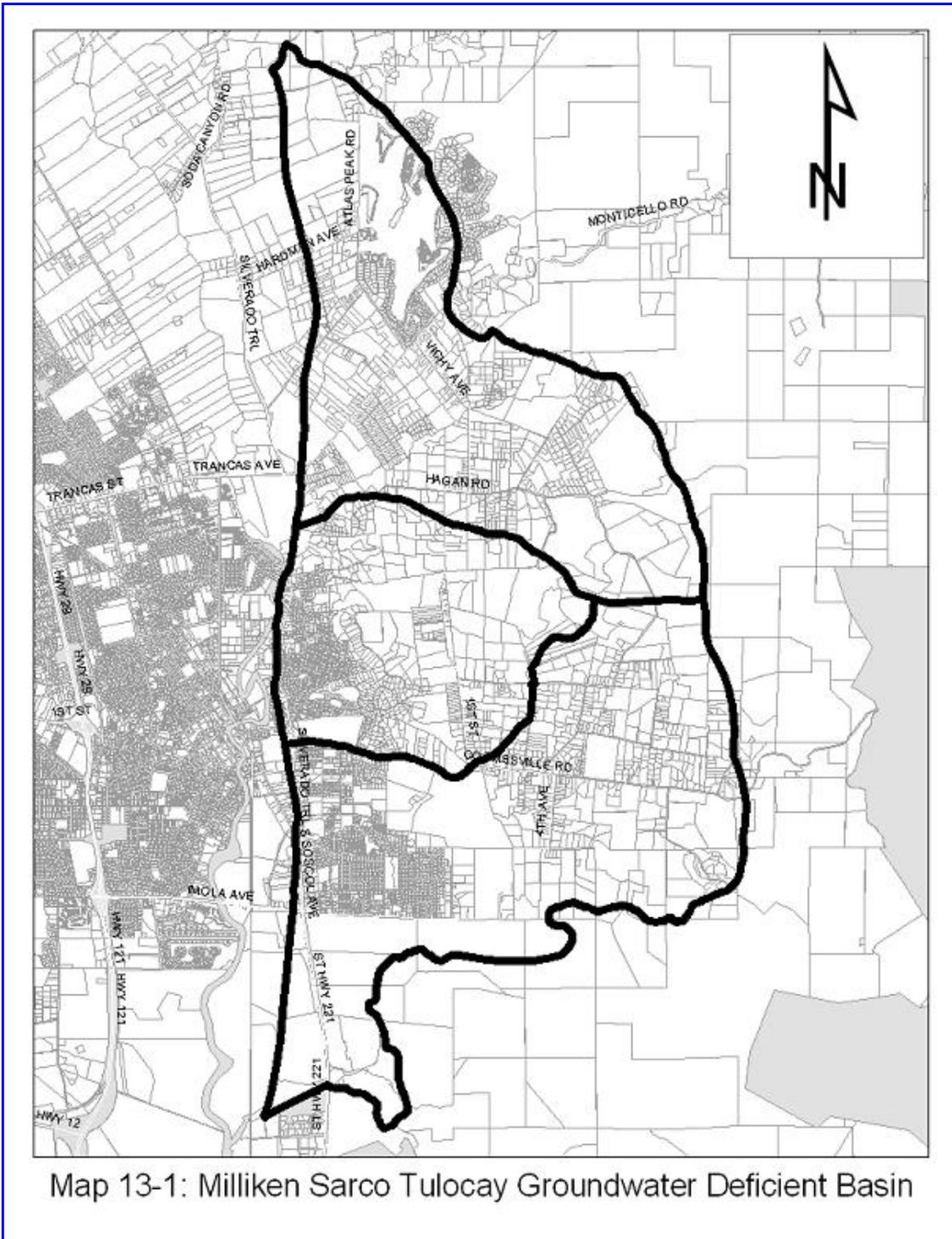
13.15.100 - Enforcement—Violation.

- A.

Criminal Penalties. Any person, firm or corporation, whether acting as principal, agent, employer or otherwise, who violates any provision of this chapter, or the terms and/or conditions of any permit issued pursuant to this chapter, with intent to do so shall be guilty of an infraction with a fine not exceeding one hundred dollars for the first violation, two hundred dollars for the second violation within one year, and five hundred dollars for the third violation within one year. Any subsequent violation shall be punishable as a misdemeanor, punishable by a fine not to exceed one thousand dollars per violation, or imprisonment not exceeding six months, or both such fine and imprisonment. Any person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any such violation is committed, continued, or permitted.

- B.** Civil Actions—Injunctive Relief. Napa County may elect to proceed with a civil action, including seeking injunctive relief, rather than proceed with criminal actions as described in subsection (A) of this section. Any person, firm or corporation, whether acting as principal, agent, employer or otherwise, who willfully violates any provision of this chapter, or the terms and/or conditions of any permit issued pursuant to this chapter, shall be liable for a civil penalty not to exceed one thousand dollars for each day or portion thereof, that the violation continues to exist. Any person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any such violation is committed, continued, or permitted. In determining the amount of the civil penalty to impose, the court shall consider all relevant circumstances, including, but not limited to, the extent of the harm caused by the conduct constituting the violation, the nature and persistence of such conduct, the length of time over which the conduct occurred, the assets, liabilities, and net worth of the violator, whether corporate or individual, and any corrective action taken by the violator.

(Ord. 1294 § 1 (part), 2007; Ord. 1230 § 3, 2003)



Division II. Sewage Systems

WATER AVAILABILITY ANALYSIS

Policy Report

August 2007

Introduction:

At the height of the 1990 drought in Napa County, the Napa County Board of Supervisors and the Napa County Planning Commission became very concerned with the approval of use permits and parcel division that would cause an increased demand on groundwater supplies within Napa County. During several Commission hearings, conflicting testimony was entered as to the impact of such groundwater extraction on water levels in neighboring wells. The Commission asked the Department of Public Works to evaluate what potential impact an approval might have on neighboring wells and on the basin as a whole. In order to simplify a very complex analysis, the Department developed a three phase water availability analysis to provide a cost-effective answer to the question.

On March 6, 1991, an interim policy was presented and approved by the Commission which requires the applicants for use permits and parcel divisions to submit a water availability analysis with their proposal. The staff report that provides the procedure to follow for compliance with the Commission policy was intended to be an interim one. With the passage on August 3, 1999 by the Board of Supervisors of Napa County Ordinance #1162 (the Groundwater Conservation Ordinance) it became apparent that the interim policy required updating and formalization. The purpose of the revised report is to provide the procedure for preparation of water availability analysis and to restate the purpose and functionality of the analysis as related to the revised Groundwater Ordinance (Napa County Ordinance # 1162).

Water Availability Analysis:

The Water Availability Analysis (WAA) sets up guidelines to determine if a proposed project will have an adverse impact on the groundwater basin as a whole or on the water levels of neighboring wells with the overriding benefit of helping to manage groundwater resources. An important sidelight to the process is public education and awareness. WAA's are comprised of potentially three phases; phase one, phase two and phase three.

A **phase one analysis** is a reconnaissance level report that may be prepared by the applicant or their agent. **It must be signed by the applicant. If prepared by the applicant's agent, it must contain the letterhead of the agent, the name of the agent, and the agent's signature.** The phase one WAA contains the following information:

1. The name and contact information of the property owner and the person preparing the phase one report.
2. Site map of the project parcel and adjoining parcels. The map should include: Assessor's Parcel Number (APN), parcel size in acres, location of project well(s) and other water sources, general layout of structures on the subject parcel, location of agricultural development and general location within the county.
3. Narrative on the nature of the proposed project including: all land uses on the subject parcel, potential for future water uses, details of operations related to water use, description of interconnecting plumbing between the various water sources and any other pertinent information.
4. Tabulation of existing water use compared to projected water use for all land uses contained on the parcel. Should the water use extend to other parcels, they should be included in the analysis (see Appendix E for additional information on determining fair share estimates when multiple parcels are involved). **These estimates should reflect the specific requirements of the applicant's operations.** The applicant should use the guidelines attached in Appendix A

The Department will review the analysis for completeness and reasonableness (based on the guidelines outlined in Appendix A) and then compare the analysis to a threshold level of groundwater use for the subject parcel. The threshold is based upon several factors including annual rainfall, topography, soil types, proximity to recharge zones and available groundwater information. In general, parcels located on the Valley Floor or in strong alluvial areas will be assigned a threshold of 1 acre-foot per acre of land (an acre-foot of water is the amount of water it takes to cover one acre of land to a depth of one foot, or 325,851 gallons). Therefore, a 40-acre parcel will have an acceptable level of groundwater use of 40 acre-feet per year. The threshold for Hillside parcels (primarily located in volcanic rock and soils) is 0.5 acre-feet per acre or 20 acre-feet per year for a 40-acre parcel. Areas designated as "Groundwater Deficient Areas" as defined in the Groundwater Conservation Ordinance will have threshold established for that specific area. For example, the Milliken-Sarco-Tulocay Basin (M-S-T) is currently the only "groundwater deficient area" and has an established threshold of 0.3 acre-feet per acre per year. Thus, the same 40-acre parcel has an acceptable level of water use of 12 acre-feet per year (see Appendix B).

If the Phase I analysis shows a water use above the parcel threshold then further analysis may be required in the form of a Phase II or Phase III analysis.

In instances where the applicant is in the M-S-T basin and their estimated future water usage will be significantly less than the values listed in Appendix A, or if the estimate is within 50% of the estimated threshold, the County may require the applicant to install a water meter to verify actual groundwater usage. If the actual usage exceeds the parcel's threshold, applicant may be required to reduce groundwater consumption and/or find

alternate water sources to ensure that no more groundwater is consumed than the threshold for the parcel(s) (See Appendix D).

In the M-S-T basin a phase one analysis examines only the estimated quantity of groundwater water usage as compared to the established water usage threshold. It is assumed that if all consumers within the MST basin were to limit their consumption to 0.3 acre-feet per acre per year* there will be sufficient groundwater for all properties within that area.

* Does not apply to the Ministerial Exemption as outlined in the Groundwater Conservation Ordinance

Any new project within the M-S-T Basin whose estimated use exceeds the threshold use will likely be recommended for denial to the County Department requesting review of the application.

For projects in all other areas within Napa County whose estimated water use exceeds the threshold, the applicant will be required to conduct either a **phase two or a phase three analysis (or both)**.

The phase two analysis is commonly called an aquifer test or well test. It requires the pumping of the project well(s) at the maximum rate needed to meet project water demands and at the same time requires the monitoring of the immediate effects of groundwater pumping on a neighboring or monitoring well(s). The following requirements must be met when performing a phase two analysis:

- An approved hydrogeologist, a list of which is on file with the Department of Public Works, must develop the test procedure. Upon approval of test procedures, the hydrologist will supervise the test and submit a report to the Department evaluating impacts to neighboring static water levels.
- A licensed well drilling contractor must perform the actual testing and monitor static and dynamic water levels of the project well and monitoring wells during the duration of the test, including the recovery phase of the project well and monitoring wells.
- The test must be conducted long enough to stabilize the dynamic water level of the project well or include an analysis of what the impact* of continued pumping would have.
- The applicant or agent must notify the Department at least 48 hours prior to conducting the test.

* Impact is unique to each project and will be evaluated on a case by case basis by the department of public works.

Any projects requiring a phase two analysis may also be required to install water meters to measure the actual amount of water consumed, and be required to find alternate

water sources if their actual groundwater usage exceeds the threshold for their property (see Appendix D).

The Department will review the phase two analysis and determine if the impacts to static water levels of neighboring wells are within acceptable limits. If the phase two is unacceptable, a **phase three analysis** is required. The phase three analysis may include many measures aimed at reducing water consumption and/or the maximum pumping rate. The Department will require periodic monitoring of static water levels with annual submittals of well production and static water level reports.

The phase three analysis only determines possible actions which could be taken to moderate the immediate effects of groundwater pumping to neighboring wells. These mitigation measures will be designed to reduce, but may not eliminate, the immediate effects of groundwater pumping to neighboring wells.

The preparation and submittal of WAA's for all use permits and parcel divisions, as well as for all Groundwater Conservation Ordinance permits must be submitted through the normal procedures for the Conservation, Development and Planning Department (CDPD) and the Department of Environmental management (DEM) respectively. All subsequent communication should likewise pass through CDPD or DEM. Any mitigation measures identified in the phase three analysis will become either project modifications to, or conditions of approval for, the proposed project.

Details of the use permit or land division can be obtained from CDPD and details of the Groundwater Ordinance and related permit process can be obtained from the Department of Environmental Management. Mapping of "Groundwater Deficient Areas" is available at all three Departments with final determination being supplied by the Department of Public Works.

Conclusions:

The Napa County Board of Supervisors has long been committed to the preservation of groundwater for agriculture and rural residential uses within the County. It is their belief that through proper management, the excellent groundwater resources found within the county can be sustained for future generations.

Since 1991, several conclusions can be drawn from application of the water availability analysis process:

- In the process of conducting the analysis, applicants become much more aware of water use for their project, providing a higher level of awareness and potentially leading to more efficient use of the resource.
- Information submitted by applicants has lead to a broader database for future study and management.

- Groundwater use can vary widely depending upon its availability.
- The current practice of evaluating an applicant's Phase I WAA to determine if additional analysis is needed has been the accepted method for making groundwater determinations. Due to the limited information available on Napa County groundwater basins in general (with the exception of the MST basin), the Phase 1 WAA has been the most reasonable approach to the process and has not been shown to be inaccurate or inadequate. As such, the established WAA procedures for making groundwater determinations as outlined above and throughout the Appendices will continue to be the accepted method of making groundwater determinations and findings.

The water availability analysis is based upon the basic premise that each landowner has equal right to the groundwater resource below his or her property. By attempting to limit the extraction to a threshold amount, it is believed that sufficient groundwater will be available for both current and future property owners.

APPENDIX A: Estimated Water Use for Specified Land Use

Guidelines for Estimating Residential Water Use-For use with the Phase I Form

The typical water use associated with residential buildings is as follows:

Primary Residence	0.5 to 0.75 acre-feet per year (includes minor to moderate landscaping)
Secondary Residence	0.20 to 0.50 acre-feet per year
Farm Labor Dwelling	0.06 to 0.10 acre-feet per person per year

Additional Usage to Be Added

1. Add an additional 0.1 acre-feet of water for each additional 1000 square feet of drought tolerant lawn or 2000 square feet of non-xeriscape landscaping above the first 1000 square feet.
2. Add an additional 0.05 acre-feet of water for a pool with a pool cover.
3. Add an additional 0.1 acre-feet of water for a pool without a cover.

Residential water use can be estimated using the typical water uses above. All typical uses are dependant on the type of fixtures and appliances, the amount and type of landscaping, and the number of people living onsite. If a residence uses low-flow fixtures and has appliances installed, is using xeriscape landscaping, and is occupied by two people, the water use estimates will be on the low side of the ranges listed above.

Examples of Residential Water Usage:

Residential water use can vary dramatically from house to house depending on the number of occupants, the number and type of appliances and water fixtures, the amount and types of lawn and landscaping. Two homes sitting side by side on the same block can consume dramatically different quantities of water.

Example1:

Home #1 is 2500 square feet. Outside the house there is an extensive bluegrass lawn, a lot of water loving landscaping, a swimming pool with no pool cover. Inside the house all the appliances and fixtures, including toilets and shower-heads, are old and have not been upgraded or replaced by water saving types. The owners wash their cars weekly but they don't have nozzles or sprayers on the hose. They do not shut off the water while they are soaping up the vehicles, allowing the water to run across the ground instead. Water is commonly used as a broom to wash off the driveways, walkways, patio, and other areas. The estimated water usage for Home #1 is 1.2 acre-feet of water per year.

Example2:

Home #2 is also 2500 square feet. Outside of the house there is a small lawn of drought tolerant turf, extensive usage of xeriscape landscaping, and no swimming pool. Inside the house all of the appliances and fixtures, including toilets and showerheads, are of the low flow water saving types. The owners wash their cars weekly, but have nozzles or sprayers on the hose to shut off the water while they are soaping up the vehicles. Driveways, walkways, patios, and other areas are swept with brooms instead of washed down with water. Estimated water usage for Home #2 is 0.5 acre-feet of water per year.

The above are only examples of unique situations. The estimated water use for each project will vary depending on existing parcel conditions.

Guidelines For Estimating Non-Residential Water Usage:

Agricultural:

Vineyards	
Irrigation only	0.2 to 0.5 acre-feet per acre per year
Heat Protection	0.25 acre feet per acre per year
Frost Protection	0.25 acre feet per acre per year
Farm Labor Dwelling	0.06 to 0.10 acre-feet per person per year
Irrigated Pasture	4.0 acre-feet per acre per year
Orchards	4.0 acre-feet per acre per year
Livestock (sheep or cows)	0.01 acre-feet per acre per year

Winery:

Process Water	2.15 acre-feet per 100,000 gal. of wine
Domestic and Landscaping	0.50 acre-feet per 100,000 gal. of wine

Industrial:

Food Processing	31.0 acre-feet per employee per year
Printing/Publishing	0.60 acre-feet per employee per year

Commercial:

Office Space	0.01 acre-feet per employee per year
Warehouse	0.05 acre-feet per employee per year

Parcel Location Factors:

The Fair share allotment of water is based on the location of your parcel. There are 3 different location classifications. Valley Floor, Hillside and Groundwater Deficient Areas. Valley Floor areas include all locations that are within the Napa Valley and the Carneros Region except for areas specified as groundwater deficient areas. Groundwater Deficient areas are areas that have been determined by the Department of Public Works as having a history of problems with groundwater. The only Groundwater Deficient Basin in Napa County is the MST basin. All other areas are classified as Hillside Areas. Public Works can assist you in determining your classification.

Parcel Location Factors

Valley Floor	1.0 acre feet per acre per year
Hillside Areas	0.5 acre feet per acre per year
MST Groundwater Deficient Area	0.3 acre feet per acre per year*

* Does not apply to the Ministerial Exemption as outlined in the Groundwater Conservation Ordinance

The threshold for the Valley Floor Area was determined in 1991 in the form of a Staff Report to the Board of Supervisors. The value of 1.0 AF/A/Year was established as the expected demand an average vineyard would have. It was noted that the Valley Floor threshold would have relatively little effect on neighboring wells.

The threshold for the Mountain Area was established due to the uncertainty of the geology, and the increasingly fractured aquifer in the mountainous and non Napa Valley areas.

The threshold for the Groundwater Deficient Areas was determined using data from the 1977 USGS report on the Hydrology of the Milliken Sarco Tulocay region. The value is calculated by dividing the "safe annual yield" (as determined by the USGS study of 1977) by the total acreage of the affected area (10,000 acres).

APPENDIX B: Values Used to Establish Thresholds

Average Annual Rainfall (Source: Napa County Road & Streets Standards):

American Canyon	1.5 feet per year
City of Napa	2.0 feet per year
Yountville	2.5 feet per year
Oakville	2.5 feet per year
Rutherford	2.67 feet per year
St. Helena	2.75 feet per year
Calistoga	3.0 feet per year
Western Hills	increase by 20%
Eastern Hills	increase by 10%

Threshold Factors of Acceptable Water Use:

Valley Floor	1.0 acre-foot per acre
Hillsides	0.5 acre-foot per acre
MST Groundwater Deficient Areas	0.3 acre-foot per acre*

* Does not apply to the Ministerial Exemption as outlined in the Groundwater Conservation Ordinance

APPENDIX C: Guidance for M-S-T Basin Permit Applications

Data collected from the monitoring of wells within the M-S-T Basin over the last forty years indicate that it may be in overdraft, leading to the conclusion that the existing water users within the basin are pumping more water from the ground than is being naturally replaced each winter season. The only way to end the overdraft trend is to cease all water extraction from the basin. However, as no other reasonable water resources exist in the M-S-T, the Department, to avoid a ban on all new construction, has assumed that each property owner should be able to develop their property to a "reasonable" level of water use while reducing the rate at which the groundwater levels are being lowered.

Within the near future, the U.S.G.S. will release a report on a recent study of the M-S-T Basin. From the U.S.G.S. report we will be able to determine to what extent the overdraft condition may exist and infer what problems may occur from the continued extraction of groundwater from the Basin. Results of the study will be used to plan for alternatives to address these problems. Until the report is available, and alternative measures can be implemented, the Department will use the following analysis to evaluate impacts from proposed projects in the M-S-T Basin:

Single Family Dwellings on Small Parcels In the M-S-T Basin: The average, single family dwelling will likely use between 0.5 and 0.75 acre-feet of groundwater per year. Using a threshold of 0.3 acre-ft/year/acre, the minimum parcel size able to support the above range is between 1.5 to 2.5 acres. Therefore, if an existing residence that uses 0.5 acre-feet per year of groundwater is located on a one-acre parcel, it already exceeds the acceptable level of water use for the property. Applications for the construction of a single family home in these instances can be approved ministerially if the owner agrees to the conditions outlined in the Groundwater Ordinance. If the conditions are not agreed upon, or if the project involves a secondary dwelling or other groundwater uses not consistent with a single family dwelling, then the project would be subject to the complete groundwater permit process including but not limited to the submittal of a Phase 1 analysis detailing all water use, existing and proposed, on the project parcel.

Agricultural Development In the M-S-T Basin: Agriculture in the M-S-T Basin is not exempt from the groundwater permit process. In these cases, such development will require an application for a groundwater permit including a phase one analysis detailing the existing and proposed water use(s) on the project parcel(s). It is likely that all agricultural development in the M-S-T will be required to meter all wells supplying water to the property with periodic reports to the Department.

Existing Vineyard, New Primary or Secondary Residence In the M-S-T Basin: On an application related to a new residence on a parcel with an existing vineyard or residence, the Phase 1 WAA shall include all water use on the property, both existing and proposed. Projects on parcels with an established vineyard will likely be required to meter all wells supplying water to the property with periodic reports to the Department.

Wineries and Other Use Permits In the M-S-T Basin: On an application for a use permit, the applicant is required to provide a phase one analysis. Should the application be approved, a specific condition of approval will be required to meter all wells supplying groundwater to the property with periodic reports to the Department. It is also possible that water conservation measures will be a condition of approval. All new use permits must meet the threshold water use for the project parcel.

APPENDIX D: Water Meters

If required, water meters shall measure all groundwater used on the parcel. Additional meters may also be required for monitoring the water use of individual facilities or operations, such as a winery, residence, or vineyard located on the same parcel. If a meter(s) is installed, the applicant shall read the meter(s) and provide the readings to the County Engineer at a frequency determined by the County Engineer. The applicant shall also convey to the County Engineer, or his designated representative, the right to access and verify the operation and reading of the meter(s) at any time.

If the meters indicate that the water consumption of a parcel in the M-S-T basin exceeds the fair share amount, the applicant will be required to submit a plan which will be approved by the Director of Public Works to reduce water usage. The applicant may be required to find additional sources of water to reduce their groundwater usage. Additional sources may include using water provided by the City of Napa, the installation of water tanks which are filled by water trucks, or other means which will ensure that the groundwater usage will not exceed the fair share amounts.

The readings from water meters may also be used to assist the County in determining trends in groundwater usage, adjusting baseline water use estimates, and estimating overall groundwater usage in the M-S-T basin.

Appendix E: Determining water use numbers with multiple parcels

The water availability analysis is based on the premise that each landowner has equal right to the groundwater resource below his or her property. There will be cases where one person or entity owns multiple parcels and requests that the total water allotment below all of his or her parcels be considered in the Phase I water availability analysis. Determining the total threshold based on multiple parcels is acceptable, however to protect future property owners, certain safeguards must be in place to ensure that the water allotment and transfer between parcels is clearly documented and recorded, especially in cases where the water from more than one parcel will ultimately serve a use on a single parcel.

When multiple parcels are involved, the parcels for which the total threshold is being based on must be clearly identified on a site plan with assessors parcel numbers noted. The transfer of water from these parcels to the parcel on which the requested use is located must be documented using the form provided by the department of public works. The form must be approved by the County and subsequently recorded by the applicant prior to commencement of any activity authorized by the groundwater permit or other county permit or approval. A condition requiring such will be placed on the use permit, groundwater permit or other permit for approval.

