Calaveras County
General Plan Update

Water Element
Goals & Policies Report

Submitted by: **Calaveras County Water Element Group**

Prepared by: MWH

In association with: *Mintier Harnish*

Center for Collaborative Policy

University of California, Davis Extension

Water Resource Protection & Reliability

Water Use Efficiency

Climate Change Adaptation & Mitigation

Water Quality

Wastewater Management

Watershed Management

Stormwater & Flood Management

Interagency Communication & Cooperation

Public Education & Awareness

February 2009
FINAL DRAFT

February 13, 2009

Board of Supervisors
County of Calaveras
891 Mountain Ranch Road
San Andreas, California 95249

RE: Submittal of Final Draft Water Element by Water Element Group

Dear Supervisors,

On August 5, 2008, the Calaveras County Board of Supervisors approved the inclusion of a water element in the Calaveras County General Plan Update (GPU). The County Board action required that this element be developed through a collaborative process that included the County, local water and wastewater agencies, and other public and private interests.

In response to this action, the Water Element Group was formed from water and wastewater agency directors and staff, County staff, other public and private stakeholders, and consultants. Over the course of several months, this group spent countless hours and contributed actual and in-kind resources to develop the Final Draft Water Element. On behalf of the Water Element Group, we are pleased to submit this document to the County for consideration in the GPU.

As the County initiates the process of incorporating the Final Draft Water Element into the GPU, the members of the Water Element Group and other interested parties will continue to provide input at community workshops and throughout the public review of the GPU. Once the GPU is adopted, water and wastewater agencies and other public and private interests will support, coordinate, and collaborate with the County on its implementation.

On behalf of the Water Element Group, we are available to answer questions you or your staff may have about the Final Draft Water Element. We are also available to participate in a presentation to the County Board, if you wish. For additional information, please contact me at (916) 418-8263 or roger.putty@mwhglobal.com.

Sincerely,
MWH Americas, Inc.

Roger Putty, P.E.
Project Manager to Water Element Group

cc: Brent Harrington, Interim Community Development Director
Robert C. Lawton, County Administrative Officer
Shirley Ryan, Assistant County Administrative Officer
Karen Varni, Clerk to the Board of Supervisors

Enclosure: Final Draft Water Element

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Final Draft

ACKNOWLEDGEMENTS

The following agencies, groups, and interests are thanked for generously giving their time, effort, and in-kind services in the development and preparation of the Calaveras County General Plan Update Water Element (Water Element):

- Blue Lake Springs Mutual Water Company
- Calaveras County Community Development Agency
- Calaveras County Environmental Management Agency
- Calaveras County Taxpayers Association
- Calaveras County Water District
- Calaveras Planning Coalition
- Calaveras Public Utility District
- Central Sierra Environmental Resource Center
- City of Angels
- Mineral Mountain Estates Mutual Water Association
- Mokelumne Hill Sanitary District
- Murphys Sanitary District
- MyValleySprings.com
- Private Citizens
- San Andreas Sanitary District
- Snowshoe Springs Association
- Union Public Utility District
- Utica Power Authority
- Valley Springs Public Utility District
- Wallace Citizens Serving Residents
- Wallace Community Service District

The following consultants participated in the development of the Water Element and the facilitation of the Water Element Group Meetings:

- Roger Putty and Jafar Faghih, MWH
- Carolyn Lott, Center for Collaborative Policy
- Jessica Schwartz and Rik Keller, Mintier Harnish
- Jeff Loux, University of California, Davis Extension

Thank you to the Calaveras Enterprise for attending the Water Element Group meetings and helping to inform and educate the public. Thank you to the Union Democrat and Calaveras Community Television, Inc. for also reporting on the progress of the Water Element.

Thank you to Calaveras County Water District for funding MWH and Mintier Harnish in the development of the Water Element and providing staff support, room reservations, website, and refreshments to the Water Element Group Meetings. Thank you to Calaveras County Water District and Utica Power Authority for providing lunch at the Water Element Group Meetings.

Thank you to the California Department of Water Resources for funding Carolyn Lott as the facilitator of the Water Element Group Meetings.

Thank you to the Calaveras County Board of Supervisors for the opportunity to develop a Water Element for inclusion into the Calaveras County General Plan Update process.

INTRODUCTION

On August 5, 2008, the Calaveras County Board of Supervisors approved the inclusion of a Water Element in the Calaveras County General Plan Update (GPU). The County Board action required the Water Element be developed through an inclusive process by the County, local water and wastewater agencies, and other public and private interests. This report is the product of that inclusive process and is submitted to the County for incorporation into the GPU.

Water Element Development Process

This Water Element was developed through a collaborative process involving water and wastewater agency directors and staff, County staff, and representatives of other public and private interests. This group, named the Water Element Group, recognized the importance of considering water as an integral part of the GPU, and the critical need to better link water-related planning and management with land-use planning.

The Water Element was developed through a series of facilitated Water Element Group meetings. Meeting participants shared and debated information regarding water issues and needs. The group used this information to craft, and ultimately agree upon, nine co-equal goals, and associated policies and implementation programs.

The Water Element is supported by the Calaveras County General Plan Water Element Baseline Report Supplement (Baseline Report Supplement, bound under separate cover). The Baseline Report Supplement describes the conditions and trends associated with water throughout the county, providing the context and background under which goals, policies, and implementation programs for the Water Element exist.

Water Element Goals and Policies

This Water Element is an important tool for the planning and management of water resources in the county. The goals, policies, and implementation programs are designed to address the multiple uses of water, including urban, agricultural, environmental, and recreational. In addition, the goals, policies, and implementation programs address water resources issues, such as water supply reliability, climate change, water quality, septic system failures, wastewater treatment and disposal, flood management, and watershed management.

The following definitions describe the nature of these goals, policies, and implementation programs:

- Goals describe the "end state." They are general in nature and support the overall vision and guiding principles of the Water Element.
- Policies are specific statements that guide action and imply clear commitment by the County. Policies support goals by outlining methods for achieving the "end state."
- Implementation programs are actions, procedures, programs, or techniques that carry out the policies for each goal. Implementation programs have a measurable result, identify a responsible department, and are connected to a specific time frame.

Organization of the Water Element Goals and Policies Report

The Water Element Goals and Policies Report is structured around the nine goals identified by the Water Element Group. These nine co-equal goals are:

Goal 1 - Water Resource Protection and Reliability
Goal 2 - Water Use Efficiency
Goal 3 - Climate Change Adaptation and Mitigation
Goal 4 - Water Quality
Goal 5 - Wastewater Management
Goal 6 - Watershed Management
Goal 7 - Stormwater and Flood Management
Goal 8 - Interagency Communication and Cooperation
Goal 9 - Public Education and Awareness

The policies and implementation programs are presented with their associated goal. Each implementation program indicates the specific policy(ies) it implements, the party(ies) responsible for its implementation, and the implementation time frame. Appendix A lists a glossary of terms used in this report. Appendix B includes letters of support for inclusion of a Water Element in the GPU from organizations that are members of the Calaveras County Water Element Group.

The Path Forward

With the submittal of this Water Element, the County will initiate a process by which the Water Element will be incorporated into the GPU. Members of the Water Element Group, and other interested parties, will provide input into this process through various GPU community involvement activities and public review processes.

Once the GPU is completed the County will be responsible for implementing the Water Element policies and implementation programs over the next 25 to 30 years. The water and wastewater agencies, and other public and private interests, will be responsible for supporting, coordinating, and collaborating with the County on implementation.

GOALS, POLICIES, AND IMPLEMENTATION PROGRAMS

GOAL 1: Water Resource Protection and Reliability. To ensure a sustainable, reliable water supply sufficient to meet the existing and future needs of the county.

Policies for Goal 1

Water Availability and Reliability

1.1. Water Supply Development. The County shall support water and wastewater agencies' plans to develop new reliable future sources of supply, including, but not limited to, the expansion of surface water storage and conjunctive use of surface water and groundwater, while promoting water conservation and water recycling/reuse. *(Working Group, 11/6/08, revisions by UPA, 11/5/08, Strange, 11/4/08, Lott, 11/13/08, CCWD, 11/26/08, Working Group, 12/4/08, Loux, 12/10/08, Mintier, 12/10/08, CCWD, 1/14/09)*

1.2. Integrated Management. The County shall support and participate in the integrated management of surface water and groundwater resources, wastewater, stormwater treatment and use, and the development of reclaimed water. *(CCWD, 11/26/08, revisions by CCWD 1/14/09, Foothill Conservancy, 1/15/09)*

1.3. Groundwater Management. The County shall support the development and implementation of groundwater management plans by water resource agencies, water users, and other affected parties to ensure a sustainable, adequate, safe, and economically viable groundwater supply for existing and future uses within the county. *(Working Group, 11/6/08, revisions by UPA, 11/5/08 , Buckley, 11/6/08, Lott, 11/13/08, Working Group, 11/20/08, Loux, 11/25/08, Working Group, 12/4/08, UPA, 12/3/08, Mintier, 12/10/08, CCWD, 1/14/09)*

1.4. Groundwater Demand Reduction. To reduce demand on the county groundwater resources, the County shall encourage the use of alternate sources of water supply (e.g., surface water and recycled water) to the maximum extent feasible. *(CCWD, 11/26/08, revisions by UPA, 12/3/08, Mintier, 12/10/08)*

1.5. Sufficient Water Supply for New Residential Development. The County shall ensure a sufficient water supply for all new residential development. To do this, the County shall enforce Water Code Section 10910 (Senate Bill 610) and Government Code Section 66473.7 (Senate Bill 221), or more current state code requirements. Where these codes do not apply, the County shall impose conditions similar to Water Code Section 10910 (Senate Bill 610) and Government Code Section 66473.7 (Senate Bill 221), or more current state code requirements, and suitable for the size and scale of the development. Developments of individual single family residential building permits or 4-way lot splits or less must still meet the requirement for "Proof of Groundwater" as established in Title 16, Chapter 16.12, Calaveras County Code. *(Working Group, 11/6/08, revisions by UPA, 11/5/08, Loux, 11/25/08, Working Group, 12/4/08, Moss, 12/7/08, Loux, 12/12/08, incorporates previous Policies 1.5, and 1.6, Working Group, 1/22/09)*

1.6. Sufficient Water Supply for New Non-Residential Development. The County shall ensure a sufficient water supply for all new non-residential development/ redevelopment

requiring discretionary approval. To do this, the County shall enforce conditions similar to Water Code Section 10910 (Senate Bill 610) and Government Code section 66473.7 (Senate Bill 221), or more current state code requirements, and suitable for the size and scale of the development/redevelopment. *(Working Group, 11/20/08, revisions by Loux, 12/12/08, Working Group, 1/22/09)*

1.7. Water Rights Protection. The County shall support public agencies and private entities within Calaveras County in their efforts to protect their water rights and water supply contracts. *(CCWD, 11/26/08, revisions by UPA, 12/3/08)*

1.8. Agricultural Water Supply. The County shall encourage water/wastewater agencies to explore opportunities for supplying agriculture with raw surface water and/or recycled water. *(CCWD, 11/26/08, revisions by Working Group, 12/4/08)*

Infrastructure

1.9. Adequate Facilities and Services. The County shall ensure through the development review process that public water facilities and services will be adequate and operational to serve new development and meet capacity demands when needed. Such needs shall include capacities necessary to comply with public safety. *(Working Group, 11/6/08, revisions by CCWD, 11/26/08, Working Group, 12/4/08, UPA, 12/3/08, Working Group, 1/22/09)*

1.10. Consistent Fire Protection Standards for New Development. The County, in coordination with local water service agencies, wildfire protection agencies, and local structural fire protection agencies, shall ensure consistent and adequate standards for fire flows and fire protection for new development, with the protection of human life and property as the primary objectives. *(Working Group, 11/6/08, revisions by UPA, 11/5/08, Working Group, 12/4/08, Mintier, 12/10/08, CCWD, 1/14/09, Foothill Conservancy, 1/15/09)*

1.11. Funding for Public Facilities. The County shall support water/wastewater agencies use of all appropriate and equitable financing methods (e.g., grant funding, assessment districts, and development fees) to finance public facility design, construction, operation, and maintenance. *(CCWD, 11/26/08, revisions by UPA, 12/3/08, Mintier, 12/10/08)*

1.12. Development Impacts to Existing Infrastructure. The County shall ensure that any new development projects do not create significant adverse impacts on existing water and wastewater infrastructure. *(CCWD, 11/26/08, revisions by UPA 12/3/08, Working Group, 12/4/08, Mintier, 12/10/08)*

1.13. Level of Service. The County shall encourage water/wastewater agencies to preserve, improve, and replace infrastructure as necessary to maintain adequate levels of water/wastewater service. *(CCWD, 11/26/08, revisions by Mintier, 12/10/08)*

1.14. New Community Water Systems. The County shall require any new community water system, in the unincorporated area of the county, serving residential, industrial, or commercial development to be owned and operated by a public or private entity that can demonstrate to the County adequate financial, managerial, and operational resources. The County shall consult with LAFCO when making adequacy determination. *(CCWD, 11/26/08, revisions by Working Group, 12/4/08, Mintier, 12/10/08, Angels, 12/15/08, Calaveras Planning Commission, 1/15/09)*

Interagency Coordination

1.15. Interagency Coordination. The County shall work, communicate, and cooperate with public and private water agencies in order to help address existing and future water needs for the county. *(Working Group, 11/6/08, revisions by UPA, 11/5/08, Lott, 11/13/08, Working Group, 11/20/08, County, 12/26/08)*

1.16. Joint Water Projects. The County shall promote development of mutually beneficial joint water projects and other efforts to expand water supply within the county. *(CCWD, 11/26/08)*

Implementation Programs for Goal 1

Implementation Program #1: The County shall work with water agencies, groundwater basin managers, and willing landowners to improve groundwater monitoring including quality, yields, and groundwater elevations. Actions will include, but are not limited to, identifying monitoring sites, installing monitoring wells, identifying gaps in the monitoring network, establishing monitoring protocols, and developing a groundwater budget. *(Working Group, 12/4/08, revisions by Mintier, 12/10/08, County, 12/26/08, WCSD, 1/14/09)*

Implements What Policy: 1.3

What County Department is Responsible? Environmental Health Department

Other Participants: Water agencies, landowners

Timeframe: 2010-2015, ongoing

Implementation Program #2: The County shall work with and encourage local agencies to prepare an update to, and develop a schedule for periodic updates of, the County Water Master Plan. This update will include, but not be limited to, a cumulative water supply availability analysis (i.e., an identification and analysis of water rights, water availability, water reliability, water usability, water supplies from reclamation and recycling, and water conveyance systems, including what water may have already been contracted out of the county) and a cumulative water demand analysis (i.e., identifying existing users; undeveloped lots; projected residential, commercial, industrial, agricultural, and environmental uses; and demand management through conservation). The County Water Master Plan will rely on urban water management plans, agency master plans, and other agency planning documents, and will be consistent with ongoing integrated regional water management plans. *(Working Group, 12/4/08, revisions by Working Group, 1/22/09)*

Implements What Policy: 1.2, 1.15, 8.1, 8.2, 8.4

What County Department is Responsible? Planning Department

Other Participants: Water and wastewater agencies, agricultural interests

Timeframe: 2010-2015, ongoing

Implementation Program #3: The County shall develop and maintain a list on the County's website of proposed development projects and community plans and upon request provide these proposals and related information to water/wastewater agencies. *(Working Group, 12/4/08, revisions by Mintier, 12/10/08, County, 12/26/08, CCWD, 1/14/09)*

Implements What Policy: 1.15, 5.6, 8.1, 8.5

What County Department is Responsible? Planning Department

Other Participants: Water and wastewater agencies

Timeframe: Ongoing

Implementation Program #4: The County shall work with and encourage water agencies and fire protection agencies to conduct a county-wide study of fire-flow requirements as they relate to compliance with fire protection standards. *(Working Group, 12/4/08, revisions by Mintier, 12/10/08, County, 12/26/08)*

Implements What Policy: 1.10, 1.9

What County Department is Responsible? Building Department, Fire Departments, Office of Emergency Services

Other Participants: Water agencies, fire protection agencies and other local agencies

Timeframe: Ongoing

Implementation Program #5: The County, in coordination with water agencies, will develop a method suitable for the size and scale of the development to demonstrate a sufficient water supply for all new development projects not subject to Water Code Section 10910 (Senate Bill 610) and Government Code Section 66473.7 (Senate Bill 221), or more current state code requirements. *(Working Group, 12/4/08, revisions by Mintier, 12/10/08, Working Group, 1/22/09)*

Implements What Policy: 1.5, 1.6, 1.9, 5.1, 8.1

What County Department is Responsible? Planning Department

Other Participants: Water agencies

Timeframe: 2010-2015

Implementation Program #6: The County shall work with water/wastewater agencies and the agricultural community to conduct a county-wide study of the feasibility of supplying agriculture with raw surface water and/or recycled water. *(Working Group, 12/4/08, revisions by Loux, 12/8/08, County, 12/26/08)*

Implements What Policy: 1.8, 1.1, 2.2

What County Department is Responsible? Planning Department, Environmental Health Department

Other Participants: Water and wastewater agencies, agricultural interests

Timeframe: 2015-2020

Implementation Program #7: As a condition of approval for discretionary developments, the County shall not issue approval of final map until verification of payment of fees imposed for water and wastewater infrastructure capacity per the fee payment schedule from the water and wastewater provider. *(Working Group, 12/4/08, revisions by Working Group, 1/22/09)*

Implements What Policy: 1.11, 8.3

What County Department is Responsible? Planning Department, Board of Supervisors

Other Participants: Water and wastewater agencies

Timeframe: 2010-2015, ongoing

Implementation Program #8: The County shall in consultation with local water/wastewater agencies develop standards for evaluating and approving the adequacy of financial, managerial, and operational resources of proposed community water systems or alternative wastewater systems. *(CCWD, 1/14/09)*

Implements What Policy: 1.14, 5.3

What County Department is Responsible? Public Works Department, Environmental Health Department, Board of Supervisors

Other Participants: Water and wastewater agencies

Timeframe: 2010-2015, ongoing

GOAL 2: Water Use Efficiency. **To maximize the efficient use and reuse of water supplies through water conservation programs, water recycling programs and other means to ensure reliable, sustainable, and affordable water supplies.**

Policies for Goal 2

2.1. Water Conservation. The County, in coordination with water agencies, shall encourage and support the use of water conservation measures appropriate for existing and future needs that comply with state and federal legislation and the California Urban Water Conservation Council. *(Working Group, 11/6/08, revisions by Strange, 11/4/08, Working Group, 11/20/08, Loux, 11/25/08, Working Group, 12/4/08, Mintier, 12/10/08)*

2.2. Recycled Water Use. The County shall encourage new development, redevelopment, and landscape and agricultural irrigators to use recycled water wherever practical and available; this includes striving for the highest possible quality of wastewater treatment to increase the potential use of recycled water for existing and future needs of the county. *(Working Group, 11/6/08, revisions by Strange, 11/4/08, Loux, 11/25/08, Working Group 11/20/08, Working Group, 12/4/08)*

2.3. Conjunctive Use. The County shall support conjunctive use of groundwater and surface water by water agencies to improve water supply reliability. *(Working Group, 11/6/08, revisions by UPA, 11/5/08, Loux, 11/25/08, Working Group, 12/4/08, Mintier, 12/10/08)*

2.4. Drought Planning and Emergency Services Planning. The County shall encourage all public and private water agencies to develop and maintain drought contingency and emergency services plans, emergency inter-ties, mutual aid agreements and related measures to ensure adequate water services during prolonged drought. *(Loux, 11/25/08, revisions by Calaveras Planning Coalition, 1/15/09)*

2.5. Educational Programs. The County shall support the development of educational programs by water agencies and public agencies to increase public awareness of efficiently using and managing water resources, including but not limited to, conservation and reuse practices. *(Working Group, 11/6/08, revisions by Lott, 11/13/08, Working Group, 11/20/08, Loux, 11/25/08, UPA, 12/3/08, Mintier, 12/10/08)*

2.6. Compact Development. The County shall support and encourage compact forms of development to reduce water demands, reduce landscaped areas per capita, and reduce the costs of water and wastewater infrastructure. *(Loux, 12/10/08, formerly Implementation Program)*

2.7. Sustainable Water Practices. The County shall encourage the use of sustainable, affordable water management practices that meet state and local standards, such as greywater reuse, rainwater capture/harvest, watershed management, and stormwater infiltration to reduce demands on potable supply. *(Loux, 11/25/08, revisions by Infusino, 11/20/08, UPA, 12/3/08, Moss, 12/8/08, formerly Policy 3.3)*

Implementation Program for Goal 2

Implementation Program #9: The County shall work with and encourage water agencies to conduct a county-wide water conservation and water use efficiency study to develop a county-wide water conservation program for new development, consistent with individual agencies' conservation programs. *(Working Group, 12/4/08, revisions by Mintier, 12/10/08, Working Group, 1/22/09)*

Implements What Policy: 2.1, 2.2, 2.6, 2.7

What County Department is Responsible? Planning Department, Environmental Health Department

Other Participants: Water and wastewater agencies, NGOs, developers, public interests

Timeframe: 2015-2020

GOAL 3: Climate Change Adaptation and Mitigation. To ensure that the County proactively develops policies and programs, and makes decisions that address the future challenges posed by climate change including prolonged drought, flooding, and water quality/aquatic resources impacts.

Policies for Goal 3

3.1. Climate Change. The County shall adopt policies and programs, and support efforts by local water and wastewater agencies to mitigate greenhouse gas emissions resulting from energy consumption related to water use and wastewater treatment to comply with state and federal legislation. *(Working Group, 11/20/08, revisions by Working Group, 12/4/08, Mintier, 12/10/08, CCWD, 1/14/09)*

3.2. Climate Change Adaptation. The County shall support efforts by local, regional, state, and federal agencies and others to develop policies and manage programs that allow the County to adapt to climate change effects such as prolonged drought, flooding, wildfires, and other events. *(Loux, 11/25/08, revisions by Mintier, 12/10/08)*

3.3. Revenue Generation. The County shall encourage water and wastewater agencies to investigate opportunities for revenue generation from green technologies, greenhouse gas mitigation strategies, small-scale hydroelectric plants, other alternative forms of green energy, and other climate change mitigation strategies. *(Working Group, 11/20/08, revisions by Working Group, 12/4/08, CCWD, 1/14/09)*

Implementation Program for Goal 3

Implementation Program #10: The County shall work with and encourage water agencies to evaluate the feasibility of generating clean energy through small-scale hydroelectric plants. *(Working Group, 12/4/08, revisions by County, Angels, 12/15/08, 12/26/08, CSERC, 1/13/09, CCWD, 1/14/09)*

Implements What Policy: 3.3

What County Department is Responsible? Public Works Department

Other Participants: Water agencies

Timeframe: 2015-2020

GOAL 4: Water Quality. To protect and enhance the quality of surface water and groundwater to meet the needs of all existing and future beneficial uses.

Policies for Goal 4

4.1. Water Quality Treatment Technology. The County shall encourage the use of water management strategies, biological remediation, and best available technology to address naturally occurring water quality problems. *(Working Group, 11/6/08)*

4.2. Regulatory Standards. The County shall support water and wastewater agencies' efforts to meet applicable safe drinking water standards in accordance with regulatory agencies. *(Working Group, 11/6/08, revisions by Lott, 11/13/08, Loux, 11/25/08, Working Group, 12/4/08, Mintier, 12/10/08)*

4.3. Best Management Practices. The County shall require the use of feasible and practical best management practices (BMPs) to protect surface water and groundwater from the adverse effects of construction activities, post-construction runoff, industrial practices, agricultural runoff, logging, and stormwater runoff. *(Working Group, 11/6/08, revisions by UPA, 11/5/08, Lott, 11/13/08, Working Group 11/20/08, see Policy 7.4 per UPA, CCWD, 1/14/09, Foothill Conservancy, 1/15/09)*

4.4. Wildfire Risk Reduction. The County shall, in cooperation with wildfire management agencies (e.g., Cal Fire, United States Forest Service, and local fire protection agencies), develop a variety of land use planning, site design, and vegetation management techniques to reduce the risk of wildfires. This risk reduction shall also include post-fire erosion, sedimentation, and water quality conditions. *(Loux, 11/25/08, revisions by UPA, 12/3/08, CCWD, 1/14/09)*

4.5. Interagency Cooperation. The County shall encourage cooperation among water and wastewater agencies in protecting surface water and groundwater resources for the long-term benefit of existing and future water needs of the county. *(Working Group, 11/6/08, revisions by UPA, 11/5/08, Lott, 11/13/08, Working Group, 12/4/08)*

4.6. Public Education for Irrigation Practices. The County shall work with local agencies and non-governmental organizations (e.g. Natural Resource Conservation Service) to provide educational and technical assistance programs to encourage practices that minimize water pollution and improve water quality. *(Working Group, 11/6/08, revisions by Buckley, 11/6/08, Lott, 11/13/08, Working Group, 11/20/08, Calaveras Planning Coalition 1/15/09)*

4.7. Mine Water Pollution Reduction. The County shall work with state, federal, and local resource managers and regulators to reduce environmental impacts, particularly related to water pollution and groundwater quality, from abandoned and active mines and mineral extraction areas of all types. *(Loux, 12/12/08)*

4.8. Septic Tank Management. The County shall enforce state septic tank regulations to protect the water quality of surface water bodies and groundwater quality. *(CCWD, 1/14/09)*

Implementation Programs for Goal 4

Implementation Program #11: The County shall conduct a public workshop among state agencies, local agencies, landowners, non-governmental organizations, and developers to identify methods that minimize impacts to water quality and the natural environment. *(Working Group, 12/4/08, revisions by Mintier, 12/10/08, Foothill Conservancy, 1/15/09)*

Implements What Policy: 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 5.7, 9.1

What County Department is Responsible? Planning Department

Other Participants: Water and wastewater agencies, other local agencies, environmental interests, NGOs, landowners, developers

Timeframe: 2010-2015

Implementation Program #12: The County shall, when fiscally possible, continue development of its Local Agency Ground Water Protection Program that identifies known or potential groundwater impacts including, but not limited to, from onsite septic systems. *(Moss, 12/7/08, revisions by Moss, 12/19/08)*

Implements What Policy: 4.5, 1.3, 5.4, 8.5

What County Department is Responsible? Environmental Health Department, Geographic Information Systems (Technology Services Department)

Other Participants: Water and wastewater agencies

Timeframe: Ongoing

GOAL 5: Wastewater Management. To ensure infrastructure is available and able to sustainably collect, treat, store, reuse, and safely dispose of wastewater for existing and future needs of the county.

Policies for Goal 5

5.1. Adequate Facilities and Services. The County shall ensure, through the development review process, that wastewater facilities and services will be adequate and operational to serve new development and meet capacity when needed. *(Working Group, 11/6/08, revisions by Lott, 11/13/08, Loux, 11/25/08, CCWD, 11/26/08, Working Group, 12/4/08, Working Group, 1/22/09)*

5.2. Sewer Service Approval. The County shall only approve new subdivisions with more than 30 residential units or equivalent commercial/industrial development if served by an approved sewer system. *(Working Group, 11/6/08, revisions by Working Group, 11/20/08, CCWD, 11/26/08, Working Group, 12/4/08, Working Group, 1/22/09)*

5.3. Alternative Wastewater System Approval. The County shall approve new development that can demonstrate to the County that sewer service will be provided from an alternative wastewater system with adequate financial, managerial, and operational resources, where septic or connection to an approved sewer system is not feasible. *(Working Group, 11/6/08, revisions by Working Group, 11/20/08, CCWD, 11/26/08, Working Group, 12/4/08, Mintier, 12/10/08, incorporates previous Policy 5.5, Working Group, 1/22/09)*

5.4. Individual Onsite Wastewater Treatment System Permitting. The County shall permit adequately designed individual onsite wastewater treatment systems (OWTS) for new single-family residential units or 4-way lot splits (or less), where connection to an approved alternative wastewater system or sewer system is not feasible. *(Working Group, 11/20/08, revisions by Working Group 12/4/08, Moss, 12/8/08, Mintier, 12/10/08, Working Group, 1/22/09)*

5.5. Responsible Use and Disposal of Water. The County shall encourage the development of waste disposal systems that minimize pollution. *(Working Group, 11/6/08, revisions by UPA, 11/5/08, Working Group, 12/4/08, combined with previous Policy 5.2)*

5.6. Interagency Coordination. The County shall direct appropriate County departments to cooperate with and provide regular communication and technical assistance to wastewater agencies in order to meet existing and future needs within the county. *(Working Group, 11/20/08, revisions by Mintier, 12/10/08)*

5.7. Educational Programs. The County shall encourage development of educational programs by wastewater agencies and public agencies to increase public awareness of wastewater collection, treatment, and disposal. *(Working Group, 11/20/08, revisions by Mintier, 12/10/08)*

5.8. Onsite Wastewater Treatment System (OWTS) Failures. The County shall encourage and support the installation of public wastewater treatment facilities in existing communities that are experiencing significant OWTS failures and/or are posing a potential threat to county water resources or the public. *(CCWD, 11/26/08, revisions by Working Group, 12/4/08, Mintier, 12/10/08, Moss, 12/19/08, Calaveras Planning Coalition, 1/15/09)*

Implementation Programs for Goal 5

Implementation Program #13: The County shall cooperate with wastewater agencies to conduct a study to evaluate feasible alternatives for rural wastewater systems. Alternatives shall meet all state and local codes. *(Working Group, 12/4/08, revisions by Moss, 12/19/08, CSERC, 1/13/09)*

Implements What Policy: 5.2, 5.3, 5.4, 5.8, 5.10

What County Department is Responsible? Environmental Health Department, Onsite Wastewater Department

Other Participants: Central Valley Regional Water Quality Control Board, Wastewater agencies, landowners

Timeframe: 2010-2015

Implementation Program #14: The County shall conduct a study to investigate the feasibility of adding infrastructure to wastewater treatment plants for septage receiving and treatment. *(Moss, 12/7/08, revisions by Moss, 12/19/08)*

Implements What Policy: 5.3, 5.4, 5.5, 5.8

What County Department is Responsible? Onsite Wastewater Department

Other Participants: Wastewater agencies

Timeframe: 2010-2015

GOAL 6: Watershed Management. To enhance and protect watersheds, including, but not limited to, open spaces, soils, water bodies, recreation areas, habitat, vegetation, groundwater recharge areas, and developed areas, through responsible water and land use management.

Policies for Goal 6

6.1. Public Education. The County, in cooperation with local agencies, non-governmental organizations, and landowners, shall support efforts to educate the public on the importance of watershed management. *(Working Group, 11/6/08, revisions by UPA, 11/5/08, Lott, 11/13/08)*

6.2. Interagency Cooperation and Coordination. The County shall cooperate and coordinate with other local watershed management programs. *(Working Group, 11/6/08, revisions by Buckley, 11/6/08, UPA, 12/3/08)*

6.3. Funding. The County shall support efforts to obtain grant funding for locally sponsored watershed programs, planning efforts, and projects that enhance and protect the watersheds of the county. *(Working Group, 11/6/08, revisions by UPA, 11/5/08, Strange, 11/4/08, Lott, 11/13/08, Mintier, 12/10/08)*

6.4. Groundwater Recharge Area Protection. The County shall require new development projects to adequately protect groundwater recharge areas. *(Working Group, 11/6/08, revisions by UPA, 11/5/08, Strange, 11/4/08, Working Group, 12/4/08, Mintier, 12/10/08)*

6.5. Watershed Protection. The County shall require new development projects to minimize impacts on surface water, recreation areas, agriculture, and wildlife habitat areas. *(Working Group, 11/6/08, revisions by UPA, 11/5/08, Strange, 11/4/08, Lott, 11/13/08, Working Group 12/4/08, Mintier, 12/10/08)*

6.6. Water Recreation Area Protection. Wherever feasible, the County shall work with landowners, agencies, and resource managers to maintain and/or improve public access for recreational uses along waterways. *(Working Group, 11/20/08, revisions by Loux, 11/25/08)*

6.7. Instream Flow Management. The County shall support instream flow standards to protect aquatic habitat and fisheries while balancing water supply needs and protecting water rights within the county. *(Loux, 11/25/08, revisions by UPA, 12/3/08)*

6.8. Road Construction Erosion Management. The County shall require new development projects to use landform and contour grading and related techniques to minimize erosion and sedimentation potential and reduce water quality impacts when planning, designing, grading and constructing County roads and roads that will serve the development. *(Loux, 11/25/08, revisions by Loux, 12/8/08, Mintier, 12/10/08)*

6.9. Building Setback Lines. The County shall establish and enforce comprehensive development standards to provide building setback lines for new approved structures along perennial and intermittent streams, adjacent to identified wetlands, or floodplains. *(Infusino, 11/20/08, revisions by Buckley, 11/20/08, Calaveras Planning Coalition, 1/15/09, CSERC, 1/13/09)*

Implementation Programs for Goal 6

Implementation Program #15: The County shall identify, inventory, and map natural groundwater recharge areas to help land use planners locate development. *(Working Group, 12/4/08, revisions by Mintier, 12/10/08)*

Implements What Policy: 6.4, 1.3

What County Department is Responsible? Planning Department, Geographic Information Systems (Technology Services Department)

Other Participants: Water agencies, other local agencies, landowners

Timeframe: 2010-2015, ongoing

Implementation Program #16: The County shall study and, if feasible, adopt standards for the protection of groundwater recharge areas, such as placing limitations on the amount of impervious surfaces, or other planning and zoning techniques. *(Working Group, 12/4/08, revisions by Mintier, 12/10/08, Angels, 12/15/08)*

Implements What Policy: 6.4

What County Department is Responsible? Public Works Department, Board of Supervisors

Other Participants: Water agencies, landowners

Timeframe: 2015-2020

Implementation Program #17: The County shall review, revise, and update its grading and erosion control ordinance and its rural road standards to implement the water quality, stormwater, and watershed policies. *(Loux, 12/8/08)*

Implements What Policy: 6.5, 6.8

What County Department is Responsible? Building Department, Public Works Department, Board of Supervisors

Other Participants: Local agencies

Timeframe: 2015-2020

GOAL 7: Stormwater and Flood Management. **To manage stormwater from existing and future development in a cost-effective manner through methods that maintain natural water quality, enhance percolation for groundwater recharge, reduce potential flooding, support natural wetlands and provide opportunities for reuse.**

Policies for Goal 7

7.1. Public Education. The County shall develop educational material and programs on the importance of stormwater and flood management. *(Working Group, 11/6/08, revisions by Lott, 11/13/08)*

7.2. Interagency Cooperation and Collaboration. The County shall work with the Central Valley Regional Water Quality Control Board and local, other state, and federal flood control and water resources management agencies to adopt effective stormwater management measures. *(Working Group, 11/6/08, revisions by UPA, 11/5/08, Buckley, 11/6/08, Lott, 11/13/08, Angels, 12/12/08)*

7.3. Best Management Practices. The County shall require best management practices (e.g., low impact development) in new development and redevelopment to reduce pollutants from entering natural water bodies while allowing stormwater reuse. *(Loux, 11/25/08, moved from previous Policy 4.4, revisions by Working Group, 12/4/08)*

7.4. Maintenance of Stormwater Runoff Systems. The County shall maintain its existing stormwater runoff systems, to the extent possible, to assure that these systems do not fall into a state of disrepair such that they are causing water quality degradation inconsistent with their original design function. *(UPA, 12/3/08)*

7.5. Runoff Quality. The County shall require all drainage systems in new development and redevelopment to comply with applicable state and federal non-point source pollutant discharge requirements. *(Working Group, 11/6/08, revisions by Lott, 11/13/08, Mintier, 12/10/08, CSERC, 1/13/09, Foothill Conservancy, 1/15/09)*

7.6. Natural Drainage Systems. The County shall encourage the use of natural stormwater drainage systems to preserve and enhance the environment. *(Working Group, 11/6/08, revisions by Lott, 11/13/08)*

7.7. Agricultural Runoff. The County shall work with local partners (e.g. Natural Resource Conservation Service) to provide educational and technical assistance to farmers to reduce sedimentation and to provide onsite retention of irrigation water and flow attenuation, as well as detention of stormwater flows. *(Working Group, 11/20/08, revisions by Calaveras Planning Coalition, 1/15/09, CSERC, 1/13/09)*

7.8. Flood Zone Compliance. The County shall not approve new non-agricultural parcel maps or subdivision maps within 100-year flood zones as mapped by Federal Emergency Management Agency (FEMA) unless the proposed new development mitigates the impacts. *(Working Group, 11/20/08, revisions by Working Group, 12/4/08, Mintier, 12/10/08)*

Implementation Programs for Goal 7

Implementation Program #18: The County shall review and, if necessary, revise grading and stormwater and flood management ordinances to fully protect downstream waters. *(Working Group, 12/4/08, revisions by County, 12/26/08, Calaveras Planning Coalition, 1/15/09)*

Implements What Policy: 7.3, 7.4, 7.5, 7.6, 7.8

What County Department is Responsible? Public Works Department, Board of Supervisors

Other Participants: Central Valley Regional Water Quality Control Board, local/state/federal flood control and water resources management agencies

Timeframe: 2010-2015

Implementation Program #19: The County shall develop and adopt revised and updated standards and best management practices for new development projects as part of its stormwater management and grading ordinance, project stormwater pollution preventions plans, and Non-Point Discharge Elimination System (NPDES) general construction permits, that encourage alternative storm water management systems, natural drainage systems and low impact development approaches to managing stormwater that improve water quality. *(Loux, 12/7/08, revisions by CCWD, 1/14/09, Calaveras Planning Coalition, 1/15/09)*

Implements What Policy: 7.3, 7.4, 7.5, 4.3

What County Department is Responsible? Public Works Department, Board of Supervisors

Other Participants: Central Valley Regional Water Quality Control Board, local/state/federal flood control and water resources management agencies

Timeframe: 2010-2015

GOAL 8: Interagency Communication and Cooperation. **To promote interagency communication and cooperation between land use and water and wastewater entities, so that they may optimize utilization of their resources and provide the highest level of dependable, yet affordable, service, while respecting individual entities water rights and interests.**

Policies for Goal 8

8.1. Water and Wastewater Infrastructure. The County shall work with water and wastewater agencies in the planning, development, and construction of water and wastewater facilities needed to transmit, treat, store, and distribute potable water supplies, and to collect, convey, treat and dispose of wastewater pursuant to adopted General Plan policies, urban water management plans, water supply agreements, and master facilities plans. *(Working Group, 11/6/08, revisions by Mintier, 12/10/08)*

8.2. Cooperation. The County shall support cooperative interregional planning efforts that have as a high priority the protection of existing water rights of local Calaveras County agencies. *(Working Group, 11/6/08, revisions by UPA, 11/5/08, Lott, 11/13/08, Buckley, 11/6/08, Working Group, 12/4/08)*

8.3. Funding Sources. The County shall work with local agencies to identify and pursue alternative funding sources that can be used for projects that improve the water resources management opportunities in Calaveras County. *(Working Group, 11/6/08, revisions by UPA, 11/5/08, Buckley, 11/6/08, Buckley 12/4/08, Mintier, 12/10/08)*

8.4. Water Supply Reliability. The County shall encourage water agencies to develop plans for responding to droughts and the effects of predicted global climate change, including contingency plans and the sharing of water resources to improve overall water supply reliability for the existing and future needs of the county. *(Working Group, 11/6/08, revisions by UPA, 11/5/08, Buckley, 11/6/08)*

8.5. Data Sharing. The County shall share relevant data and encourage water/wastewater agencies to share data to assist in planning activities. *(Working Group, 11/6/08, revisions by CCWD 1/14/09)*

Implementation Programs for Goal 8

Implementation Program #20: The County shall direct appropriate departments to participate, to the extent possible, in regional water, wastewater, and watershed planning groups designed to discuss and solve water supply, water quality, watershed, and other water/wastewater-related issues within the county, and to identify and pursue alternative funding sources for future projects. These groups include, but are not limited to, the Mokelumne-Amador-Calaveras Integrated Regional Water Management Plan (IRWMP) and the Tuolumne-Stanislaus IRWMP. *(Working Group, 12/4/08, revisions by Mintier, 12/10/08, CSERC, 1/13/09, incorporates previous Implementation Program #19)*

Implements What Policy: 8.2, 1.2, 6.2, 5.6, 4.5, 1.15

What County Department is Responsible? Planning Department, other departments as directed, Board of Supervisors

Other Participants: Water and wastewater agencies, other local agencies, other interested parties

Timeframe: 2010-2015, ongoing

Implementation Program #21: The County shall work with local agencies and other interested parties to develop an interagency cooperative program to serve as a clearing house for data related to land use and water planning. These data may include hydrology, water quality, geology, hydrogeology, geography, facility locations, land use, and other water and wastewater related information. *(Working Group, 12/4/08, revisions by Moss, 12/19/08, Foothill Conservancy, 1/15/09)*

Implements What Policy: 8.5, 8.2, 6.2, 5.6, 4.5, 1.15

What County Department is Responsible? Geographic Information Systems (Technology Services Department), Environmental Health Department

Other Participants: Water and wastewater agencies, and other local agencies

Timeframe: 2010-2015

Implementation Program #22: The County Building Department shall work with water and wastewater agencies to develop consistent construction and inspection standards. *(Working Group, 12/4/08, revisions by Mintier, 12/10/08)*

Implements What Policy: 8.1

What County Department is Responsible? Building Department, Board of Supervisors

Other Participants: Water and wastewater agencies

Timeframe: 2010-2015

GOAL 9: Public Education and Awareness. To increase public awareness of water resources and wastewater planning, water quality, and water conservation through education and outreach.

Policies for Goal 9

9.1. Public Education Material. The County shall encourage water agencies, wastewater agencies, and other local organizations or individuals to develop and distribute educational material regarding water conservation and water quality protection measures and programs. *(Working Group, 11/6/08, revisions by Strange, 11/4/08, Working Group, 12/4/08)*

9.2. Water Resources and Wastewater Planning. The County shall encourage water and wastewater agencies to involve the public in their water resource and wastewater planning activities. *(Working Group, 11/6/08, revisions by Buckley, 11/6/08, Working Group, 12/4/08)*

Implementation Programs for Goal 9

Implementation Program #23: The County shall work with local agencies and non-governmental organizations to seek funds to support efforts to develop and distribute educational material for the public regarding water conservation, water quality, irrigation practices, and other water and wastewater related topics. *(Working Group, 12/4/08, revisions by County, 12/26/08)*

Implements What Policy: 9.1, 9.2, 2.5, 4.6, 5.7, 6.1, 7.1

What County Department is Responsible? Planning Department

Other Participants: Water and wastewater agencies, other local agencies, NGOs, landowners

Timeframe: Ongoing

Implementation Program #24: The County shall work with water and wastewater agencies to establish a schedule for briefings to the Board of Supervisors regarding water and wastewater related activities. *(Formerly Policy 9.6 per Working Group, 11/6/08, revisions by Mintier, 12/10/08)*

Implements What Policy: 9.2, 1.15, 4.5, 5.6

What County Department is Responsible? Planning Department

Other Participants: Water and wastewater agencies

Timeframe: 2010-2015, ongoing

APPENDIX A

GLOSSARY OF TERMS

APPENDIX A

GLOSSARY OF TERMS

The following key terms used in this chapter are defined as follows:

Acre-Foot (AF). The volume of water required to cover one acre of land (43,560 square feet) to a depth of one foot. One AF is equal to 325,851 gallons or 1,233 cubic meters.

ADWF. Average dry weather flow, or flow during dry seasons, with limited or no inflow and infiltration.

Aquifer. A geologic formation that is water bearing. A geological formation or structure that stores and/or transmits water, such as to wells and springs. Use of the term is usually restricted to those water bearing formations capable of yielding water in sufficient quantity to constitute a usable supply.

Alternative Wastewater System. A wastewater treatment system that meets all state and local codes, but is not a septic system or regional sewer treatment/collection system.

Backup. Wastewater that enters into basements and other low-lying areas during a moderate to intense rainfall event. Similar to overflow, backup is normally a result of excess stormwater and groundwater entering into the sanitary sewer or a blockage in the public or private sewer system.

Base Flow. The component of wastewater that originates from domestic users such as residential, commercial, and institutional discharges.

Beneficial Use. Use of water either directly by people or for their overall benefit as legally defined and identified.

Cleanout. Outside access point on a property owner's service lateral that allows for cleaning in the event of a blockage.

Climate change. Changes in average annual temperature and precipitation and their monthly patterns in 2050 compared to today.

Commercial Water Use. Water used for motels, hotels, restaurants, office buildings, other commercial facilities, and institutions. Water for commercial uses comes both from public-supplied sources, such as a county water department, and self-supplied sources, such as local wells.

Community Water System. A public water system that serves at least 15 service connections used by yearlong residents or regularly serves at least 25 yearlong residents. See also public water system.

Confined Aquifer. Soil or rock below the land surface that is saturated with water. There are layers of impermeable material both above and below a confined aquifer and it is under pressure, so that when the aquifer is penetrated by a well, the water will rise above the top of the aquifer.

Conjunctive use. Application of surface and groundwater to meet the demand for a beneficial use. Coordinated and planned management of both surface and groundwater resources in order to maximize the efficient use of the resource; that is, the planned and managed operation of a groundwater basin and a surface water storage system combined through a coordinated conveyance infrastructure. Water is stored in the groundwater basin for later and planned use by intentionally recharging the basin during years of above-average surface water supply.

Conveyance Facilities. Canals, pipelines, pump lifts, ditches, etc. used to move water from one area to another.

Cubic Feet per Second (cfs). A rate of flow, for example in streams and rivers. One cubic foot per second is equal to a volume of water one foot high and one foot wide flowing a distance of one foot in one second. This is 7.48 gallons of water.

Discharge. A rate of surface flow, typically expressed as a unit of volume of water per unit of time.

Disinfection. A process following secondary or tertiary treatment that typically involves the use of chlorine or ultraviolet (UV) radiation to destroy bacteria and other pathogens.

Domestic Water Use. Water used for household purposes, such as drinking, food preparation, bathing, washing clothes, dishes, and dogs, flushing toilets, and watering lawns and gardens.

Drawdown. A lowering of the groundwater surface level caused by pumping.

Dry Weather Infiltration. Groundwater that enters into the sanitary sewer system during the driest period of the year when the groundwater table is lowest in elevation.

Ecosystem restoration. The activity of improving the condition of natural landscapes and biotic communities.

Effective Dwelling Unit (EDU). Also referred to as Equivalent Dwelling Unit or Equivalent Single- Family Unit. The level of service a typical residential unit receives per year. Often serves as the basis for determining service fees.

Effluent. Treated wastewater discharged from a wastewater treatment facility.

Floodplain management. Actions designed to reduce risks to life, property, and the environment due to flooding. Actions can include watershed management, infrastructure construction and operation, variations in land use practices, floodway designations, etc.

Greywater (or graywater). Domestic wastewater that does not contain human wastes such as tub, shower, or washing machine water

Groundwater Basin. A groundwater basin is the aboveground area from which water flows or seeps into a particular aquifer or series of linked aquifers.

Groundwater Budget. A numerical accounting, the groundwater equation, of the recharge, discharge and changes in storage of an aquifer, part of an aquifer, or a system of aquifers.

Groundwater in storage. The quantity of water in the zone of saturation.

Groundwater management plan. A comprehensive written document developed for the purpose of groundwater management and adopted by an agency having appropriate legal or statutory authority.

Groundwater management. The planned and coordinated management of a groundwater basin or portion of a groundwater basin with a goal of long-term sustainability of the resource.

Groundwater quality. Water quality can affect supply integrity. Many pollutants are hydrophilic and not easily filtered by soil. Treated groundwater can be added to water supply.

Groundwater recharge. The natural or intentional infiltration of surface water into the zone of saturation.

Groundwater. Water that occurs beneath the land surface and fills the pore spaces of the alluvium, soil, or rock formation in which it is situated. It excludes soil moisture, which refers to water held by capillary action in the upper unsaturated zones of soil or rock.

Industrial Water Use. Water used for industrial purposes in such industries as steel, chemical, paper, and petroleum refining. Nationally, water for industrial uses comes mainly (80 percent) from self-supplied sources, such as local wells or withdrawal points in a river, but some water comes from local water service providers.

Inflow. Surface stormwater that enters into the sanitary sewer through direct sources such as vented manhole covers, downspouts, area drains, and uncapped cleanouts.

Interceptor. Sanitary sewer interceptors are those lines that convey sewage from neighborhood to neighborhood in route to the wastewater treatment plant. Pipe diameters are generally larger than lines placed within residential developments.

Lift Station. A pumping facility that conveys wastewater flow from an area that would not naturally drain to the wastewater treatment plant, or into the gravity sewer system for delivery and treatment.

Manhole. Manholes are used at designated intervals in a sewer line as a means of access for inspection or cleaning.

Maximum Contaminant Level (MCL). The designation given by the U.S. Environmental Protection Agency (EPA) to water quality standards promulgated under the Safe Drinking Water Act. The MCL is the greatest amount of a contaminant that can be present in drinking water without causing a risk to human health.

Milligram (mg). One-thousandth of a gram.

Milligrams per Liter (mg/L). A unit of the concentration of a constituent in water or wastewater. It represents 0.001 gram of a constituent in 1 liter of water. It is approximately equal to one part per million (PPM).

Million Gallons per Day (mgd). A rate of flow of water equal to 133,680.56 cubic feet per day, or 1.5472 cubic feet per second, or 3.0689 AF per day. A flow of one million gallons per day for one year equals 1,120 AF (365 million gallons).

Municipal Water System. A water system that has at least five service connections or which regularly serves at least 25 individuals for 60 days; also called a public water system.

Natural recharge. Natural replenishment of an aquifer generally from snowmelt and runoff; through seepage from the surface.

Ordinance. A law set forth by a governmental authority

Overdraft. Overdraft is a condition of a groundwater basin or aquifer in which withdrawals exceed inflow (i.e., more water is removed than put back in).

Per Capita Use. The average amount of water used per person during a standard time period, generally per day.

Potable Water. Water of a quality suitable for drinking.

Recharge area protection. The action of keeping recharge areas from being paved over or otherwise developed and guarding the recharge areas so they don't become contaminated.

Recycled water (or reclaimed water). Treated municipal, industrial, or agricultural wastewater to produce water that can be reused.

Reuse. Additional use of previously used water.

Runoff. Precipitation that is not used by plants, evaporated, or absorbed by soils and is transported across land surfaces to streams or other bodies of surface water.

Service Line. Facilities owned and maintained by property owners that convey waste from a structure to the public system.

Sufficient Water Supply. Total water supplies available during normal, single-dry, and multiple-dry years within a 20-year projection that will meet the projected demand associated with the proposed subdivision, in addition to existing and planned future uses, including, but not limited to, agricultural and industrial uses. *(Government Code Section 66473.7(a)(2)*

Surcharge. A condition in which the wastewater flow rate in a sewer system exceeds the capacity of the sewer lines to the extent that raw sewage begins to rise within manholes.

Surface Water. Water that is on the earth's surface, such as in a stream, river, lake, or reservoir.

Sustainability. A specific resource that avoids complete depletion over a specified time horizon. The continued feasibility of a specified economic activity over a specified time horizon, usually influenced by management and policy actions

Title 22. A section of the California State Water Code requiring filtration of any reclaimed effluent used for full-body contact recreation or fresh food crop irrigation, provided a receiving water dilution of less than 20-to-1 exists. Title 22 requires lesser levels of treatment for other uses of reclaimed effluent.

Total Maximum Daily Loads. A total maximum daily load (TMDL) refers to the amount of a specific pollutant a river, stream, or lake can assimilate and still meet Federal water quality standards as provided under the Clean Water Act.

Unconfined Aquifer. An aquifer whose upper water surface (water table) is at atmospheric pressure, and is, therefore, able to rise and fall.

Wastewater. Sewage (either treated or untreated) from residential, commercial, industrial, and institutional sources.

Water balance. An analysis of the total developed/dedicated supplies, uses, and operational characteristics for a region.

Water conservation. The use of less water to accomplish the same purpose.

Water demand. The desired quantity of water that would be used if the water is available and a number of other factors such as price do not change.

Water quality. Description of the chemical, physical, and biological characteristics of water, usually in regard to its suitability for a particular purpose or use.

Water Quality. The chemical purity of water measured in terms of a variety of constituents or parameters (e.g., turbidity, metals concentration, organics concentration, and salinity).

Water Table. The top of the water surface in the saturated part of an aquifer.

Watershed management. The process of evaluating, planning, managing, restoring, and organizing land and other resource use within an area that has a single common drainage point.

Watershed. The land area from which water drains into a stream, river, or reservoir.

Well (wellwater). An artificial excavation put down by any method for the purposes of withdrawing water from underground aquifers. A bored, drilled, or driven shaft, or a dug hole whose depth is greater than the largest surface dimension and whose purpose is to reach underground water supplies or oil, or to store or bury fluids below ground.

Wet-Weather Infiltration. Peak infiltration that is measured 6 to 12 hours after a measured storm event, excluding base flow and dry weather infiltration.

WWTF. Abbreviation for wastewater treatment facility.

APPENDIX B

LETTERS OF SUPPORT

APPENDIX B

LETTERS OF SUPPORT

Listed below are organizations that submitted written communications supporting inclusion of a water element in the County's General Plan Update. These organizations are members of the Calaveras County Water Element Group, and participated, along with other members, in the formulation of the Final Draft Water Element. These written communications were received prior to publication of this report, and are included in this appendix. Letters of support from other organizations received after this publication will be mailed to the Calaveras County Board of Supervisors under separate cover.

Organization	Date of Communication
Calaveras Community Television	February 12, 2009
Calaveras County Water District	February 13, 2009
Calaveras Planning Coalition	February 9, 2009
Central Sierra Environmental Resource Center	February 12, 2009
Union Public Utility District	February 9, 2009
Wallace Citizens Serving Residents	January 31, 2009
Wallace Community Service District	February 6, 2009

Paul Moeller
<pmoeller@paulmoeller.net>
02/11/2009 07:29 PM

To Roger G Putty <Roger.G.Putty@us.mwhglobal.com>
cc
bcc
Subject Re: Calaveras County Water Element: Support Letters

History: This message has been forwarded.

From long research of water and waste water issues in Calaveras County, I am in full support to include the Water Element in the General Plan Update.

Water is of extra ordinary importance and is of tremendous value for our County's existence and further growth. Nothing goes without sufficient supply of water. cannot exist without water and economical development neither. We can exist without many things, but not without water

Paul A. E. Moeller, Calaveras Community Television (CCTV}
Life

CALAVERAS COUNTY WATER DISTRICT

BUSINESS OFFICE
423 East St Charles Street
Post Office Box 846
San Andreas, California 95249
(209) 754-3543
Fax (209) 754-1069

February 11, 2009

Calaveras County Board of Supervisors
891 Mountain Ranch Road
San Andreas, CA 95249

Re: Calaveras County General Plan Update Water Element

Dear Board of Supervisors:

In behalf of the Calaveras County Water District, I would like to thank and commend the Board of Supervisors for taking a leadership role in authorizing water / wastewater districts and the community to develop a Water Element for the General Plan Update. The Calaveras County Board of Directors actively participated in the development of the Water Element and supports its implementation. It is the District's opinion that this Water Element product provides the County a valuable tool to ensure good long-range land use planning for the County's resources.

While various techniques are available to link water and land use planning, the County's Water Element approach will help secure a healthy, sustainable water supply for the next generation of Calaveras County residents. Despite a difficult early start, the Water Element Group, representing a diverse array of water / wastewater districts, non-governmental organizations, and community members throughout Calaveras County, pulled together collectively as a group to develop what I feel is an excellent document that links water and land use planning. The document represents countless hours of research, analysis, discussion, and product development by the Water Element Group. It is comprehensive in scope, ranging from water rights protection to water supply management, to conservation, to water quality protection, to watershed management, to interagency coordination, to public education. By consolidating these measures into a single document, a number of benefits have been achieved:

- Elevating the importance of water supply and water supply infrastructure as an important resource to be managed carefully;
- The creation of a nexus for integration of land use planning and water and wastewater availability; and
- A greater chance to update the water element on a timely basis.

More important, the Water Element allows the County to better coordinate water and land use management with the many diverse water / wastewater districts scattered throughout the County.

The success of the Water Element effort cannot be emphasized without mention of the team of consultants that came together to assist the Water Element Group achieve its goal. Roger Putty and Jafar Faghih, MWH, Inc., Carolyn Lott, Center for Collaborative Policy, Jeff Loux, UC Davis, and Jessica Schwartz, Larry Mintier, and Rik Keller, Mintier Harnish. County planning staff, including John Taylor, Robert Sellman, and Debra Lewis also served as vital team members.

Thank you again for the opportunity to present the Water Element to the Calaveras County Board of Supervisors. If you have any questions, please contact me or Edwin Pattison at (209) 754-3543.

I look forward to working with you and your staff as this process moves forward.

Sincerely,

CALAVERAS COUNTY WATER DISTIRCT

David J. Andres
General Manager

Thomas P. Infusino
P.O. Box 792
Pine Grove, CA 95665
(209) 295-8866
tomi@volcano.net

February 9, 2009

Board of Supervisors
County of Calaveras
891 Mountain Ranch Road
San Andreas, CA 95249

RE: Support for Draft Water Element

Dear Supervisors:

I am very pleased to submit these comments on behalf of the Calaveras Planning Coalition ("Coalition"). The Coalition is composed of community groups, organizations, and individuals interested in growth and planning issues in Calaveras County. The Coalition is united in its belief in the need for a comprehensive update to the Calaveras County General Plan. Further, the Coalition believes that citizen participation is the key to a successful update of the General Plan, and necessary to the update of area specific plans throughout the County.

In August of 2008, the Board of Supervisors and the CCWD Board of Directors held a joint meeting to discuss including a water element in the County's General Plan Update. At that time, the Coalition testified in support of including such an element. In the months that followed, representatives of the Coalition and its member groups participated with many other water interests from around the county in the element drafting workshops. The result of that fast-paced and tumultuous process is the draft water element that is being presented to your Planning Department this week. While we feel strongly that there are many areas in the draft element that continue to need a lot of work, we also feel that the draft element it is a good start. We hope that your professional staff and your consultants will help to improve the draft water element as it moves through further staff, public and environmental review.

Sincerely,

Thomas P. Infusino

Thomas P. Infusino, Facilitator
Calaveras Planning Coalition

Central Sierra Environmental Resource Center
Box 396 • Twain Harte, CA 95383 • (209) 586-7440 • FAX (209) 586-4986
Visit our website at: www.cserc.org or contact us at: johnb@cserc.org

February 12, 2009

Russ Thomas, chair, and fellow board members
Calaveras County Board of Supervisors
891 Mountain Ranch Road
San Andreas, CA 95249-9709

To the members of the board:

As you are each fully aware, Calaveras County residents and various interests groups in the County represent a wide range of perspectives and political views. When it comes to the complex issues tied to water and wastewater, there are certainly turf battles, philosophic disagreements, and strong motivation for some to press their individual agendas.

Surprisingly, that is not how the Water Element discussions turned out. Due in part to the talented facilitators of the Water Element sessions and due to the respectful collaborative spirit of those who participated in the water discussions, the end result was general consensus beyond any early expectations. All parties involved in these months of discussions moved beyond their personal views and worked cooperatively to come up with agreed upon language, policies, and implementation programs that everyone could live with and accept.

We recognize that a General Plan revision is a huge undertaking with an endless range of potential policies and countless different ways to approach mandated programs. That is one of the reasons that our Center encourages you to take advantage of the collaborative effort that the Water Element represents. CSERC could easily point out many ecological reasons why we could justify much stronger resource protection policies or much stricter regulatory limits on the kinds of development that might harm water quality or aquatic species. But CSERC is not asking for any of those kinds of changes. Instead, we simply add our voice of support to the middle ground Water Element policies and programs that water district staff, local citizens, and representatives of interest groups all agreed upon.

Please consider carefully all the donated hours and sincere efforts that went into the draft Water Element that is now coming to you for action. Our Center provides our clear support for the finely tuned, carefully balanced language that is the end result of so much work.

John Buckley, executive director

UNION PUBLIC UTILITY DISTRICT
339 MAIN STREET
MURPHYS, CA 95247-9626
(209) 728-3651

February 9, 2009

Board of Supervisors
Calaveras County
891 Mountain Ranch Road
San Andreas, CA 95249

Supervisors:

The purpose of this letter is to reiterate our support for the Water Element to be included in the County's General Plan Update.

The goals, policies and implementation efforts outlined in the Element were drafted by consensus of the many water agencies, wastewater agencies and members of the public.

It is our hope that this Element will aid the County in developing and protecting the resources and residents of Calaveras County

Sincerely,

Bill Riedel

Bill Riedel, President
Board of Directors

Calaveras County Board of Supervisors

891 Mountain Ranch Road

San Andreas, CA 95249

31 January, 2009

RE: Endorsement for a Water Element in the General Plan Update

The Wallace Citizens Serving Residents (WCSR) strongly endorses the Water Element Goals and Policies as necessary to a balanced General Plan going forward. We view water as a public trust which calls for civic involvement that will help lead to the best decision making with land use and water wise strategies upheld by county stewardship.

As development continues, the long term quality and sustainability of groundwater and surface water resources has become a major public concern. Like much of California, Calaveras County is facing large water resource and supply challenges. Thirteen small unincorporated public water and wastewater special districts, along with several private municipal providers, scattered throughout Calaveras' largely rural population cannot provide for the protection and ecological health of our rivers, streams and watersheds over the next twenty years.

Community design with protection of open space for riparian corridors, wetlands, wildlife, agriculture, recreation, forestry, timber and mineral resources, demand that water availability be tightly integrated with Land Use, Open Space, Public Services, and Natural Resource Conservation. Interregional involvement and conservation methods are key to the protection of water rights and future growth.

By endorsing the Water Element, the WCSR believes that the future success for this element must include a county Natural Resources Conservation official who can work with federal, state, regional and NGO's in obtaining grants and programs to match increasing regulations. Such a twenty year planner should report directly to the BOS and become the interface with special districts, Planning, Environmental Health, agriculture and landowners and environmental agencies. Like Tuolumne County, this leads eventually to the formation of a Natural Resources Conservation (NRC) special district.

Respectfully,

Jackie Neill

Jackie Neill

Wallace Citizens Serving Residents

Cc: Roger Putty, Principal Engineer

WALLACE
COMMUNITY SERVICE DISTRICT
P.O. BOX 398 WALLACE, CA 95254 - 0398
TELEPHONE: (209) 763-2882

February 6, 2009

Calaveras County Board of Supervisors
891 Mountain Ranch Road
San Andreas, CA 95249

Dear Lady & Gentlemen:

The Wallace CSD has been participating in the formulation of the Draft Water Element effort sponsored by CCWD and intended to be a part of the General Plan Update.

In the process, we were impressed by the broad representation of stakeholders involved and the effective conduct of the meetings, which seemed to be responsive to stakeholders' views – even those of the rather small Wallace CSD.

The Board of Directors of the Wallace CSD supports the work of the Water element Group and the resulting Draft Water Element.

Sincerely,

Charles W. Cantoni
Member, Wallace CSD Board of Directors

cc: Mark Fusselman, President, WCSD Board of Directors
Roger Putty, MWH

Water Element
Goals & Policies Report

Calaveras County
General Plan Update

February 2009
FINAL DRAFT