

Section 6

Policy Recommendations

The Steering Committee composed the following recommendations for Butte County water resources policies. These recommendations are the outcome of a structured, eight-month planning process, as described in Sections 1 through 5. The policy recommendations are separated into two tiers. The First Tier represents policies that



The Steering Committee prepares to develop policy recommendations.

are derived from the options within the hybrid package; and the Second Tier includes policies that relate to the remaining options.

For each policy recommendation, the Steering Committee suggests a series of implementation steps. In most cases, the policy implementation steps reflect steps to implement options that are related to each policy. The steps are presented in chronological order, where possible.

6.1 First Tier Policies

The Steering Committee identified a group of policies that should be implemented to meet the County's planning objectives. Policies in the First Tier are those that should be the initial focus of the DW&RC.

Continue Ongoing Water Resources Efforts

Butte County has been working for many years to more effectively manage and protect its water resources. The existing efforts should continue, including:

- Groundwater Conservation Ordinance (Chapter 33);
- Well Spacing Ordinance;
- Update of Butte County Inventory and Analysis;
- Groundwater Management Plan (AB3030 Plan);
- Groundwater Monitoring Program;
- Update of Butte Basin Groundwater Model; and
- Urban Stormwater Management Plan.

The Integrated Water Resources Program has initiated the following efforts:

- Drought Management Plan;
- Water Resources update of the Conservation Element in General Plan;

- Environmental Monitoring Program (described below in more detail); and
- Basin Management Objectives.

Improve Water Management of the SWP Allocation

The County's current SWP contract amendment terminates in December 2004, and a majority of the County's allocation remains unused. The County must develop a mechanism for managing the unused portion of its SWP allocation and other water that may be available. This policy applies during the near-term, until the County implements projects associated with other policies that require use of the allocation (such as the policy to begin a coordinated management program). The Monterey Agreement specifies that SWP contractors may, on a short-term basis, transfer any unneeded supplies into a pool for purchase by other contractors; however, Turnback Pools A and B pay less than 50 percent and 25 percent, respectively, of the costs of the SWP allocation.

Implementation Steps

- Negotiate new mechanisms beyond the requirements of the Monterey Agreement regarding water management by an Area-of-Origin county.
- Evaluate uses of current allocation to develop estimates of the County's baseline needs in all water year types, including a firm estimate of the minimum amount of water needed in dry years.
- Negotiate new contracts with Del Oro Water Company, Paradise Irrigation District, and California Water Service Company based on the analysis above.
- Evaluate the amount of surplus water available in normal and wetter years that could provide additional water management improvements.
- Identify water management options that could generate revenue for the County.
- Develop financial goals associated with improved SWP allocation management.
- Analyze potential water management options; pricing ranges; various mechanisms for using the allocation; potential contractual requirements; and other legal and institutional requirements associated with managing the allocation.
- Evaluate existing infrastructure options and natural features (e.g., storage, conveyance) that could be necessary or beneficial for long-term water management improvement.
- Develop a method to project revenue by water year type and a means to provide consistent annual income to the County.

- Determine which other County water resources programs or policies currently supported by General Funds could be funded with proceeds from improved water management programs.
- Identify and pursue specific water management opportunities.

Increase Agricultural and Urban Water Use Efficiency

The County recognizes that improved water use efficiency (WUE) can provide additional supply for future drought protection or other in-County beneficial uses. Many water providers already work to improve water use efficiency. The County will investigate implementation of improved agricultural and urban WUE measures including best management practices, efficient water management practices, or quantifiable objectives. The County will cooperate with the Butte County RCD, the NRCS, the UC Cooperative Extension, and CSU-Chico (University Farm) to implement this policy.

Implementation Steps

- Identify areas where water use efficiency could improve and sponsor pilot projects to estimate the amount of potential water savings.
- Consult with urban and agricultural water suppliers to understand potential benefits and drawbacks of WUE measures.
- Provide funding and guidance for local public education regarding WUE and include WUE information in County publications, such as Water Solutions.
- Identify potential beneficial uses of saved water.
- Investigate the potential for a countywide WUE program to encourage the implementation of WUE measures. Identify potential program components such as: education; loans or grants for WUE implementation; other incentives; and design guidance assistance.
- Identify potential funding sources (e.g., Proposition 50) for implementation of agricultural and urban WUE programs. If appropriate, apply for funding for Countywide WUE programs.
- Provide guidance and assistance to local jurisdictions applying for funding.

Recommend that BMOs Support Native Vegetation

Sustaining natural vegetation above recharge zones is important for managing groundwater levels, because natural vegetation enhances riparian areas and wetlands that recharge the aquifer. When vegetation dies, water runs more quickly off of the wetland and vegetation areas, reducing recharge. The County encourages groundwater management units participating in the BMO development process to

consider groundwater levels that locally support vegetation, and to establish BMOs that maintain vegetation.

Implementation Steps

- Initiate the Environmental Monitoring Program.
- Retain the services of groundwater and habitat experts to estimate groundwater levels required for local vegetation in different BMO management units.
- Create and distribute guidance document for BMO process participants that explains the benefits of sustaining vegetation, and that provides locally-specific information pertinent to groundwater levels that support vegetation.
- Cooperate with the Butte County RCD, the NRCS, the UC Cooperative Extension, and CSU-Chico (University Farm and Research Foundation) to implement this policy.

Protect Recharge Areas through Zoning

Land use practices on recharge areas can affect the quality and quantity of recharge into the aquifer. Protecting habitat areas and limiting activities that could degrade water quality would reduce the potential for these effects. The County will pursue zoning changes to define protection measures within recharge areas.

Implementation Steps

- Define and prioritize recharge areas.
- Identify measures that could help protect aquifer quality and quantity, such as prohibiting certain types of new industrial or commercial facilities, installing sanitary sewers, limiting impervious cover, or building detention basins for stormwater.
- Determine the effectiveness of the protection measures.
- Work with Butte County Department of Development Services and the Board of Supervisors to craft and approve changes to zoning in recharge areas.

Inform and Educate the Public about Water

Fostering public knowledge and understanding regarding water resources can help to create a culture of resource stewardship. The County will increase public education to inform residents about local water resources and issues.

Implementation Steps

- Prioritize education campaigns (e.g., information dissemination through publications; interaction with the public in meetings or other settings; provision of

water data; and other methods) to determine which programs best meet Plan objectives.

- Develop specific tasks, budgets, and schedules for priority information programs.
- Identify and pursue potential funding sources, or use proceeds derived through improved management of SWP allocation.
- Roll out education program(s) in partnership with the NRCS, Butte County RCD, UC Cooperative Extension, CSU-Chico, Butte College, the Water Education Foundation, local watershed groups, and local water agencies.

Increase Support for Butte County Resource Conservation District

The Butte County RCD can play an important role in managing water resources by fulfilling its mission to “conserve the resources of Butte County for the benefit of its citizens, its environment and its economy.” The County will maintain administrative support for the RCD and help to coordinate activities with local watershed groups through the RCD.

Implementation Steps

- Assist the RCD to develop an annual and long-term plan as necessary.
- Identify and investigate funding for RCD activities.
- Help to obtain continued funding for a watershed coordinator within the RCD.
- Provide guidance and assistance for coordination with local watershed groups.

Support Solutions to Potential Future Water Shortages in the Ridge Community

The County will provide institutional support to help the Ridge community implement a solution to potential future water shortages.

Implementation Steps

- Continue efforts to coordinate with Paradise Irrigation District and Del Oro Water Company, as was initially implemented under the Paradise-Ridge MOU.
- Coordinate with Paradise Irrigation District and Del Oro Water Company as they update demand projections as part of their Urban Water Management Plans.
- Before the formal environmental documentation begins, assist local communities to develop local or regional environmental options to reduce environmental effects.
- Help secure funding for water supply reliability projects.

- Cooperate on use of County's SWP allocation to improve water supply reliability.

Implement a Coordinated Management Program

A coordinated management program could improve the flexibility and reliability of county water resources. A coordinated management program would include a recharge component to place water into the aquifer, a recovery component to extract water from the aquifer, a monitoring program to assess the aquifer behavior, and an institutional framework within which the program would function. The County will study the feasibility of a coordinated groundwater-surface water management program, and will seek to implement programs that are feasible and environmentally beneficial.

Implementation Steps

- Refine the existing Butte Basin groundwater model for use in further studies of this program.
- Apply the Butte Basin groundwater model to perform a preliminary feasibility screening of a coordinated management program.
- If a coordinated management program appears feasible, conduct a study and pilot projects to identify prime recharge areas, examine potential recharge methods, including direct recharge and in-lieu recharge, to determine financial, technical, economic, political, and environmental feasibility. Examine the potential environmental benefits associated with various recharge methods, including enhanced natural recharge. Develop a preliminary understanding of the potential environmental benefits and impacts of the recharge methods.
- Conduct pilot studies of groundwater extraction methods to determine their financial, technical, economic, political, and environmental feasibility.
- Develop a program plan and budget, including costs of the recharge and recovery components and potential program revenue.
- Investigate the potential for partnerships with other local, regional, or statewide agencies to help fund program components.
- Form a management structure within which the program will function.
- Design and construct program components.

Take Steps to Understand and Improve Butte County Water Quality

Understanding threats to water quality and improving water quality in Butte County are important aspects of resource stewardship. Known constituents affecting the County's water quality include nitrates, organic chemicals, sediment, and heavy

metals. The County will support investigations to improve understanding of Butte County surface water and groundwater quality.

Implementation Steps

- Support studies to investigate agricultural, rural, and urban water quality problems in Butte County.
- Coordinate among County, state, and federal agencies and groups to compile and share existing water quality data and develop a countywide water quality database to facilitate data sharing.
- Identify additional water quality monitoring needs and support monitoring programs as necessary.
- Enact land treatment (e.g., grading) and stormwater policies to protect and improve water quality.
- Identify and pursue potential funding sources for these water quality-related actions, or use proceeds from managing the SWP allocation.

Serve as an Advocate to Improve Understanding of and Conditions for Special Status Species in Creeks and Rivers

Many creeks and rivers in Butte County provide valuable habitat for special status species (i.e., state and federally-listed species). The presence of these species, their requirements, and the threats to their health are not fully understood. A need exists for a better understanding of these species' location-specific requirements, and for identification and implementation of actions to improve conditions for these species.

The County will use USFWS and CDFG documents to identify the type and location of special status species and the habitat needs of these species. The County will initiate actions and participate in ongoing efforts to protect special status species in creeks and rivers.

Implementation Steps

- Identify the special status species and their habitat needs.
- Coordinate with CDFG, NOAA Fisheries, USFWS, watershed groups, Butte County RCD, municipalities, and local agencies to determine how the County could assist in studies.
- Identify actions that can be taken to improve conditions for special status species.
- Identify and work to address concerns of private property owners that may be affected by potential actions.

- Assist CDFG and the Butte Creek Watershed Conservancy with their feasibility investigations of methods to protect the species.
- Develop partnerships with entities that have ongoing efforts to understand and improve conditions for special status species.
- Participate in the FERC relicensing processes on creeks and rivers and serve as an advocate for additional resources for special status species.
- Form an Environmental Committee to provide assistance in securing funding and implementing the environmental monitoring program.
- Identify potential funding sources for actions that support this policy, or use proceeds from managing SWP allocation.
- Share information gathered through implementation of this policy with the public.

Coordinate Regional Watershed Management

The County recognizes the efforts and progress made by the Butte County RCD and local watershed groups to meet distinct organizational and resource challenges. These local efforts could in some cases be enhanced through coordination and exchange of information, as well as through sharing of staff and funding resources. Likewise, at the regional level, coordination of watershed management planning among Butte, Plumas, Yuba, and Lassen Counties could achieve mutual benefits. The County will support watershed planning and management through the RCD.

Implementation Steps

- Create a forum (e.g., a series of meetings or an active committee) to exchange information and share expertise with watershed planners in neighboring counties and RCDs.
- Support development of a County-wide watershed model.

Implement an Environmental Monitoring Program

While the County has developed demand projections for municipal and agricultural water use, the County's environmental water needs are less well quantified. Better quantifying current and projected environmental water needs will allow the County to plan for its future water needs and to protect the potential for beneficial, in-county use of its water resources. The County will implement an environmental monitoring program to increase knowledge regarding environmental resources and water demands.

Implementation Steps

- Determine environmental monitoring objectives.

- Form an Environmental Committee to implement the program.
- Work with CSU-Chico and the Environmental Committee to refine program plans and budget.
- Identify potential funding sources for actions that support this policy, or use proceeds from managing the SWP allocation.
- Partner with State and Federal agencies in ongoing environmental monitoring activities.
- Conduct an ongoing environmental monitoring effort and use information gathered to develop detailed estimates of environmental water needs.
- Support instream flows that sustain appropriate fishery and terrestrial habitat.

Enhance a Multi-County Cooperative Outreach Effort

Because management of the County's water resources affects – and is affected by – resource management in adjacent counties, opportunities may exist for the County to improve local, statewide, and federal understanding of regional water management issues and needs through a multi-county, coordinated outreach effort. The County will initiate a multi-county effort to cooperate with neighboring entities that share water resources.

Implementation Steps

- Investigate which water resources management and outreach activities could benefit from dissemination of a consistent message at the local, statewide, and/or federal level.
- Determine whether an outreach effort could be completed in conjunction with other regional entities or efforts, such as the Northern Sacramento Valley Water Forum, Northern California Water Association, or the Sacramento Valley Water Management Agreement.
- Discuss the potential for an enhanced effort with neighboring counties, including Tehama, Glenn, Sutter, Colusa, Plumas, and Yuba.
- Identify or initiate, then participate in, an appropriate forum to exchange information, share expertise, jointly develop outreach themes and components, and implement outreach with representatives of other participating counties and federal agencies.

6.2 Second Tier Policies

The Steering Committee identified additional policies that do not need to be implemented immediately, but may be valuable policies in the future. These policies comprise the Second Tier.

Investigate the Potential for Water Storage in Former Mines

Mining activities leave a pit that may have potential for use as a water storage reservoir. The County will investigate the potential for future water storage projects in former mines.

Implementation Steps

- Investigate past and potential mining activities in the County that could leave excavations suitable for creation of water storage reservoirs.
- Investigate the amount of runoff or other potential sources of water in the vicinity of these excavations.
- Identify potential users for the stored water.
- Estimate project costs, and determine whether potential users have the ability to pay those costs.
- Examine potential environmental impacts and recreation benefits associated with creating the storage reservoir.

Expand Groundwater Level and Extraction Monitoring

Increased monitoring of the groundwater aquifer will help the County protect the resource for the future. Butte County DW&RC and DWR, Northern District have focused on characterizing the groundwater aquifer under Butte County, but additional information is needed in areas where significant volumes of groundwater are extracted each year. Increased groundwater level and extraction monitoring in these areas would provide information that could help the County and DWR better understand the aquifer. The County would increase monitoring efforts to further this goal.

Implementation Steps

- Investigate ways to monitor extractions that may be more affordable and politically acceptable than monitoring individual wells.
- Identify areas in the County where additional monitoring would help increase understanding of the aquifer.
- Determine the best methods to increase monitoring in these areas, including installation of new wells or increased monitoring at existing wells.

- Pursue long-term funding for the necessary monitoring.

Commit to a Periodic and Coordinated Update of Water Management Plans, Ordinances, Resolutions, and Policies

Water use and available supplies change regularly, especially with increasing development or changes in land use. Water management tools lose effectiveness if they are not updated as these changes take place. The County will commit to regularly updating water management plans, ordinances, resolutions, and policies, including management objectives.

Implementation Steps

- Identify the plans, ordinances, resolutions, policies, and management objectives that need to be updated, and develop a schedule for updates.
- Identify other agencies or groups that may have a stake in each tool, and determine the best way to coordinate the updates with these groups.
- Pursue steady funding for the updates.

Support Restoration of a More Natural Flow Regime on the Sacramento River

The flow patterns and geomorphology of the Sacramento River vary from historic patterns of high flows during rainfall and snowmelt. Fish and riparian vegetation use flows to cue various behaviors, such as spawning and migration. Channel geomorphology also plays an important role in the river's suitability for riparian species. Butte County will provide institutional and political support to restore a more natural flow regime and geomorphology on the Sacramento River.

Implementation Steps

- Identify agencies or non-profit groups that may be working to create these flow patterns.
- Coordinate with these agencies and groups to determine ways to lend support.
- Discuss concerns with local landowners that may be affected, and work with landowners and other interested parties to determine how these concerns could be addressed.

6.3 Dissenting Opinion

One member of the Steering Committee expressed reservations about the First Tier of policies because it includes an option to implement a coordinated management program. This stakeholder determined that he/she cannot fully support the set of policy recommendations because of environmental concerns associated with coordinated management.

6.4 Public Review and Completion of the Plan

Public review copies of the Integrated Water Resources Program are available at Butte County libraries, the DW&RC's library and website, or at Butte Environmental Council's office in Chico.

DW&RC staff plans to conduct public outreach meetings throughout the community during the summer of 2004 beginning in July. After public comments are received, they will be incorporated into the Draft Plan and presented to the Butte County Water Commission, then to the Board of Supervisors for future consideration and policy direction.