

Section 5

Packages

5.1 Package Development

Each of the options presented in Section 4 was conceived to serve one or more purposes. No single option, however, is capable of addressing all of the County's water management objectives on its own. "Packages," or groups, of options are necessary to develop a plan that meets multiple objectives. Many methods exist for selecting and grouping potential options for evaluation relative to multiple objectives. Because Steering Committee discussions centered on a number of specific water management problems within Butte County, the Study Team and Steering Committee began the package creation process by organizing options according to their combined ability to address specific problems, as expressed by problem statements (Section 5.1.1).

Once the initial set of packages was assembled, the Steering Committee and Study Team performed an evaluation in order to select the final package of options on which to base recommendations and to identify risk and uncertainty considerations. Sections 5.2 through 5.4 describe these evaluative steps.

5.1.1 Problem Statements

The Study Team drafted six problem statements based on Steering Committee discussions. These problem statements describe potential issues the County could face in the future, as follows:

- The Ridge area is projected to have water supply shortages during dry years.
- The County faces a potential reduction in its 27,500 acre foot SWP allocation if it is not put to beneficial use, but using the entire allocation in the County could be expensive.
- Water quality degradation could affect future supplies and biological resources.
- Outside interests may attempt to use County water resources that are not used beneficially within the County.
- The County must cope with fiscal challenges.
- The County faces historic and ongoing threats to its terrestrial and aquatic habitats.

As noted in the first problem statement above, the Ridge area is projected to have water supply shortages during dry years. In order to improve water supply reliability, the Plan must address Ridge supplies. Choosing how to address Ridge supplies, however, is a local decision. Because one of the measures included in the list of Ridge supply options from Section 4.1.3 (or another solution) will be implemented, the list of

Ridge options need not be included in an option package for evaluation. The Study Team forwarded the Ridge supply options to the policy recommendation development step (See Section 5.4). The Steering Committee developed a policy statement that expresses County support for addressing future Ridge supplies.

5.1.2 Content of Packages

The Study Team developed option packages, including about 10 to 12 options each, to address the problem statements. The Study Team formed packages to focus on a single problem statement. The Study Team then added options to address other problem statements, as long as the options met the guidelines below. Thus, each package addresses multiple problem statements, though has a primary focus indicated by the title of the package. The packages do not include any Ridge supply options because the Plan will directly address these options in the policy recommendations, as noted above.

The Study Team followed two guidelines when grouping options into packages:

- 1) The package must pay for itself; and
- 2) The SWP allocation quantity must not be exceeded.

First, the County is facing fiscal challenges and does not have a substantial budget for water resource actions. Therefore, the first guideline for package development was that each package must have the potential pay for itself. To adhere to this guideline, the Study Team developed planning level cost estimates (and income estimates) for each option, and created a tally sheet for each package. The team used the cost estimates to help develop packages that were cost neutral or income producing. Each package contains a money-making option to pay for itself. Other options would be implemented with the revenue generated or grant funding. The cost estimates, which are at an order of magnitude level and based on general assumptions regarding

project design and implementation, are adequate for this stage in the planning and implementation process.

Base Options Included in All Packages

- Option 4: Develop a coordinated water quality database
- Option 5: Develop a coordinated and expanded water quality monitoring program
- Option 6: Implement an environmental monitoring program
- Option 7: Provide guidance in development of BMOs that support vegetation
- Option 8: Expand urban water use efficiency measures
- Option 9: Expand agricultural water use efficiency measures
- Option 24: Protect recharge area water quality through zoning
- Option 28: Coordinate regional watershed management
- Option 30: Improve management of unused SWP allocation

The second guideline for package contents is that the finite quantity of the SWP allocation must not be exceeded. Many of the options rely on the allocation as a water source. The Study Team considered how much of the SWP allocation each option required and developed the packages so that the SWP allocation was not exceeded.

Considering these guidelines, the Study Team developed initial packages to address each of the problem statements. As package development progressed, the Study Team found that several options

could be included in each package. These “base options” have grant funding available (for example, water use efficiency measures), or are relatively inexpensive to implement.

Because the base options include the water quality options, the Study Team did not develop a specific package for the water quality problem statement. The Study also did not make a package to specifically address problem statement regarding the beneficial use of the SWP allocation because all packages include options that require use of the allocation. The following four packages address the remaining problem statements.

Economic Health Package

Economic Health Package

- Base options
- Option 2: Increase fish flows in Lower Butte Creek
- Option 15: Implement a coordinated management program
- Option 19: Construct groundwater recharge basins
- Option 26: Initiate a multi-county cooperative outreach effort

The *Economic Health* package addresses the County’s fiscal challenges by generating revenues for the County. A coordinated management program with groundwater recharge basins provides the opportunity for stored water to be sold outside the County during dry years at a price higher than in most years. This package includes beneficial use of the County’s unused SWP

allocation to recharge the aquifer. The recharge basins would also capture excess flood flows for additional storage and the potential for more revenue. A coordinated management program and recharge basins would require multiple years to design, permit, and construct. During these years, the DW&RC would work with DWR to improve management of the unused SWP allocation to generate additional revenues. The *Economic Health* package also addresses environmental concerns by including the option to increase fish flows on Lower Butte Creek, which does not require use of the SWP allocation.

Threat of Outside Interest Package

Threat of Outside Interest Package

- Base options
- Option 2: Increase fish flows in Lower Butte Creek
- Option 15: Implement a coordinated management program
- Option 18: Build the Oro-Chico conduit for in-lieu and direct recharge in Cherokee and Esquon
- Option 26: Initiate a multi-county cooperative outreach effort

The *Threat of Outside Interest* package protects County water supplies and resources from outside interests. This package provides a complete local beneficial use of the SWP allocation, which prevents outside interests from trying to obtain the water. The package includes a coordinated management program with in-lieu and direct recharge. In-lieu recharge, which supplies surface water to existing groundwater users, is the most

effective mechanism for implementing a coordinated management program without affecting overlying water users. The package also includes options to address environmental, water quality, and fiscal problems in the County.

Environmental Package – Focus on Butte Creek

The *Environmental* package focused on Butte Creek addresses County environmental

Environmental Package: Focus on Butte Creek

- Base options
- Option 1: Increase fish flows on Upper Butte Creek
- Option 10: Inform and educate the public about water

problems by increasing flows to improve fish and riparian habitat and by improving the understanding of water quality and environmental resources. The County would use the SWP allocation to increase fish flows in Upper Butte Creek, which would benefit the entire creek. The package also contains the option to

educate the public about County water needs and uses, including environmental uses. The County would employ part of the SWP allocation to generate revenue to fund other options and allow the package to pay for itself.

Environmental Package – Focus on Feather River

Environmental Package: Focus on Feather River

- Base options
- Option 2: Increase fish flows in Lower Butte Creek
- Option 3: Restore a more natural flow regime on the Feather River
- Option 10: Inform and educate the public about water

The *Environmental* package focused on the Feather River addresses County environmental and water quality problems by increasing flows to improve habitat, restoring more natural flow patterns in rivers and creeks, and increasing understanding of water quality and environmental resources. This package uses the SWP allocation to restore a more natural flow regime on the Feather River. This package also

includes the option to increase fish flows on Lower Butte Creek, an action that would not require use of the SWP allocation. As in the above environmental package, improving management of a portion of the SWP allocation would produce a revenue source that would allow the package to pay for itself.

5.2 Package Evaluation

The purpose of package evaluation is to compare groups of options and select one that best meets the plan objectives. As part of the integrated planning process, evaluating packages illustrates the interrelationships of options and the ways in which combinations of options meet objectives that are not addressed through any lone option. In this evaluation, the Steering Committee considered the performance of each package of options relative to each objective, according to a defined rating scale (Section 5.2.2 and 5.2.3). Some of the planning objectives were not required for this evaluation (Section 5.2.1). The Steering Committee then developed a hybrid package with options that performed best relative to most objectives (Section 5.2.4).

5.2.1 Objectives Not Included in Evaluation

Several of the planning objectives were not applicable for use by the Study Team and Steering Committee in evaluating packages. These objectives, however, remain central to the planning and implementation process because they reflect the County's fundamental reasons for undertaking the Plan and they help shape other elements of the Plan. Figure 2-3 displays the full set of planning objectives. The following text

identifies those objectives removed from package evaluation and explains their removal.

Identify, understand, and remove barriers to local control. One of the plan's overall purposes is to increase Butte County's control over its resources, and the list of options was brainstormed and refined such that all of the options meet this objective. Evaluation according to this objective would not help distinguish how well one package performs relative to another.

Meet in-County needs first - The Study Team and Steering Committee designed the options to meet in-County agricultural, urban, and environmental needs before serving outside interests. The potential for water to leave the County would only exist after in-County needs are met, thus only supplies that were beyond the needs of the County could leave the County. This objective functions as a constraint that all packages must meet; therefore, it does not help distinguish between packages.

Protect public health and safety - By legal obligations, the County is required to protect the health and safety of its citizens. This objective is a built-in component of all options; therefore, this objective is not a major discriminator among packages.

Protect rural way of life - For evaluation purposes, this objective is redundant with the objective that aims to meet future in-County water demands. Water has the ability to affect land use if it constrains certain uses. The Plan, however, includes the objective to meet future water demands for all land uses (e.g., agricultural, urban, and environmental). The lack of water constraints would prevent water from affecting land use; therefore, no one package would perform better than the others.

Seek consistency and applicability at the regional level - This objective is not a major discriminator among options because no options interfere with other regional efforts.

As the following section details, evaluation of the options was a complex process requiring highly focused discussion among the Steering Committee members. Omitting these five objectives during option evaluation simplified the evaluation and enhanced its validity.

5.2.2 Objective Rating Scales

The Steering Committee developed rating scales for each objective that were applicable to package evaluation. The rating scales ensure an even application of objectives to each package. Figure 5-1 presents the objective rating scales, which vary from three to five parts. The colors in Figure 5-1 reflect the degree to which options or packages meet an objective. The green level shows a good performance according to

the objective; the yellow level, if present, shows a somewhat favorable performance; orange shows a neutral performance or non-applicability; and the red levels show poor or somewhat poor performance according to the objective.

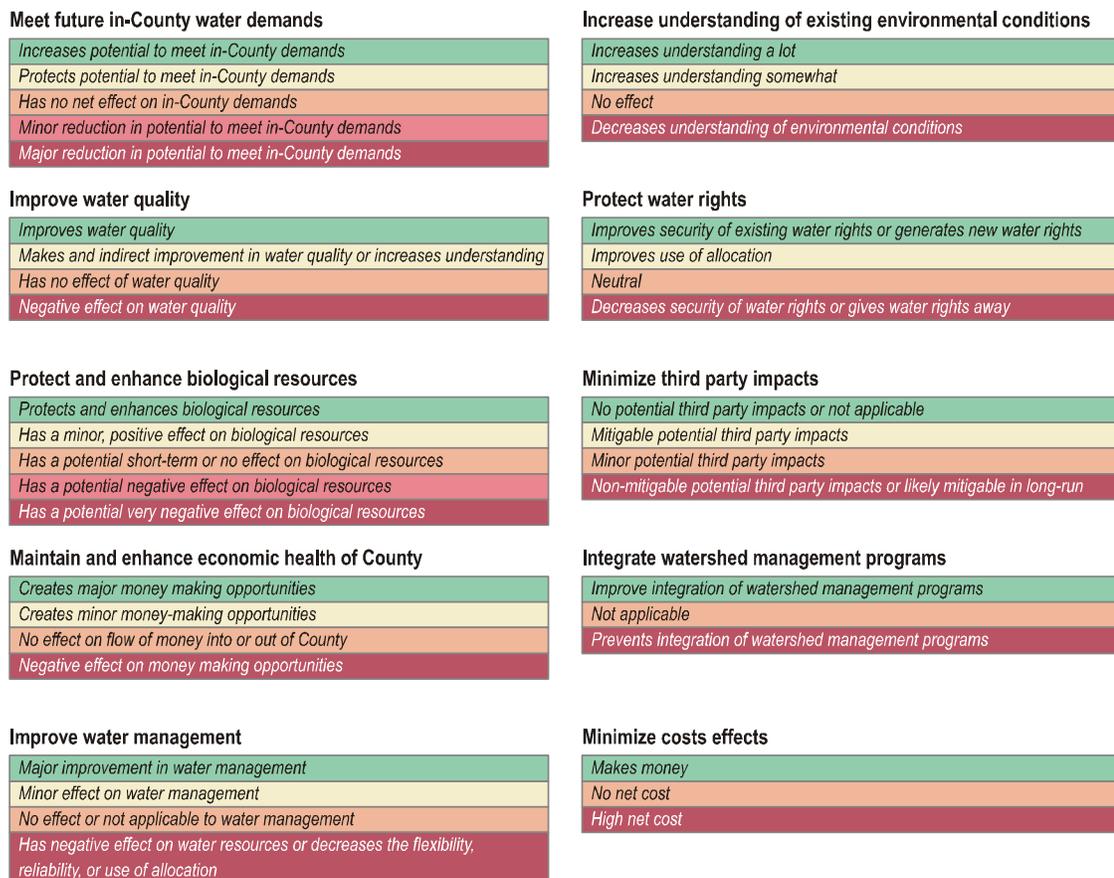


Figure 5-1
Objective Rating Scales

5.2.3 Preliminary Evaluation Results

The preliminary package evaluation results describe how entire packages rate with respect to each objective. Each package discussion includes a figure (Figure 5-2 through 5-5) that summarizes the evaluation results. The figures show the package contents in the left-hand column and list the objectives across the top. The objectives are in separate columns with widths that correspond to the objective weighting scale (see Section 2.3.1). The width of each column reflects the degree of importance assigned by the Steering Committee. The figures present the objectives from most important on the left to lesser importance on the right. The Steering Committee rated how well the packages achieved each objective using the scales presented in Figure 5-1.

The following paragraphs present the four package evaluations.

Economic Health Package

Figure 5-2 presents the evaluation for the *Economic Health* package. The colors displayed under each objective correspond to the objective rating scales in Figure 5-1. Table 5-1 lists the options that had the greatest effects on the evaluation and identifies whether the option had an overall positive or negative effect on the rating. A positive effect contributes to an overall higher rating of the packages and a negative effect results in a more negative rating. If all options have a positive effect or a negative effect on the objective, it does not necessarily mean the option receives the highest “green” rating or lowest “red” rating. Again, ratings are dependent on the scales in Figure 5-1.

Package Theme/Options	Meet in-County Demands	Water Quality	Biological Resources	Economic Health	Water Management	Environmental Understanding	Water Rights	Third Party Effects	Watershed Management	Cost
Economic Health <ul style="list-style-type: none"> ■ Increase fish flows in Lower Butte Creek ■ Develop a coordinated water quality database ■ Develop a coordinated and expanded water quality monitoring program ■ Implement an environmental monitoring program ■ Provide guidance in development of BMOs that support vegetation ■ Expand urban water use efficiency measures ■ Expand agricultural water use efficiency measures ■ Implement a coordinated management program ■ Construct groundwater recharge basins ■ Protect recharge area water quality through zoning ■ Initiate a multi-county cooperative outreach effort ■ Coordinate regional watershed management ■ Improve management of unused SWP allocation 										

Figure 5-2
Economic Health Package Evaluation

The package receives a green rating for the objective deemed most important by the Steering Committee. The least favorable rating occurs in relation to the biological resources objective. This “light red” rating is most heavily influenced by the inclusion of water recharge basins in the package. Constructing groundwater recharge basins is land intensive and would result in permanent effects to the environment. Continuous flooding of the recharge ponds could affect vernal pools and sensitive species in the area. With this option included, the package could have potential negative effects to biological resources.

The package receives a yellow in relation to water quality objective even though all options have a positive effect on the objective. The options only improve the understanding of County water quality, rather than physically improving the County’s water quality. The rating scale (Figure 5-1) identifies a green rating as “improves water quality.”

Table 5-1 Explanation of Economic Health Package Evaluation Ratings			
Objective	Rating Determination		Rating
	Options Contributing to Rating	+/- effect	
Meet future in-County water demands	Implement coordinated management program	+	Green
	Construct groundwater recharge basins	+	
	Improve management of unused SWP allocation	+	
	Expand urban water use efficiency measures	+	
	Expand agricultural water use efficiency measures	+	
Improve water quality	Protect recharge area water quality through zoning	+	Yellow
	Develop expanded water quality monitoring program	+	
	Develop coordinated water quality database	+	
Protect and enhance biological resources	Increase fish flows in Lower Butte Creek	+	Light Red
	Provide guidance for establishing BMOs for vegetation	+	
	Implement an environmental monitoring program	+	
	Construct groundwater recharge basins	-	
Maintain and enhance economic health of County	Implement coordinated management program	+	Green
	Improve management of unused SWP allocation	+	
	Increase fish flows in Lower Butte Creek	+	
Improve water management	Implement coordinated management program	+	Green
	Improve management of unused SWP allocation	+	
	Expand urban water use efficiency measures	+	
	Expand agricultural water use efficiency measures	+	
Increase understanding of existing environmental conditions	Develop expanded water quality monitoring program	+	Yellow
	Develop coordinated water quality database	+	
	Implement an environmental monitoring program	+	
Protect water rights	Implement coordinated management program	+	Yellow
	Improve management of unused SWP allocation	+	
	Increase fish flows in Lower Butte Creek	-	
Minimize third party impacts	Implement coordinated management program	-	Yellow
	Increase fish flows in Lower Butte Creek	-	
Integrate watershed management programs	Coordinate regional watershed management	+	Green
	Initiate a multi-county cooperative outreach effort	+	
Minimize cost effects	Implement coordinated management program	+	Green
	Construct groundwater recharge basins	+	
	Improve management of unused SWP allocation	+	

With regards to the objective to minimize third party impacts, each option has a negative effect, but, the package receives a yellow rating. These options could result in third party effects to waters users overlying an aquifer from increased groundwater pumping of neighboring water users. These effects, however, are mitigable; so the package receives a yellow rating.

Threat of Outside Interest Package

Figure 5-3 presents the evaluation of the *Threat of Outside Interest* package. This package evaluation differs from the economic health packages with respect to the biological resources objective. The in-lieu recharge option requires the construction of a canal and pipeline to deliver water. This option's potential effects to biological resources are more temporary than those caused by the recharge basins. The package also includes several options to improve biological resources; therefore, it receives an

overall yellow rating in relation to biological resources. Because the options in this package are similar to the *Economic Health* package, the majority of rating determinations in Table 5-1 also apply to this package.

Package Theme/Options	Meet in-County Demands	Water Quality	Biological Resources	Economic Health	Water Management	Environmental Understanding	Water Rights	Third Party Effects	Watershed Management	Cost
Threat of Outside Interest <ul style="list-style-type: none"> ■ Increase fish flows in Lower Butte Creek ■ Develop a coordinated water quality database ■ Develop a coordinated and expanded water quality monitoring program ■ Implement an environmental monitoring program ■ Provide guidance in development of BMOs that support vegetation ■ Expand urban water use efficiency measures ■ Expand agricultural water use efficiency measures ■ Implement a coordinated management program ■ Build the Oro-Chico conduit for in-lieu and direct recharge in Cherokee and Esquon ■ Protect recharge area water quality through zoning ■ Initiate a multi-county cooperative outreach effort ■ Coordinate regional watershed management ■ Improve management of unused SWP allocation 										

Figure 5-3
Threat of Outside Interest Package Evaluation

Environmental Package: Focus on Butte Creek

Figure 5-4 presents the Steering Committee’s evaluation of the *Environmental* package focused on Butte Creek. This package includes several options that are different from the above packages, which results in different ratings. Table 5-2 lists the options that had the largest effects on the evaluation and identifies whether the option had an overall positive or negative effect on the rating.

Package Theme/Options	Meet in-County Demands	Water Quality	Biological Resources	Economic Health	Water Management	Environmental Understanding	Water Rights	Third Party Effects	Watershed Management	Cost
Environmental: Focus on Butte Creek <ul style="list-style-type: none"> ■ Increase fish flows in Upper Butte Creek ■ Develop a coordinated water quality database ■ Develop a coordinated and expanded water quality monitoring program ■ Implement an environmental monitoring program ■ Provide guidance in development of BMOs that support vegetation ■ Expand urban water use efficiency measures ■ Expand agricultural water use efficiency measures ■ Inform and educate the public about water ■ Protect recharge area water quality through zoning ■ Coordinate regional watershed management ■ Improve management of unused SWP allocation 										

Figure 5-4
Environmental Package: Focus on Butte Creek Evaluation

Objective	Rating Determination		Rating
	Options Contributing to Rating	+/- effect	
Meet future in-County water demands	Improve management of unused SWP allocation	+	Yellow
	Expand urban water use efficiency measures	+	
	Expand agricultural water use efficiency measures	+	
Improve water quality	Protect recharge area water quality through zoning	+	Yellow
	Develop expanded water quality monitoring program	+	
	Develop coordinated water quality database	+	
Protect and enhance biological resources	Increase fish flows in Upper Butte Creek	+	Yellow
	Provide guidance for establishing BMOs for vegetation	+	
	Implement an environmental monitoring program	+	
Maintain and enhance economic health of County	Improve management of unused SWP allocation	+	Yellow
	Increase fish flows in Upper Butte Creek	+	
Improve water management	Improve management of unused SWP allocation	+	Yellow
	Expand urban water use efficiency measures	+	
	Expand agricultural water use efficiency measures	+	
Increase understanding of existing environmental conditions	Inform and educate the public about water	+	Green
	Develop expanded water quality monitoring program	+	
	Develop coordinated water quality database	+	
	Implement an environmental monitoring program	+	
Protect water rights	Improve management of unused SWP allocation	+	Yellow
	Increase fish flows in Upper Butte Creek	+	
Minimize third party impacts	None	None	Green
Integrate watershed management programs	Coordinate regional watershed management	+	Green
Minimize cost effects	Improve management of unused SWP allocation	+	Orange
	Increase fish flows in Upper Butte Creek	-	

The package receives a yellow rating for the top five objectives ranked by relative importance; however, each option listed in Table 5-2 affects the package positively. The package does not receive green ratings in relation to these objectives because the positive effects are not great enough to trigger green ratings on the rating scales. For example, the options provide benefits to biological resources; however, the scope of environmental needs in the County is much larger than that addressed by the options. Therefore, the package has a minor, positive effect on biological resources.

In contrast to the above packages, this package does not make money for the County. Improving management of the SWP allocation is the only option in this package that has the potential to generate revenues, though some of the allocation must be used to increase fish flows on Butte Creek. These revenues are used to finance the remaining options. The package does not have a net cost to the County; therefore, it receives an orange rating related to minimizing cost effects.

Environmental Package: Focus on Feather River

Figure 5-5 shows the evaluation for the environmental package focused on the Feather River. The package rates identically to the environmental package focused on Butte Creek because it includes similar options. The majority of rating determinations in Table 5-2 also apply to the rating in this package.

Package Theme/Options	Meet in-County Demands	Water Quality	Biological Resources	Economic Health	Water Management	Environmental Understanding	Water Rights	Third Party Effects	Watershed Management	Cost
Environmental: Focus on Feather River <ul style="list-style-type: none"> ■ Increase fish flows in Lower Butte Creek ■ Restore a more natural flow regime on the Feather River ■ Develop a coordinated water quality database ■ Develop a coordinated and expanded water quality monitoring program ■ Implement an environmental monitoring program ■ Provide guidance in development of BMOs that support vegetation ■ Expand urban water use efficiency measures ■ Expand agricultural water use efficiency measures ■ Inform and educate the public about water ■ Protect recharge area water quality through zoning ■ Coordinate regional watershed management ■ Improve management of unused SWP allocation 										

Figure 5-5
Environmental Package: Focus on Feather River Evaluation

5.2.4 Hybrid Package

Hybrid Package

- Option 4: Develop a coordinated water quality database
- Option 5: Develop a coordinated and expanded water quality monitoring program
- Option 7: Provide guidance in development of BMOs that support vegetation
- Option 8: Expand urban water use efficiency measures
- Option 9: Expand agricultural water use efficiency measures
- Option 10: Inform and educate the public about water
- Option 15: Implement a coordinated management program
- Option 21: Enhance natural recharge from local waterways through environmental restoration activities
- Option 24: Protect recharge area water quality through zoning
- Option 26: Initiate a multi-county cooperative outreach effort
- Option 27: Increase support for the Butte County RCD
- Option 28: Coordinate regional watershed management
- Option 30: Improve management of unused SWP allocation
- Develop Butte County water quality policies *New*
- Serve as advocate to improve understanding and conditions for special status species in creeks and rivers *New*

After reviewing the above package evaluations, the Steering Committee was not satisfied with any one package. The evaluations resulted in few “green” ratings, indicating that the packages did not fully meet Plan objectives. The Steering Committee chose to create a new package that would perform better according to the Plan objectives. The above evaluations informed the Study Team and Steering Committee which individual options and option combinations met Plan objectives at the highest levels (i.e., those that earned green ratings on the evaluation scales).

With this knowledge, the Study Team drafted a “hybrid” package that could achieve a more favorable overall rating than the initial packages. The Steering Committee commented on the contents of the hybrid package, added and changed options, then evaluated the hybrid package.

The Steering Committee developed two new options to improve the package’s rating according to the biological resources and water quality objectives. First,

the Steering Committee believed it was important to increase the scope of the environmental options. The committee members chose to combine the Butte Creek and Feather River options into a more general option that focuses on improving special status species habitat in all Butte County creeks and rivers. Second, the Steering Committee noted that the water quality options only increased the understanding of water quality, and did not actually improve water quality. Therefore, the Committee developed a new policy option designed specifically to improve County water quality. Because of the late addition of these options into the process, the Study Team did not fully develop option descriptions but translated them directly into the policy statement recommendations.

The Steering Committee then evaluated the hybrid package in the same manner as the other packages. Figure 5-6 presents the hybrid package evaluation. With the new options, both the water quality and biological resources objectives received green ratings. As Figure 5-6 shows, the hybrid package performs extremely well at meeting the range of planning objectives, thus forming a well-integrated approach toward water management in the County.

Package Theme/Options	Meet in-County Demands	Water Quality	Biological Resources	Economic Health	Water Management	Environmental Understanding	Water Rights	Third Party Effects	Watershed Management	Cost
Hybrid <ul style="list-style-type: none"> ■ Develop a coordinated water quality database ■ Develop a coordinated and expanded water quality monitoring program ■ Implement an environmental monitoring program ■ Provide guidance in development of BMOs that support vegetation ■ Expand urban water use efficiency measures ■ Expand agricultural water use efficiency measures ■ Inform and educate the public about water ■ Implement a coordinated management program ■ Enhance natural recharge from local waterways through environmental restoration activities ■ Protect recharge area water quality through zoning ■ Initiate a multi-county cooperative outreach effort ■ Increase support for the Butte County RCD ■ Coordinate regional watershed management ■ Improve management of unused SWP allocation ■ Develop Butte County water quality policies ■ Serve as advocate to improve understanding and conditions for special status species in creeks and rivers 										

Figure 5-6
Hybrid Package Evaluation

5.3 Uncertainty

While developing options, the Study Team assumed that the agency implementing the option would do so in a manner that provides the County or the water agency the most benefits. Study Team recognizes the uncertainty involved with this assumption.

For example, if a district implements water use efficiency measures, it would generate additional water supply. The Study Team assumes the implementing agency (e.g., the County or a water district) would use the additional water to meet the needs of its customers or other in-County uses. If the agency sells the water to outside interests without meeting in-County needs first, the evaluation of how the packages would perform related to the objectives would dramatically change. These secondary effects cannot necessarily be predicted. Many unknown factors could affect the agency's decision as to how to use the water. The package evaluation process does not take into account the various potential secondary effects.

The Study Team and Steering Committee recognize the potential for adverse secondary effects. During the evaluation process, the Study Team and Steering Committee discussed each objective and the reasons for the ratings, and generally agreed with the assumption underlying package evaluation.

5.4 Policy Recommendations Development

The Study Team used the hybrid package evaluation results to develop draft recommendations for the Board of Supervisors, by characterizing the policy directives necessary to implement the option combinations. The policy recommendations provide future direction for County water resources management. Similar options, (such as the water use efficiency options, the water quality options, and the coordinated management options) were viewed in combination to develop single policy statements. The team also included a policy statement for the Ridge options that were screened into the Plan earlier in the process. Policies developed from the hybrid package options create the First Tier of recommendations. The Steering Committee felt that an additional policy was necessary in the First Tier of recommendations to indicate that the DW&RC should continue its ongoing water resources activities. Policies generated from the remaining options fell into the Second Tier of recommendations. Table 5-3 identifies the options and related policies.

The Study Team presented the recommendations to the Steering Committee, which provided detailed feedback regarding policy statement content. The team incorporated all Steering Committee comments and revisions into the final policy recommendations. Section 6 includes the Steering Committee's policy recommendations.

**Table 5-3
Options and Related Policies**

Option(s)	Related Policy
Option 30: Improve Management of the SWP Allocation	Improve Management of the SWP Allocation
Option 8: Expand Urban Water Use Efficiency Measures Option 9: Expand Agricultural Water Use Efficiency Measures	Increase Agricultural and Urban Water Use Efficiency
Option 7: Provide Guidance in Development of BMOs that Support Native Vegetation	Recommend BMOs that Support Native Vegetation
Option 24: Protect Recharge Area Water Quality through Zoning	Protect Recharge Areas through Zoning
Option 10: Inform and Educate the Public about Water	Inform and Educate the Public about Water
Option 27: Increase Support for the Butte County RCD	Increase Support for the Butte County RCD
Option 11: Divert Water from Miocene and Hendricks Canal to supply the Ridge Option 12: Build the Lime Saddle Pipeline to Deliver Water to the Ridge Option 13: Strengthen Magalia Dam to Increase Storage Capacity Option 14: Raise Paradise Dam to Increase Storage Capacity	Support Solutions to Potential Water Shortages in the Ridge Community
Option 15: Implement a Coordinated Management Program Option 16: Identify and Deepen Shallow Groundwater Wells Option 17: Build a Canal to Deliver Surface Water to Cherokee and Esquon Option 18: Build the Oro-Chico Conduit for In-lieu and Direct Recharge in Cherokee and Esquon Option 19: Construct Groundwater Recharge Basins Option 21: Enhance Natural Recharge from Local Waterways Through Environmental Restoration Activities Option 23: Create a Groundwater Replenishment District	Implement a Coordinated Management Program
Option 4: Develop a Coordinated Water Quality Database Option 5: Develop a Coordinated and Expanded Water Quality Monitoring Program	Take Steps to Understand and Improve Butte County Water Quality
Option 1: Increase Fish Flows in Upper Butte Creek Option 2: Increase Fish Flows in Lower Butte Creek Option 3: Restore a More Natural Flow Regime in the Feather River	Serve as an Advocate to Improve Understanding of and Conditions for Special Status Species in Creeks and Rivers
Option 28: Coordinate Regional Watershed Management	Coordinate Regional Watershed Management
Option 6: Implement an Environmental Monitoring Program	Implement an Environmental Monitoring Program
Option 26: Enhance Multi-County Cooperative Outreach Effort	Enhance Multi-County Cooperative Outreach Effort
Option 20: Investigate a Storage Reservoir in Table Mountains Former Basalt Mine	Investigate Potential for Water Storage in Former Mines
Option 22: Expand Groundwater Level and Extraction Monitoring	Expand Groundwater Level and Extraction Monitoring
Option 25: Commit to Periodic and Coordinated Update of Water Management Plans, Ordinances, Resolutions, and Policies	Commit to Periodic and Coordinated Update of Water Management Plans, Ordinances, Resolutions, and Policies
Option 29: Support Restoration of a More Natural Flow Regime on the Sacramento River	Support Restoration of a More Natural Flow Regime on the Sacramento River