
CHAPTER 1.0 INTRODUCTION

1.1 Background

The Upper Feather River Region has a long history of successful watershed planning and implementation. In 2005, with the advent of the State of California's Integrated Regional Water Management (IRWM) Program, water managers in the Region embraced the process as a means to integrate the various watershed efforts and encourage greater implementation and transparency. The 2005 IRWM planning effort was built on the communication and cooperation that took place for decades on such topics as natural resources enhancement, management for special status species, watershed and forest management on national forests, several Federal Energy Regulatory Commission (FERC) relicensing processes, State Water Project financing and management issues, and many other topics. This 2016 IRWM Plan incorporates the strengths and synergies from those historic efforts and identifies new opportunities for collaboration on current and future regional water management issues and perspectives developed from extensive outreach and public engagement with a broad array of water stakeholders and interests.

This IRWM Plan articulates a coherent and durable vision for the management of water resources in the Upper Feather River (UFR) Region that highlights important actions needed to accomplish that vision through the year 2035--the planning horizon. This document is intended to be an ongoing adaptive planning tool that can evolve with a dynamic water future. It does not authorize or provide discretionary approval for any given project, nor does it establish new prescriptive compliance requirements. Rather, it provides a locally developed framework for improving understanding and undertaking the coordinated actions that will be needed to address the major water-related challenges/needs and conflicts facing the Region through the planning horizon.

This 2016 IRWM Plan, which is an update to the 2005 Upper Feather River Watershed IRWM Plan, is required to be in compliance with 2012 IRWM Grant Program Guidelines (Proposition 84 and 1E per the Proposition 84 Planning Grant). It is also intended to comply with the 2016 IRWM Grant Program Guidelines (Proposition 1) published by the California Department of Water Resources (DWR) in August 2016. The information contained within this IRWM Plan was developed through the time, expertise, and other contributions of more than 40 water supply, wastewater treatment, land use management, Tribal, public interest, and including some of the ecosystem-focused, non-governmental organizations with interests in the water resources of the Upper Feather River Region. The focus and direction described within this IRWM Plan provides participating entities and individuals with an opportunity to envision the integration of water management across the Region and thereby accomplish more to benefit the needs of the Region. The integrated array of goals and objectives, resource management strategies (RMS), implementation projects, and the Plan's implementation framework demonstrate the potential for further strengthening and broadening the collaborative working relationships for integrated water and watershed management that have been fostered throughout the 24-month plan development process.

1.2 History, Purpose, and Status of the California IRWM Program

Integrated Water Management (IWM) is a strategic approach to planning and implementing water management programs that combines flood management, environmental stewardship, and surface water and groundwater supply actions to deliver multiple benefits across watershed and jurisdictional boundaries.

Per DWR guidelines and the California Water Code, an IRMW Plan is a comprehensive planning document to encourage regional strategies for management of water resources. By investigating a broad spectrum of issues, developing objectives, and identifying management strategies, participants develop

relationships and methods of communication and coordination that achieve synergies of staff and financial resources, making planning more comprehensive and less duplicative throughout the planning region. This process should result in a water management plan that is meaningful for the region and developed collaboratively, accommodating a diversity of regional needs.

State-level water managers in California began to recognize the need for local- and regional-scale water planning in the late 1990s. With the enactment of Senate Bill (SB) 1672, the Integrated Regional Water Management Planning Act of 2002 (Act), the State of California affirmed the importance of IRWM. In this act, the legislature found and declared:

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

(b) Improved coordination among local agencies with responsibilities for managing water supplies and additional study of groundwater resources are necessary to maximize the quality and quantity of water available to meet the state’s agricultural, domestic, industrial, and environmental needs.

(c) The implementation of the Integrated Regional Water Management Planning Act of 2002 will facilitate the development of integrated regional water management plans, thereby maximizing the quality and quantity of water available to meet the state’s water needs by providing a framework for local agencies to integrate programs and projects that protect and enhance regional water supplies.”

The 2002 Act authorized regional water management groups to prepare and adopt a regional plan that addresses programs, projects, reports, or studies relating to water supply, water quality, flood protection, or related matters, over which any local public agency, that is a participant in that group, has authority to undertake.

California Water Plan 2005 featured IRWM as its Number 1 Initiative, described its implementation as essential to the state’s future, and listed the following IRWM principles:

- ◆ Use a broad, long-term perspective,
- ◆ Identify broad benefits, costs, and trade-offs,
- ◆ Promote sustainable resource management,
- ◆ Increase regional self-sufficiency,
- ◆ Increase regional drought preparedness,
- ◆ Use open forums that include all communities,
- ◆ Promote coordination and collaboration among local agencies and governments, and
- ◆ Use sound science, best data, and local knowledge.

In the Implementation Plan of the California Water Plan (CWP) Update 2009, the first objective listed is to “promote, improve, and expand integrated regional water management to create and build on partnerships that are essential for California water resources planning, sustainable watershed and floodplain management, and increasing regional self-sufficiency.” Integrated water management and IRWM practices have made strides over the past ten years, and the California Water Plan Update 2013 encouraged continuation and expansion of these practices. The CWP Update 2013 identified an action to increase regional self-reliance and IRWM across all levels of government (Table 1-1).

California voters similarly affirmed the importance of these efforts via passage of four significant bond measures (Figure 1-1):

Figure 1-1 Voter-approved Bond Measures – Integrated Water Management

Year	Name	IRWM Program Apportionment	UFR Awards
2002	Proposition 50: The Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002	\$500 million	\$7 million for implementation projects
2006	Proposition 84: The Safe Drinking Water, Water Quality, and Supply, Flood Control, River and Coastal Protection Bond Act	\$1 billion	\$679,000 for planning (update 2005 IRWM Plan)
2006	Proposition 1E: The Disaster Preparedness and Flood Prevention Bond Act	\$300 million	None
2014	Proposition 1: The Water Quality, Supply, and Infrastructure Improvement Act of 2014	\$510 million	In process

In 2002, voters passed Proposition 50, which developed the Integrated Regional Water Management Grant Program as a joint effort between the California Department of Water Resources and the State Water Resources Control Board (SWRCB). Proposition 50 provided competitive grant funding through the IRWM Program for projects that protected communities from drought, protected and improved water quality, and reduced dependence on imported water. Approximately \$380 million was made available through two rounds of funding.

Subsequently, voters passed Proposition 84 and Proposition 1E in 2006. These propositions created additional funding through the IRWM Grant Program for projects that assist local agencies to meet the long-term water needs of the state, including delivery of safe drinking water and protection of water quality and the environment. To be eligible for this funding, projects and project sponsors must be involved in a Regional Water Management Group (RWMG) that has adopted an IRWM Plan.

Most recently, voters passed Proposition 1, which enacted the Water Quality, Supply, and Infrastructure Act of 2014. Proposition 1 authorized funding for implementation, planning, and disadvantaged community (DAC) involvement efforts to each IRWM Funding area.¹ Proposition 1 provides funding for projects that help meet the state's long-term needs, including:

- ◆ To assist water infrastructure systems adapt to climate change.
- ◆ To provide incentives throughout each watershed to collaborate in managing the region's water resources and setting regional priorities for water infrastructure.
- ◆ To improve regional water self-reliance, while reducing reliance on the Sacramento-San Joaquin Delta.

¹ The Upper Feather River IRWM Region is located within the Mountain Counties Funding Area, along with all or portions of ten other IRWM regions (Source: <http://www.water.ca.gov/irwm/grants/prop1/index.cfm>).

1.3 Purpose and Vision

The IRWM Program is intended to promote and implement integrated regional water management to ensure sustainable water uses, reliable water supplies, improved water quality, environmental stewardship, efficient urban development, sustainable agriculture, and a strong economy. This planning and implementation framework is a strategic approach to planning and implementing water management programs that combines flood management, environmental stewardship, and water supply actions to deliver multiple economic, environmental, and social benefits across watershed and jurisdictional boundaries.² It implements integrated solutions through a collaborative multi-partner process that includes water managers; Native American tribes; non-governmental organizations; federal, state, and local government agencies; and DACs. IRWM is a portfolio approach for determining the appropriate mix of water-related resource management strategies, and investments for projects that enhance environmental and watershed stewardship across the planning region. The goal of the Plan is to provide a coordinated and comprehensive framework for achieving reliable, durable, affordable, and high-quality water supplies for water uses and needs in the UFR region.

As the result of this collaborative regional planning effort, this 2016 UFR IRWM Plan is intended to be useful as a “living” document to guide adaptive management and implementation within the Region. It is both the continuation of regional watershed restoration and management efforts and also the enhancement of collaborative and inclusive processes that participants expect to follow moving forward. During its November 14, 2014 meeting, the RWMG unanimously approved a mission statement to guide the actions of the UFR IRWM Program, spell out its overall goal, provide a path, and guide decision-making for the RWMG.



Upper Feather River RWMG Mission

To effectively perpetuate local control and regional collaboration to provide stability and consistency in the planning, management and coordination of resources within the Upper Feather River Watershed. To implement an integrated strategy that guides the Upper Feather River region toward protecting, managing and developing reliable and sustainable water resources. (November 14, 2014)

Stakeholders have voiced the need for ongoing dialogue as water resource projects are proposed and implemented; for further developing communication pathways to address regulatory issues; for speaking with a regional voice when needed about resource issues of federal and state importance; and to continue to rely upon and strengthen local and regional knowledge, experience, and capacity to accomplish objectives identified in this Plan. As part of this commitment, RWMG members have committed to meet at least quarterly to assess Plan implementation, to track and accelerate progress in implementing projects, to identify and communicate “lessons learned” in advancing integrated water and watershed management, and to identify and broaden funding opportunities.

² California Water Plan. 2013. *Volume 1: The Strategic Plan*; pp. 2-18 (Source: http://www.water.ca.gov/waterplan/docs/cwpu2013/Final/03_Vol1_Ch02_Imperative_to_Innov_and_Infrastr.pdf).

1.4 Regional and Statewide Priorities for IRWM Program

The DWR's IRWM Grant Program encourages development of integrated regional strategies for management of water resources by providing funding through competitive grants. Eligible projects must implement IRWM plans that meet the requirements of Propositions 84 and 1. As required, IRWM plans should identify and address the major water-related objectives and conflicts within the region, consider all RMSs identified in the California Water Plan Update, and use an integrated, multi-benefit approach for project selection and design. Plans should include performance measures and monitoring plans to document progress toward meeting Plan objectives. Projects that may be funded must be consistent with an adopted IRWM plan or its functional equivalent as defined in DWR's Propositions 84 and 1 IRWM guidelines.

In addition to addressing regional issues (Chapter 4 – *Regional Water Issues, Integration, Capacity*), the DWR guidelines identified multiple priorities that address issues of statewide concern (Table 1-1):

Table 1-1 Statewide Priorities, Proposition 1 Guidelines

Action No.	Action	Description
1	Make conservation a way of life	<p>Building on current water conservation efforts and promoting the innovation of new systems for increased water conservation.</p> <ul style="list-style-type: none"> ◆ Expand agricultural and urban water conservation and efficiency to exceed Senate Bill (SB) X7-7 targets ◆ Provide funding for conservation and efficiency ◆ Increase water sector energy efficiency and greenhouse gas reduction capacity ◆ Promote local urban conservation ordinances and programs
2	Increase regional self-reliance and integrated water management across all levels of government	<p>Ensure water security at the local level, where individual governmental efforts integrate into one combined regional committee where the sum becomes greater than any single part.</p> <ul style="list-style-type: none"> ◆ Support and expand funding for integrated water management planning ◆ Update land use planning guidelines ◆ Provide assistance to disadvantaged communities ◆ Encourage California's focus on projects with multiple benefits ◆ Increase the use of recycled water
3	Achieve the co-equal goals of the Delta	<p>This action is directed towards state and federal agencies; however, consideration will be afforded to eligible local or regional projects that also support achieving the co-equal goals providing a more reliable water supply for California and to protect, restore, and enhance the Delta ecosystem</p>

Action No.	Action	Description
4	Protect and restore important ecosystems	<p>Continue protecting and restoring the resiliency of our ecosystems to support fish and wildlife populations, improve water quality, and restore natural system functions:</p> <ul style="list-style-type: none"> ◆ Restore key mountain meadow habitat ◆ Manage headwaters for multiple benefits ◆ Protect key habitat of the Salton Sea through local partnership ◆ Restore coastal watersheds ◆ Continue restoration efforts in the Tahoe Basin ◆ Continue restoration efforts in the Klamath Basin ◆ Water for wetlands and waterfowl ◆ Eliminate barriers to fish migration ◆ Assess fish passage at large dams ◆ Enhance water flows in stream systems statewide
5	Manage and prepare for dry periods	<p>Effectively manage water resources through all hydrologic conditions to reduce impacts of shortages and lessen costs of state response actions. Secure more reliable water supplies and consequently improve drought preparedness and make California's water system more resilient.</p> <ul style="list-style-type: none"> ◆ Revise operations to respond to extreme conditions
6	Expand water storage capacity and improve groundwater management	<p>Increase water storage for widespread public and environmental benefits, especially in increasingly dry years, and better manage our groundwater to reduce overdraft.</p> <ul style="list-style-type: none"> ◆ Provide essential data to enable sustainable groundwater management ◆ Support funding partnerships for storage projects ◆ Improve sustainable groundwater management ◆ Support distributed groundwater storage ◆ Increase statewide groundwater recharge ◆ Accelerate cleanup of contaminated groundwater and prevent future contamination

Action No.	Action	Description
7	Provide safe water for all communities	<p>Provide all Californians the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes.</p> <ul style="list-style-type: none"> ◆ Consolidate water quality programs ◆ Provide funding assistance for vulnerable communities ◆ Manage the supply status of community water systems <p>Additionally, as required by Water Code Section 10545, in areas that have nitrate, arsenic, perchlorate, or hexavalent chromium contamination, consideration will be given to grant proposals that included projects to help address the impacts caused by those contaminants, including projects that provide safe drinking water to small disadvantaged communities.</p>
8	Increase flood protection	<p>Collaboratively plan for integrated flood and water management systems, and improve flood projects that protect public safety, increase water supply reliability, conserve farmlands, and restore ecosystems.</p> <ul style="list-style-type: none"> ◆ Improve access to emergency funds ◆ Better coordinate flood response operations ◆ Prioritize funding to reduce flood risk and improve flood response ◆ Encourage flood projects that plan for climate change and achieve multiple benefits
9	Increase operation and regulatory efficiency	<p>This action is directed toward state and federal agencies; however, consideration will be afforded to eligible local or regional projects that also support increased operational efficiency of the State Water Project or Central Valley Project.</p>
10	Identify sustainable and integrated financing opportunities	<p>This action is directed toward state agencies and the legislature.</p>

Source: DWR Proposition 1 Guidelines

1.5 Upper Feather River Planning Process

In 2005, an initial regional water management group was organized under the guidelines of the Proposition 50 phase of the IRWM Program, consisting of Plumas County, Plumas County Flood Control and Water Conservation District, Plumas National Forest, and Sierra Valley Groundwater Management District. The collaboration built upon the past cooperation among the Feather River Coordinated Resource

Management³ group, the Plumas Watershed Forum,⁴ and other existing programs and plans in the region. The 2005 UFR IRWM Plan focused on documenting the existing water management authorities and accomplishments, and identifying gaps in the following existing regional plans:

- ◆ Feather River Coordinated Resource Management MOU
- ◆ Feather River Watershed Management Strategy
- ◆ FERC Project 1962 Settlement Agreement
- ◆ FERC Project 2105 Settlement Agreement
- ◆ Herger-Feinstein Quincy Library Group Forest Recovery Act
- ◆ Monterey Settlement Agreement
- ◆ Plumas National Forest Land and Resource Management Plan
- ◆ Sierra Valley Groundwater Management District Act

The Upper Feather River RWMG was reorganized in 2008 to create a more formal governance structure to increase stakeholder participation, collaboration, and opportunities in order to meet requirements of the IRWM Planning Act of 2008 (Proposition 84). In 2009, the RWMG sought approval of the UFR Region from DWR through the Region Acceptance Process (RAP), which was prepared by the Plumas County Flood Control and Water Conservation District, and a new memorandum of understanding (MOU) with 29 signatories was established. The intent of the new MOU was to recognize relationships and to formalize commitments to working together to promote regional water management planning for the Upper Feather River watershed. The MOU signatories agreed to participate in a long-term effort to better understand the water resources in the watershed, and to design a voluntary and collaborative approach for managing those resources that recognizes the competing needs for water in the future and the long history of water and land stewardship in the region.

In developing the RAP documents, the organizations were in contact with representatives of the newly approved Upper Feather River IRWM Region and the Northern Sacramento Valley Region to ensure that the UFR covered all areas of the Upper Feather River watershed down to Oroville Dam, and had congruent regional boundaries with surrounding regions. The exception was an area of overlap with the Northern Sacramento Valley IRWM Region, which consists of the Butte County area around Lake Oroville. It was determined that this area was relevant to both IRWM regions; the overlap acknowledged a need for coordination between the two IRWMs. Plumas County submitted the RAP on behalf of the Upper Feather River region in 2009, which was ultimately accepted, thereby establishing the Upper Feather River IRWM Region. In 2012, the Plumas County Flood Control and Water Conservation District developed the planning grant proposal, which was awarded in 2014.

In mid-2014, the Plumas County Flood Control and Water Conservation District signed a two-year grant agreement with DWR to manage the process of developing an IRWM Plan for the Upper Feather River Region. The planning process is designed to develop a water management plan that is meaningful for the

³ The Feather River Coordinated Resource Management (CRM) group functioned from 1985 through 2015 to maintain, protect, and improve water quality and water quantity; physical restoration, public education, community involvement, and volunteer opportunities. The Feather River CRM consisted of 25 members of federal, state, and local agencies (Source: Regional Acceptance Process, 2009; p. 2).

⁴ The Plumas Watershed Forum was established in 2003 as a result of the Monterey Settlement Agreement to direct investment in the Upper Feather River watershed for the mutual benefit of local interests and the State Water Project. The voting members of the PWF were DWR, State Water Project contractors, and Plumas County Flood Control and Water Conservation District. The PWF also includes 15 participating members who provide technical assistance and advice. Members include federal, regional, and Tribal organizations and agencies (Source: Regional Acceptance Process, 2009; pp. 2-3).

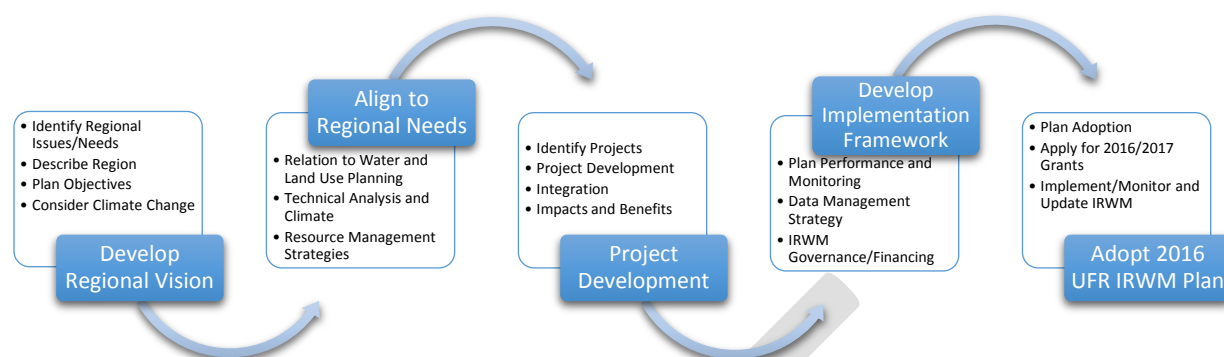
region--developed by the stakeholders, rather than a top down, one-size-fits-all approach--to accommodate the diverse needs of different interests. A revised MOU was developed and circulated in late 2014 that recognized the changes in the Region's governance structure that was identified in the grant agreement work plan. To date, 36 agencies, stakeholders, and entities within the Region have signed the MOU.

Much of the groundwork for the IRWM planning effort in the region had already been initiated through the work of other collaborative processes such as the Upper Feather River Watershed Group, Quincy Library Group, Plumas Watershed Forum, Feather River Coordinated Resource Management group, Feather River Roundtable, Maidu Consortium, Mountain Meadows Conservancy, Lake Almanor Watershed Group, Plumas Corporation, and the FERC relicensing Settlement Agreement development processes, all of which serve as building blocks for integrated regional water management. In the North Fork Feather River watershed, diverse stakeholders have been involved in FERC relicensing processes with PG&E and State Water project facilities. In the Middle Fork of the Feather River, local groundwater management governance was initiated through state legislation developed by Sierra Valley agricultural water users and Sierra and Plumas Counties.

In September 2014, Plumas County Flood Control and Water Conservation District sent a letter to the 29 RAP MOU signatories to initiate the Plan Update process and invited them to the first meeting of the RWMG, which was held on September 24, 2014. Additionally, informational articles were posted in the newspaper, inviting stakeholders and interested parties to the first RWMG meeting. Furthermore, a Notice of Intent was published in the local newspapers in early October. Tribal, disadvantaged community (DAC), and National Forest representatives from the three National Forests in the region, were invited to participate in the Plan update as members of the Regional Water Management Group (RWMG).

As the UFR IRWM Plan Update planning process got underway in 2014, the RWMG held meetings every other month. This schedule encouraged continuous discussion, while allowing time for the project workgroups to respond to requests and develop meeting materials. In mid-2015, after most of the chapter work had been discussed within the stakeholder meetings, many details had been worked out by workgroups dedicated to four key areas of interest in the region: agricultural lands stewardship; floodplains, meadows, waterbodies; municipal services; and uplands and forest. Additionally, a Tribal Advisory Committee (TAC) met and worked in parallel with the workgroups. The workgroups and TAC were integral in the development of the majority of information and materials for the Plan Update. For example, the workgroups identified regional issues, developed recommendations for RMSs, developed implementation projects, provided input on climate change vulnerabilities and adaptation strategies, identified integration linkages, and reviewed and provided input on chapters. These workgroups allowed for continued and open participation, which was instrumental during the development of a comprehensive UFR IRWM Plan.

Figure 1-2 IRWM Planning Process Overview



1.5.1 Plan Organization

The 2016 Upper Feather Region IRWM Plan Update provides a description of the Region; identifies regional issues, challenges, and opportunities; and details how that informs the objectives for the Region. The Plan is organized to address the standards required by the Proposition 84 and 1 IRWM guidelines issued by DWR. Table 1-2 links DWR plan elements with the Upper Feather River IRWM Plan topics.

Table 1-2 Proposition 84 and 1 standards discussed in the 2016 UFR IRWM Plan Update

IRWM Standard	IRWM Plan Chapter
1. Governance	2
2. Region Description	3, 4
3. Objectives	5
4. Resource Management Strategies (RMS)	6
5. Integration	4
6. Project Review Process	9
7. Impact and Benefit	10
8. Plan Performance and Monitoring	11
9. Data Management	11
10. Finance	12
11. Technical Analysis	13
12. Relation to Local Water Planning	7
13. Relation to Local Land Use Planning	7
14. Stakeholder Involvement	2
15. Coordination	2
16. Climate Change	8

1.5.2 Plan Adoption

It is recommended that all participants in the planning process, including the governing boards of the RWMG, adopt the 2016 UFR IRWM Plan. The IRWM guidelines require that each agency that is part of the RWMG be responsible for the development and implementation of the Plan and formally adopt the IRWM Plan. The guidelines also require that each project proponent named in an IRWM Grant Application adopt the Plan.

It is currently anticipated that the governing bodies of the various public agencies will begin to adopt the Plan once the final IRWM Plan is released in September 2016. The deadline for adopting the Plan for purposes of fulfilling the planning grant requirements and to secure potential implementation grant funding is September 30, 2016. A list of organizations that have adopted or endorsed the UFR IRWM Plan will be included in Appendix 1-1. Adoption or endorsement of the UFR IRWM Plan does not imply that an organization necessarily supports every project that is included in the Plan. Rather, each organization is documenting its support for the objectives, resource management strategies, actions, and implementation framework recommended to implement the Plan. Projects will be reviewed for implementation on a case-by-case basis as the Plan is implemented.

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