KLAMATH
WATER AND
POWER AGENCY

Klamath Water and Power Agency
KWAPA

OPPortunities

Bringing You the Latest News on the OPP

Volume I, Issue 2

Welcome to OPPortunities!

You are reading the second edition of a series of newsletters that will be issued periodically over the course of the next two years.

The focus will be exclusively on providing updates on how the On-Project Plan (OPP) is coming together.

Inside this issue:

KWAPA Hosts Local Public Meetings on the OPP

The Klamath Water and Power Agency (KWAPA) conducted its first two public meetings in December 2011 to provide Klamath Project irrigators with an opportunity to learn more about the development of the On-Project Plan (OPP).

"Our intent was to give local water users a chance to ask any questions they may have about this important process," said KWAPA executive director Hollie Cannon.

Approximately two dozen water users, irrigation district managers and water agency board members attended the meetings, which were held at Hope Lutheran Church in Klamath Falls and Lost River High School in Malin.

KWAPA staff and OPP consultants briefed audience members on: 1) Background of the Klamath Basin Restoration Agreement (KBRA) and the OPP; 2) On-Project Plan Advisory Committee and Role; 3) Goals and Objectives of On-Project Plan; 4) Approach to OPP Development; 5) Environmental Review Process; and 6) Project Schedule. However, the primary reason for the meetings was to hear comments and questions water users had regarding the OPP. The feedback generated by the audiences consisted of a mix of support for the intent of the OPP, as well as criticism from KBRA opponents, who object to other, bigger-picture components of the Klamath settlement agreements, including possible removal of four hydroelectric dams on the Klamath River in California.

"The OPP is being developed to ensure a reliable water supply for the sustainability of agriculture in the Klamath Project and the avoidance of involuntary water shortage," Hollie Cannon told those assembled at the meetings.

Cannon and OPP consultant Marc Van Camp (MBK Engineers, Sacramento) explained how the KBRA describes certain agreed upon "Diversion Limits" for water diverted from Upper Klamath Lake and the Klamath River for the Klamath Project and refuges that would come into effect in the future.

"Beyond the scope of the KBRA, the challenges of meeting water demands during dry years for agriculture, endangered and threatened species, and wildlife refuges in the Klamath Basin have become monumental and are unlikely to change," said Van Camp.

The purpose of the OPP is to align water supply and demand in areas of the Klamath Reclamation Project that rely on Klamath Lake and River for water supply. The OPP is being developed for a context where Project districts, for the first time ever, have a known block of water available each year. The plan will also take into account water delivery obligations for National Wildlife Refuges.

The OPP is being prepared by KWAPA, which was formed in 2008 as an outcome of discussions among local irrigators, districts, and others in the community. KWAPA consists of public agency members in Oregon and California, all of whom are contractors of the Bureau of Reclamation and provide water delivery within the areas of the Klamath Irrigation Project.

OPP Public Outreach

The December 2011 public meetings were the first in a series of events intended to engage local water users to gain input and provide a status update. At least three sets of similar meetings are scheduled in the coming year, with the next round tentatively set for April 2012. The overriding principals/goals of the OPP are that the plan be developed by and for districts and irrigators and that no irrigator or district in the Project suffers involuntary water shortages, as has happened in the past.

The OPP Work Group

Hollie Cannon (KWAPA)
Greg Addington (KWUA)
Julie Matthews (KWAPA)
Ed Bair (KWAPA and Klamath Basin Improvement District)
John Crawford (Tulelake Irrigation District)
Bill Ganong (KWAPA Legal Counsel)
Paul Simmons (KWUA Legal Counsel)
Marc Van Camp (Consultant Team—MBK Engineers)
Mark Deutschman (Consultant Team—Houston Engineering, Inc.)
Dan Keppen (Consultant Team—Dan Keppen & Associates, Inc.)
Mark Oliver (Consultant Team—CH2M Hill)

The "Technical Memo" Approach to Developing the OPP

The On-Project Plan (OPP) is being developed on a "build-as-you-go" approach to accommodate input from its irrigation constituents, partners, and OPP stakeholders. In support of both of these key foundational tenants, the OPP is being developed through a series of Technical Memorandums (TMs) that will build upon one another and culminate in a summary document.

From a communications perspective, the TM-based approach provides a useful forum to generate consistent, timely and focused updates to stakeholders on progress being made on the OPP.

The OPP Work Group last fall completed TM1, which was unanimously approved by the On-Project Plan Advisory Committee (OPPAC) in September.

OPPAC members are listed in the inset box on Page 3 of this newsletter.

TM1 discusses the following:

- Mission Statement/Goals and Objectives
- Key Issues
- On-Project Plan Development Approach
- Communication Plan
- Existing Data Sources
- Proposed National Environmental Policy Act (NEPA)/California Environmental Quality Act (CEQA) Approach

You can see TM1 in its entirely by going to www.kwapa.org.

Update on TM2—Past & Recent Water Operations and Supply Contracts, Water Rights, and Project Operations

The OPP consultant team has made significant progress on TM 2, which will document water operation and supply, contract, water rights, and project operations. The goal is to wrap up TM 2 and present it to the OPPAC by the end of February 2012.

Purpose of TM 2

"The purpose of TM 2 is to form a solid basis of understanding from which stakeholders can move forward," said Marc Van Camp, the lead consultant from MBK Engineers.

This TM will also describe two specific periods: the past (1986 through 2001) and recent (2002 through 2010).

"The past is important because it provides an understanding of operations prior to significant influence or impact from project constraints due to the Endangered Species Act," said Mr. Van Camp. "Also, the past includes the two years, 1992 and 1994, that would have been declared extreme drought pursuant to the KBRA."

The recent period is important because significant water bank activities have occurred that could prove to be valuable lessons learned for development of the OPP. It has also been characterized by a higher degree of groundwater development.

Overall Operations

TM 2 will summarize the Klamath Reclamation Project ("Project") operations, supply sources (including surface and groundwater supplies as well as demand reduction), and water contracts and rights within the On-Project Plan Area (OPPA).

The half-inch thick final memo will provide a brief history of the Project, describe water rights adjudication and Reclamation contracts, and pull together the most up-to-date information on Klamath Basin hydrology, groundwater resources and water quality. Detailed information will be provided on Klamath Project water supply, facilities and operations, which changed significantly in the past decade as Endangered Species Act conditions resulted in moving water away from irrigation and national wildlife refuges and towards flow and lake level recommendations made by federal fisheries agencies and the Bureau of Reclamation.

"Lessons Learned"

TM 2 evaluates recent Water Bank activities, including water made available through crop idling, storage, conservation measures, and groundwater pumping. Water bank rules and regulations are also summarized, and importantly, a complete quantification of activities will be presented that can provide decision-makers a better understanding of "lessons learned".

"The purpose of TM 2 is to form a solid basis of understanding from which stakeholders can move forward."
Marc Van Camp
MBK Engineers

TM 3 Evaluates Current and Future Water Demands

Technical Memo 3 (TM 3) – tentatively set to be presented to the On-Project Plan Advisory Committee (OPPAC) in late February 2012—will address current and future water demands associated with current and anticipated future cropping patterns and agricultural land use. Potential changes in cropping patterns will be identified, as well as anticipated resulting water needs.

This technical memo will describe the irrigation districts, improvement districts, drainage districts and national wildlife refuges that comprise the On-Project Plan Area (OPPA). A uniform approach for quantifying crop consumptive use, total on-field water requirements, and district water requirements will be presented. The final product will be a presentation of acreages and cropping patterns for each entity, with associated independent water demand results.

"Water demand was estimated at both the individual district and OPPA levels though the use of information gathered primarily from the Bureau of Reclamation," said Mark Oliver, (CH2M Hill, Redding, CA), who oversaw this technical effort.

"We also relied upon previous reports and studies, climate data, and correspondence with irrigation districts," said Oliver.

Although previous studies have examined water balances, and irrigation and water use efficiencies at the basin and sub-basin levels, irrigation requirements and district-level water demand have not been uniformly and consistently quantified for each irrigation district comprising the OPPA.

The water demand quantities developed in TM3, coupled with previous reports and studies, will provide a basis for the identification and prioritization of potential water management enhancements and irrigation modernization projects to support the OPP.

"The water demand quantities developed in TM3... will provide a basis for the identification and prioritization of potential water management enhancements and irrigation modernization projects to support the OPP."

Tour Sets Stage to Understand OPP Treatment of Refuges

Much of the discussion around the development of the On-Project Plan (OPP) revolves around efforts to align water supply and demand in areas of the Klamath Reclamation Project (KRP) that rely on the Klamath system (Lake and River) for water supply. However, OPP must also take into account water delivery obligations for National Wildlife Refuges that straddle the California-Oregon state line.

The On-Project Plan Area (OPPA) includes the Klamath Irrigation Project districts that rely on Klamath system for their water supply, but also Tule Lake National Wildlife Refuge (TLNWR) and the Lower Klamath National Wildlife Refuge (LKNWR) Area K lease lands located on the Oregon side of the border.

Representatives from Klamath Water and Power Agency (KWAPA), U.S. Fish and Wildlife Service (USFWS), MBK Engineers, CH2M HILL, and Dan Keppen & Associates met October 20, 2011, to tour and review refuge operations at LKNWR and TLNWR.

Refuge Water Supply

The refuges are part of the Klamath Basin National Wildlife Refuge Complex and are approximately 50,000 acres (LKNWR) and 40,000 acres (TLNWR) in size. Of the 50,000 acres that make up LKNWR, 32,000 acres are either permanent or seasonal wetlands, or share-cropped grain fields (this does not include the refuge lease lands on the Oregon side of the border). The LKNWR is a major stopover for migrating waterfowl in both the fall and spring.

LKNWR receives water through agreement with the Klamath Drainage District (KDD) for water from the Ady Canal. In addition to deliveries from the Ady Canal, LKNWR receives water though D-Plant from the Tule Lake Sump 1a.

…..Continued on Page 4

KWAPA staff and consultants toured key flow measurement and control structures with U.S. Fish and Wildlife Service representatives from the Lower Klamath National Wildlife Refuge in October 2011.

OPP Mission Statement

Develop, through an open, transparent, and collaborative interdistrict approach, an integrated plan that provides a strategy with various options for aligning water supply and demand consistent with the KBRA to preserve the On Project Plan Area agricultural, industrial, and municipal economies, and environmental resources.

Tour of National Wildlife Refuges *(….Continued from Page 3)*

Water pumped through Sheepy Ridge (D-Plant) is delivered into the P-Canal system and serves private lands (P-Canal users) and LKNWR lands.

TLNWR receives water through the Lost River, which includes drainage return flows from upstream irrigation districts and individuals. TLNWR comprises four sumps, two of which act as regulating reservoirs within Tulelake Irrigation District (TID) (sumps 1a and 1b). The other two sumps have been reclaimed and are currently being farmed as lease and co-op lands. Operation of the water levels in sumps 1a and 1b is dictated by a 1992 Biological Opinion (BO) for endangered sucker fish.

In addition to open-water evaporation, evapotranspiration, and groundwater seepage, water leaves the refuge northward through the Klamath Straights Drain. Water is pumped through the Drain into the Klamath River.

Refuge Water Demands

The greatest water needs are in the spring and fall. Refuges are managed for migratory waterfowl and, to a lesser degree, shorebirds. Historical deliveries to the refuges were based on available water supply and operations of the Tule Lake sumps. Prior to 2001, water availability was not a primary concern by USFWS except during years of drought.

Dave Mauser (USFWS) says shortages are becoming increasingly frequent.

"The current situation of both mandated river flows and lake levels make for shortage situations to some degree nearly every year," said Mauser. "Now, refuge water supply is more uncertain."

USFWS is continuing to explore the potential for groundwater use to assist in meeting refuge water needs. As is common in many areas near LKNWR, water temperatures can be quite high and contain concentrations of metals including mercury. Therefore, the potential for groundwater development within the lower portion of LKNWR is not likely.

USFWS is exploring the potential for geothermal development monitoring well site locations.

An opportunity further exists to develop groundwater wells within the lower portion of TLNWR. Feasibility hinges, in part, on affordable power.

On-Project Plan Progress Update

The development of the OPP has been divided into four distinct phases to assist in the overall planning and resource allocation effort. Phase 1 - the preparation of TM1 – was completed last fall. Phase 2 includes the work necessary to complete the foundational TM2 – Past and Recent Water Operations and Supply Contracts, Water Rights, and Project Operations, TM3 – Current and Future Water Requirements/ Demand, and TM4 – Baseline Conditions. This phase will also include the initial efforts for developing TM5 – On-Project Plan Area Water Need and Water Flow Path and TM8 – NEPA/CEQA Compliance Plan. Incorporated into the development of TM8 will be ongoing efforts to assess the level of detail and complexity of NEPA/ CEQA compliance with Reclamation to implement the OPP. Also, as an ongoing effort, Phase 2 will include outreach efforts and implementation of an agreed upon communication plan. Phase 3 is scheduled to begin this spring.

KWAPA Consultants Complete GEU Analysis

Consultants hired by KWAPA recently completed a Groundwater Efficiency Use Analysis (GEUA), a project intended, among other things, to assist in the development of the OPP. Key components of the analysis included development of a Geographic Information System to assist in overall management; integration of data and water user ideas to propose a more efficient and effective irrigation system, and specific recommendations.

It is important to recognize that the data and information used has limitations. In addition, this work did not include an evaluation or analysis of the groundwater resource itself. This work was to evaluate and analyze areas to improve on the coordinated use of groundwater with the surface water system. The groundwater basin is currently being studied and modeled by the U.S. Geological Survey.

On-Project Plan Advisory Committee

Bob Flowers - Ady District Improvement Company

Shane McDonald - Enterprise Irrigation District

Ed Bair - Klamath Basin Improvement District

Luther Horsley - Klamath Drainage District

Rocky Liskey - Klamath Hills District Improvement Co.

Dave Cacka - Klamath Irrigation District

Luke Robison - Malin Irrigation District

Curt Mullis - Pioneer District Improvement Company

Gary Derry - Shasta View Irrigation District

Pat Patterson - Sunny Side Irrigation District

Earl Danosky - Tulelake Irrigation District

David Jensen - Van Brimmer Ditch Company

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We're on the web!
www.kwapa.org

Working together towards locally based solutions to energy issues, water management issues

And coordination in other areas to the benefit of the whole community.

The Klamath Water and Power Agency (KWAPA) is a joint powers / inter-governmental agency whose members are water agencies within the Klamath Reclamation Project.

KWAPA provides programs to align water supply and demand, generally within the Klamath Project. We seek to identify areas for efficient use of energy and exercise the authority of a PUD.

KWAPA obtains and provides transmission and delivery of Federal preference power for eligible On-Project and Off-Project Power Users.

Background and Development of the Klamath Basin Restoration Agreement

Representatives of diverse communities in the Klamath Basin, working with federal, state, and county governments, and with other interested organizations, developed the Klamath Basin Restoration Agreement (KBRA) to rebuild fisheries, sustain agricultural communities, and resolve longstanding disputes related to the allocation of water resources. KWAPA and its member entities are parties to the KBRA. Relevant key provisions of the KBRA related to water supply include the following:

- *An ultimate limitation on diversions (DIVERSION is a term in the KBRA defined as the total amount of water from the Klamath system diverted from specific Upper Klamath Lake and Klamath River diversion facilities).*
- *Reliability and certainty regarding water that will be available for a sustainable agricultural community and national wildlife refuges.*

For more information on the KBRA, go to http://kwua.org/kbra.

OPP Goals and Objectives

- ***Meet commitments specified in the KBRA***
- ***Maintain long - term sustainability of Klamath Reclamation Project agriculture***
- ***Minimize reductions in irrigated agriculture in the On-Project Plan Area (OPPA) and avoid any uncompensated reduction in irrigated agriculture***
- ***Ensure equitable treatment among districts, avoid impacts on district operations, and seek opportunities for improved water management operations within and across districts***
- ***Develop fair, equitable, and transparent strategies for aligning water supply and demand***
- ***Consider cost effectiveness of alternatives to the overall Klamath Basin economy and minimize third - party impacts***
- ***Avoid adverse impacts on groundwater as a result of OPP implementation or administration***
- ***Use groundwater in a long - term and sustainable manner, and address all relevant in - basin groundwater management objectives, including identifying and addressing potential impacts on areas directly adjacent to the OPPA***

Klamath Water and Power Agency KWAPA