

# Irrigation Leader

First Edition



WELCOME TO THE  
**KENNEWICK**  
IRRIGATION DISTRICT  
HOMEOWNER'S EDITION



# CONTENTS

First Edition



## YOUR DISTRICT

- 3** Welcome From District Manager Charles Freeman
- 4** Our Responsibility Within Your System
- 4** How To Report A Problem
- 5** Customer Service
- 6** Assessments: How Billing Works
- 6** Canal Safety
- 7** So, You Live In a Private Line Area
- 8** How Helping Hands Takes the Burden Off Their Shoulders
- 9** Planning for Drought
- 10** The History of Kennewick Irrigation District
- 16** Making the Desert Bloom: The Benefits of Urban Forests in a Shrub-Steppe Ecoregion

- 18** Budgeting for the Future

## KID PROJECTS

- 20** Life at the End of the Project: Water Supply for the Kennewick Irrigation District
- 22** The Integrated Plan: The Yakima River Basin Water Enhancement Program
- 23** Investing in Kennewick's Future: The Capital Improvement Program
- 24** The Lower River Subgroup: Meeting the Challenge of Salmon Recovery and Resilient Water Supply in the Lower Yakima River
- 26** The Next 25 Years: The Chandler Electrification Project
- 28** The Case for Title Transfer
- 30** The Next 100 Years

# Irrigation Leader

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## COVER PHOTO:

Kennewick Irrigation District Highland Feeder Canal, Photo taken by Dana Hernandez.



# Letter from District Manager, Charles Freeman



Bureau of Indian Affairs. Our water right sets the irrigation season for us to deliver 102,674 acre-feet of water from April 1 to October 31 of any given year. KID is a prorable district, meaning that in times of drought, water available to KID decreases. Numerous factors, such as snow pack, snowmelt, reservoir levels, and return flows are used to determine the degree of proration.

## Why You Are in the District

Your property lies within the KID boundaries established decades ago by community leaders in agreement with Reclamation. The size of the district is 20,201 currently irrigated irrigable acres, which is inside a larger project boundary of over 55,000 acres. Our water right limits the total amount of acres we can irrigate at any given time.

KID was initially built to serve the agricultural community in the Tri-Cities area. Today, the majority of our customers live in residential developments, and the shift from farmland to urbanization is expected to continue. This presents challenges because the canal system was designed for farmers who had to order their water. KID balanced the system with an agricultural demand curve, not an urbanized on-demand system. We currently work with over 140 water masters, most of whom are required to order their water.

Having over 23,700 active accounts, which represent over 65,000 individuals; 12,000 acres of agriculture; and 9,000 acres of urban, rural, and residential customer acres, is challenging, and we staff accordingly. During the water season from April 1 to around mid-October, KID's staff on a 24/7 schedule. We have 62 dedicated staff members who deliver water and make repairs on a system of 74 miles of open channel canals, 300-plus miles of piping, and over 120 pump stations. We have a customer service department that is structured like a call center. You can call it to report a leak or poor water pressure, or in times of emergency, to report a flood. Customer service will dispatch maintenance crews to address your issue. After hours, we have an answering service that will provide your information to the staff working the after-hours shift.

The KID board of directors and staff are community members and your neighbors. We are stewards of a precious resource and an integral part of the economic vibrancy of our community. I welcome you to KID. ■

**A**s the district manager, I would like to welcome you to the Kennewick Irrigation District (KID). KID was originally formed as a special-purpose district in the state of Washington in 1917, but it originated much earlier, dating back to the late 1800s. The modern KID of today began in the early 1950s, when the Bureau of Reclamation, in partnership with the district and water users, built the canal system used today.

KID is one of six Reclamation Yakima River basin projects. The others are Kittitas Reclamation District; Sunnyside Valley Irrigation District; Roza Irrigation District; Yakima Tieton Irrigation District; and the Wapato Irrigation District, which is operated and maintained by the

# KID's responsibility within your system



- It is important to understand what customers' responsibilities are within their system and the role of Kennewick Irrigation District (KID).
- All customers are responsible for their sprinkler system and all maintenance, including the filter within that system.
- KID is responsible for the riser and valve that provides irrigation water to your system. ■

This photo illustrates what the riser and valve may look like. Risers and valves vary in appearance.

## How to report a problem

Customer service can be reached during business hours for issues that may occur during the water season and after water has been turned off. There are many ways to reach our office:

1. You can contact our office during business hours at (509) 586-9111.  
**Water on hours: (April-October)**  
Monday-Friday 8:00am-5:00pm  
**Water off hours: (November-March)**  
Monday-Thursday 8:00am-5:30pm
2. If you have an emergency after office hours, you can call our answering service at (509) 586-8000.
3. You can also email customer service at [customerservice@kid.org](mailto:customerservice@kid.org). Please be aware that emails are read during business hours.
4. If you see a burrowing animal hole or activity near our canal, we have a 'Report a Burrowing Animal' button



on the homepage of our website; [kid.org](http://kid.org). This button directs you to a form to report the activity and to attach a picture of what you see. Once submitted, this form will be sent to our Customer Service team. Operations personnel will dispatch to investigate and take corrective action, if necessary. ■



# Customer Service

Our Customer Service Department is a vital part of Kennewick Irrigation District (KID). We are here to serve you in a variety of ways, including answering calls and emails regarding questions, complaints, concerns, and suggestions; arranging service calls when necessary; and helping with account activities. The most important customer service task is answering each call that comes in to our office. Customers report repair requests, delivery system change requests, billing questions, outage reports, and water damage reports, among other matters.

Each April, our team of four customer service representatives and the customer service supervisor averages more than 22,000 calls in 24 working days, including Saturdays. April is the busiest month because water is coming on and thousands of payments are made. The return of water to our system triggers a large number of calls about breaks, leaks, and floods. This is inevitable, because many problems that arise over the winter cannot be detected until the water arrives.

The difficulty of water start-up varies based on the winter we had and the way customers maintain their personal irrigation filters and pipes. When customers ask why we did not fix these issues while water was off in the winter months, we are happy to have the opportunity to share with customers how breaks can occur and how they can best protect their own system.

The Customer Service Department is an important communication link between customers and the Operations team. Customer Service takes reports of issues that need to be addressed from customers, creates work orders, and sends them to the Operations team in the field. In emergency situations, when safety or property damage is possible, Customer Service can call out by radio for immediate help.



**The Customer Service Department is an important communication link between customers and the Operations team.**

During July and August, warmer temperatures cause algae growth in the canals, creating plugs and blockages that affect water deliveries. We encourage customers to call and report low water pressure or outages. This helps guide our Operations teams to areas needing attention and prevent damage that could occur if blockages are unreported. These calls are also an opportunity to advise customers to clean and check their filters to avoid a delay in water delivery and possible damage to their system.

Operations and Customer Service work together to update the water status map on our website with current outages and repairs. This map is updated based on repairs that are reported from the Operations team and calls received from customers. The map informs customers about the status of their water. KID customers can type in

their address and get information about their water delivery or outages affecting their water delivery.

Other tasks handled by Customer Service that might not be observed by most customers include working daily with more than 140 private line area water masters, partnering with Benton County to ensure property ownership changes are correct, and acting as support staff to the Operations and Engineering Departments.

When temperatures begin to drop in October, incoming calls begin to slow down. As less water is ordered, sprinkler lines are blown out, and water is turned off, some of the Customer Service Department's attention is focused inward on providing assistance to other departments. No matter the time of year, Customer Service is here and happy to help you. ■

# Assessments: How billing works

Kennewick Irrigation District (KID) delivers irrigation water to 20,201 acres of land and to more than 23,000 customers. In accordance with state law, customers receive assessment bills each year by April 1. Customers can pay the assessment in full or divide the assessment up into two payments; the first half is due April 30, and the second half is due October 31.



The assessment pays for the irrigation services provided by KID to deliver water to the irrigable parcels. The assessment is determined by the customer's parcel size and the infrastructure used to deliver water to the parcel. For the base rate and charges breakdown, visit [kid.org/find/rates](http://kid.org/find/rates).

Assessments are a direct lien against property, and failure to pay results in foreclosure. Foreclosure is the state law; it is not an option that KID chooses. KID charges a delinquency fee on May 1 and November 1 for past-due amounts and an interest rate at 1 percent per month, pursuant to Washington State law. KID has a program through which a customer may request forgiveness of up to \$30 in penalties and interest, but this request is only valid once during a customer's ownership of a piece of property.

Assessments can be paid by a customer's mortgage company. However, KID only has a legal relationship with the customer/land owner and does not have a legal relationship with mortgage companies. If the mortgage company fails to pay or pays an assessment late, it is the customer's responsibility to pay the assessment and any account fees, late fees, penalties, and/or interest charged to the

account. To find out if your mortgage company is paying your assessment, contact your mortgage company and ask to speak with the escrow department.

Government fees are set and collected to pay for daily operating costs, maintenance of aging infrastructure, and capital improvement projects that extend the life of our infrastructure, improve the system, and pay our staff. We assess our customers the proportionate share of all costs to maintain and upgrade the system.

*If you have questions about your assessment, Customer Service is always happy to help. You can contact Customer Service at [customerservice@kid.org](mailto:customerservice@kid.org) or (509) 586-9111. ■*

## CANAL SAFETY

Canals are not for play—stay away! Child safety is a community concern. Together, we can help prevent a tragedy.

- Drowning is the second-leading cause of death in children ages five to 14, according to Safe Kids Worldwide.
- Constant adult supervision for children in or around water is the number one safety tool against drowning.
- Parents and caregivers can teach children the dangers of irrigation canals. When near a canal, please take every safety precaution.
- Stay off canal roads and avoid entering the irrigation canal at all times, even when canals are empty.
- Always walk your bike and leash your pets near canals.
- Do not ingest irrigation water and avoid letting children and pets run through the sprinklers. Irrigation water is raw river water and may contain harmful microbial contaminants.



- Avoid playing in irrigation water, and do not let children and pets run through the sprinklers.
- Do not use irrigation water to fill pools or pet bowls.
- The Bureau of Reclamation provides irrigation districts with safety and drowning prevention coloring books for children. Please stop by the KID office if you are interested in a coloring book. ■



## So, you live in a **Private Line Area**

When Kennewick Irrigation District (KID) was created, it was predominantly agricultural in nature. Over the decades, agricultural farms were sold and subdivided by developers. For instance, a 40-acre orchard served by a single turnout became 160 single-family homes. This process was repeated hundreds of times, resulting in over 20,000 unique parcels of land.

Today, when an orchard subdivides, KID requires the irrigation system component of the subdivision to meet American Water Works Association (AWWA) standards and KID standards. Thirty-plus years ago, a developer who subdivided an orchard was not required to meet AWWA or KID standards, and often opted to install a system that would not meet today's standards. For more than 7,000 parcels, this resulted in the creation of private line areas that are served by irrigation infrastructure that the public (KID) does not own. The developer may have selected this avenue in order to save costs.

A developer or even a homeowner may have

inadvertently severed a distribution line that served another neighborhood or even a section within the neighborhood, resulting in parcels becoming isolated from the system. If easements exist that allow access to the distribution system, KID may be able to help.

KID could also help if the private line area system is interested in public ownership of the system. In 2017, the KID board of directors approved policy 2.43, the Private Line Area Conversion Fund. This fund is front loaded with \$1.5 million that will be used to bring deficient, failing private systems up to current standards. If the neighborhood is supportive, KID will assess the participating customers a surcharge over a 5–10 year period to bring the system to current standards. Once an agreement is reached, KID crews will construct the new system, or KID will elect to bid it out and hire a contractor to execute construction.

*Interested in learning more? Please contact our Engineering Department at (509) 586-6012. ■*

# How Helping Hands Takes the Burden off Their Shoulders



Sooner or later, we all need a helping hand. That's why Kennewick Irrigation District (KID) participates in a program to help those in danger of losing their property because they cannot pay the assessments. There are many reasons individuals might find themselves in need of help, such as a medical emergency, family problems, or unemployment. These problems are unexpected, and few people can handle them alone.

The Helping Hands Program is funded by a portion of the revenues collected from delinquency fees, customers, and concerned neighbors. In 2011, KID began charging a delinquency fee on all past-due accounts. Thirty percent of the collected delinquency fees fund the Helping Hands Program.

Barbara, a resident of Kennewick, shared how KID's Helping Hands Program has assisted her for the past four years. "Everything gets stretched real thin. That's why they help me. They've been helping me get that burden off my shoulders. I'm sure a lot of people don't realize it."

Ronald, a resident of Finley, told us the program has

**"Everything gets stretched real thin. That's why they help me. They've been helping me get that burden off my shoulders."**

**—BARBARA, KENNEWICK, WASHINGTON**

helped him with utility costs. "As a retiree, it helps me share the expense of what utilities cost. Things have gotten so bad with health care, and my wife is in dire straits with her health. We have had to rob Peter to pay Paul."

Customers interested in donating to the Helping Hands Program may do so by using the option available on their payment coupon or coming to the KID office, located at 2015 S. Ely Street, Kennewick, Washington, 99337.

All donations are tax deductible, and every dollar donated goes to a customer in need. ■



## PLANNING FOR DROUGHT

**K**ennewick Irrigation District (KID) serves up to 20,201 acres of agricultural and residential customers in a region of Washington State that receives on average less than 10 inches of precipitation per year. These challenging conditions make irrigation necessary to grow economically valuable agricultural products, such as cherries and grapes, and urban shade trees that help to cool residential areas and increase the quality of life in the district during the summer months.

KID depends on water from the Yakima River, which receives its water from the eastern slopes of the Cascade Range. Approximately 140 inches of precipitation falls in the Cascade Range per year, feeding the Yakima River through numerous tributaries and providing flows for fish, farms, and residences all the way to the Tri-Cities.

During years of average precipitation and temperatures, there is enough water to supply the needs of farms and residences in the Yakima Basin. However, during drought conditions, when precipitation fails to fill the storage reservoirs or the snowpack fails to materialize or melts too quickly, water shortages threaten agriculture and our quality of life. In 2015, a severe drought in the Yakima Basin reduced water supplies for prorated water rights holders by over half. The drought was due to a lack of snowpack; a normal amount of precipitation fell in the mountains, but it fell as rain instead of snow. The reservoirs in the Yakima Basin can only store up to 30 percent of the total annual runoff. Snowpack plays a critical role in complementing water storage by providing water during the spring and early summer of the irrigation season.

Although KID holds a mostly proratable water right, it is not held to the strict prorated annual quantity that

other proratable districts receive. KID does not draw water from the proratable bucket; it relies on return flows that return to the river after being diverted by other users and are available for diversion by KID at Prosser. This has historically allowed KID to receive a more reliable water supply than the other proratable districts, but large-scale water conservation projects implemented over the past 20 years have greatly reduced available return flows. Currently, KID is not receiving the water when it is most needed for plant growth—during the summer months of July and August.

Current conditions and future potential climate change effects have created a challenge to protect and enhance the KID water supply. To guide the district through the difficulties of drought conditions, KID adopted a drought plan policy. The on-the-ground realities of the 2015 drought caused KID to reevaluate the drought plan. Many of the goals and actions in the plan were found to be unfeasible for KID with its unique position in the Yakima project as a return-flow district. KID staff is currently rewriting the plan to better support goals and actions that will give KID the tools needed to make the next drought easier for our ratepayers. Actions such as calling on reservoir storage will provide KID with more water in a drought, although it will have the negative effect of reducing water supplies for other users in the Yakima Basin. KID is actively pursuing the addition of electric pumps at Chandler pump station. This congressionally authorized project will replace water taken from KID by federally funded up-basin conservation projects. This project will improve the reliability of KID water supplies during a drought and will reduce the need to call on storage in future drought. ■



**ABOVE:** Date unknown. Original caption: Ditch Digger: without this little device, there would have been no Kennewick!

**RIGHT:** We have come a long way in promoting and educating about canal safety. Please remember: Canals are not for play—stay away!



20th SENG OF IRRIGATION CANAL, KENNEWICK, WASHINGTON

# The History of KENNEWICK IRRIGATION DISTRICT

Irrigation in the Yakima Valley has a long and productive history. In the Tri-Cities area, the feasibility of diverting Yakima River water out of the river to the surrounding farmlands was first studied in 1888 with formation of the Dell Haven Irrigation District.

The first water rights for diversion of Yakima River water for the present-day Tri-Cities area came in 1891, when the Yakima Irrigation and Improvement Company obtained a 300-cubic-feet-per-second right on the south bank of the Yakima River, known as Horn Rapids.



## Irrigation vital to first settlers

From the day the first settler located on the vast and semi arid stretches of what are now Franklin and Benton counties, irrigation was recognized as the most urgent and vital need.

It was quickly discovered that on the land and water brought to the rich volcanic soil anything adaptable to local climatic conditions could be grown abundantly.

As far back as 1888 the Dell Haven Irrigation district was formed in the Yakima Valley and within four years work had been started on what eventually was to be-

come the great Kennewick Canal.

By 1906, five irrigation projects were in operation — the Kiona, Kennewick, Richland, Columbia and Two Rivers although the latter was a pumping proposition; power being furnished by the fall of Snake River at Five-Mile rapids. The Two River interlocked with the Columbia canal.

Oldest ditches in the valley were in Kiona, taken out of the Yakima two miles above the village of Kiona, and the sources seven miles below Kiona. Both were started by the same company in 1892.

## 1893

The Yakima Irrigation and Improvement Company conveyed the Kennewick Canal (now known as the Columbia Irrigation District Canal) system to the Dell Haven Irrigation District, and canal construction was completed. The present-day Canal Drive was named for the Columbia Irrigation District Canal that it parallels.

## 1901

The Dell Haven Irrigation District was sold through court-ordered auction to the Northwestern Improvement Company.

## YOUR DISTRICT

# 1904

The deed of transfer from the Northwestern Irrigation Company to the Northern Pacific Irrigation Company was completed.



**ABOVE:** Building dam at head of Kennewick Canal (Horn Rapids Dam) in September 1908.

**RIGHT:** Raising the trestle at Badger Canyon on June 18, 1909.

# 1905

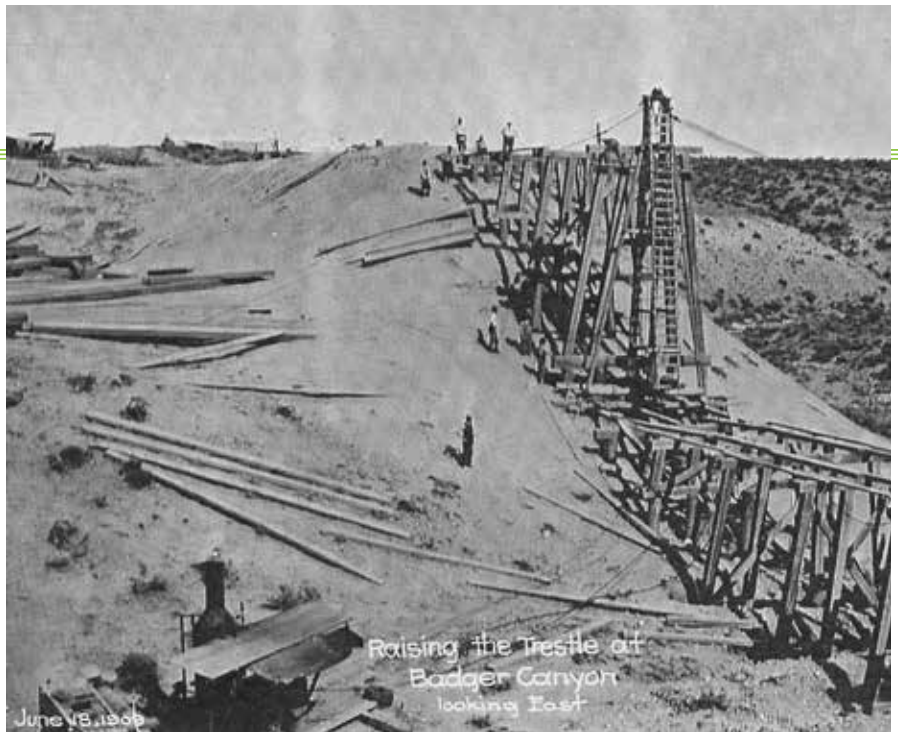
The Northern Pacific Irrigation Company rehabilitated the Kennewick Canal.

# 1906

The Highland Water Users Association was formed. It constructed a pumping plant at the north end of Edison Street during 1908 and 1909 to serve the Kennewick Highlands. This was the first time Kennewick property received irrigation water.

# 1909

The Low Lift Canal was completed and placed into service, serving lands north of 4th Street to the Kennewick Canal.



# 1910

The High Lift Canal was completed, serving land between the Low Lift Canal to the north and 10th and 14th Streets to the south.

# 1914

The Northern Pacific Irrigation Company deeded over the irrigation system, which included the pumping plant, pipelines, canals, and all appurtenances, to the Highland Water Users Association.

# 1917

The Kennewick Irrigation District (KID) was officially organized.



# 1918

The Columbia Irrigation District (CID) was officially organized. The Northern Pacific Irrigation Company deeded Horn Rapids Dam, water rights, canals, and all appurtenances to the CID.



1919

The Kennewick Irrigation District attempted to construct the New Lands Project for the first time; however, funding failed to pass Congress.

1930

Due to financial trouble, the Highland Water Users Association was unable to continue the irrigation system and dissolved. KID took over the entire system. In the same year, a contract between the KID and the U.S. Bureau of Reclamation transferred the Prosser Dam, KID water rights, and Chandler Power Canal right-of-way to Reclamation for the rehabilitation of the Kennewick Highlands irrigation system.

1948

A second attempt to appropriate funds to construct the New Lands Project passed Congress, which appropriated funds for the construction of facilities to irrigate an additional 14,534 acres.

# 1957

# 1958

The Kennewick New Lands Main Canal and Lateral System delivers water for the first time.

The Kennewick Irrigation District Main Canal and associated laterals was given to the Kennewick Irrigation District for operation and maintenance. Under the contract with Reclamation, the district will operate, maintain, and hold responsibility for construction on the canal system until the year 2025.



**ABOVE:** First water delivery ceremony in Kennewick, Washington, on April 26, 1957. Pictured: Floyd Dominy (Chief, Irrigation Division, U.S. Bureau of Reclamation), Warren Magnuson (United States Senate), Henry Jackson (United States Senate), Walter Crayne (KID Board), Orvel Terril (KID Board Chairman), W.A. Sloan (KID Board), Van Nutley (KID Manager), K.J. Brand (KID Manager, retired), O.W. Lindgren (Superintendent, Yakima Project), Don Creswell (President, Franklin County Irrigation District), H.T. Nelson (Regional Director, U.S. Bureau of Reclamation, Boise, ID), W.L. Karrer (Construction Engineer, Kennewick Division).



**ABOVE:** In the 1950s, a pipe carries water from the main canal across Badger Draw to the Badger east and west laterals. The siphon is 3,100 feet long, 48 inches in diameter, and carries water to serve 2,970 acres.

# TODAY

The KID encompasses 20,201 irrigable acres, and it is composed of more than 70 miles of open canals and laterals along with more than 300 miles of buried pipelines. The district services a host of varied pumps, weed screens, canal crossings, and associated facilities, all designed for the delivery of irrigation water.

Our irrigation season normally runs from April 1 to October 15 or approximately 198 irrigating days. During the course of the irrigation season, the district delivers between 85,000 to 90,000 acre-feet of water to the irrigable lands in the district. This represents almost three times the capacity of Bumping Lake, a popular camping and summer recreation reservoir

near Mt. Rainier. Each property is entitled to a water allocation equivalent to 42 inches of water, which, is the annual rainfall in Seattle.

The KID diverts water out of the Yakima River at Prosser Dam located in Prosser, Washington. From that point, the canal runs on the north side of the Yakima River to the midway point between Prosser and Benton City, where it crosses underneath the Yakima River in a 99-inch pipe to the south side of the river. It then flows through Badger Canyon, South Kennewick, and South Finley to a point known as Hover. At Hover, directly across the river from the Boise Cascade Plant, the spill then runs into the Columbia River. ■

**LEFT:** The first water delivery ceremony for the KID on April 26, 1957. *Original caption in Tri-City Herald: Climax of the Kennewick Highlands Project dedication this morning came when Don Cresswell Climbed the delivery box to turn the water onto his farm unit that was first settled over a half century ago, and then given up when no irrigation water arrived.*

**BELOW:** Present-day KID.



# MAKING THE DESERT BLOOM

The Benefits of Urban Forests in a Shrub-Steppe Ecoregion



**T**raveling across the shrub-steppe hills and agricultural plains of eastern Washington, one cannot help but notice the vibrant urban forest that appears as one enters the Tri-Cities. A rarity in our arid region, this urban forest is made possible by irrigation, which in large areas of Kennewick and south Richland is the result of water diverted from the Yakima River and delivered by KID.

Prior to the arrival of irrigation in the area, the dominant natural vegetation found in the Tri-Cities was shrub-steppe. In fact, the Tri-Cities is located in the heart of an ecoregion with an arid climate of 7 to 10 inches of precipitation per year, frost-free days for 140 to 200 days per year, cool winters with an average January minimum temperature of 30 degrees Fahrenheit, and warm summers with an average July high temperature of 89 degrees Fahrenheit. Without supplemental irrigation water, the region is dominated by dryland vegetation, such as Wyoming sagebrush, rabbit brush, Sandberg wheatgrass, needle-and-thread grass, and Indian ricegrass.

Besides scattered groves of western juniper in the uplands and black cottonwood along the rivers, the Tri-Cities area is nearly devoid of native trees. The Lewis and Clark Expedition in the early 19th century took note of the lack of trees. Bateman Island, located at the confluence of the Yakima and Columbia Rivers, was the farthest point upstream on the Columbia River explored by Lewis and Clark. On October 17, 1805, William Clark wrote in his journal, “There is no timber of any Sort except Small willow bushes in sight in any direction” on Bateman Island.

The onset of irrigation was monumental for the region, as in many areas of the arid intermountain West. The economic and social benefits of the conversion of desert areas into irrigated croplands have been well documented over the years. The ecological changes brought by converting the natural landscape into irrigated farmland have also been widely noted. However, it is less well known that irrigation benefits natural resources in urban areas—the effect is just as dramatic on urban areas as on agricultural areas. One striking example in the Tri-Cities, and within the KID boundary, is the urban forest that is found in our community.

Contrary to the belief that urban areas are devoid of nature and wildlife, these areas provide habitat for species that can adapt to urban environments. The urban forest in the Tri-Cities provides a habitat for a variety of species, including porcupines, raccoons, Cooper’s hawks, and robins.

The urban forest benefits the Tri-Cities and many

other communities across the nation. Urban forests include all publicly and privately owned trees and vegetation in urban areas, and nationally constitute 25 percent of the total forest canopy.

The urban forest is a vital part of a community’s green infrastructure and includes vegetation and porous elements for natural storm water management, such as lawns and landscaped areas. Trees in urban areas deliver a variety of ecosystem services: supporting soil formation, photosynthesis, and nutrient cycling; improving air quality by storing and sequestering carbon; and removing air pollutants, including greenhouse gases and particulates.

Urban trees improve water quality by reducing and treating stormwater runoff, including the prevention of millions of gallons of runoff per year; the water is intercepted by the foliage or absorbed through the plant’s roots. This is important in an arid environment, where much of the precipitation is sudden thunderstorms that produce large amounts of rain in a short period of time; this kind of precipitation can overwhelm storm drains and cause local flooding of streets.

Shade from urban trees reduces energy use and associated costs, contributes to cooling surface air temperatures, and absorbs ultraviolet radiation; the cooling is crucial to making desert areas such as the Tri-Cities livable during the hot summer months.

Trees in urban areas provide significant economic, social, and cultural benefits to a community, including opportunities for outdoor recreation; the gathering of natural products, such as fruits and nuts; and aesthetic, spiritual, psychological, and public health benefits. Trees also reduce noise pollution from cars, highways, and other urban land uses. Urban forests can increase residential property values by up to 20 percent and spending by shoppers in central business districts by up to 12 percent, according to recent studies. Additionally, the urban forest can support a strong landscape maintenance industry by providing demand for lawn care specialists, arborists, and allied trades.

Benefits of urban forests are numerous, and residents must use water wisely, especially in arid regions and drought-prone areas. To ensure a thriving urban forest in arid ecoregions, it is important to choose drought-tolerant tree and shrub species to conserve water and to increase plant survival when water shortages occur. Local nurseries, soil conservation districts, university extension offices, and city park departments are good places to find information about proper plant selection for your local climate. ■



# Budgeting for the Future

Kennewick Irrigation District (KID) would not exist today if it was not dedicated to both the short- and long-term benefit of our agricultural and residential customers. The forward-thinking individuals of the late 19th century worked for decades to lay the foundation for the formal creation of KID as a special-purpose district in 1917. Local farmers and residents pursued that vision for close to 40 more years until the authorization and initial funding was secured to build KID's core canals in 1948 and 1954.

This forward-looking emphasis has continued under the current KID leadership, which has undertaken major efforts to preserve KID's full water rights, accomplish Chandler electrification, and pursue title transfer of KID's facilities from the federal government to the district. Some of these projects have time frames of 5, 25, and 50 years; others require unending diligence.

## Planning

KID's annual budget process and 6-year capital program focus on applying staff and capital resources in a timely, cost-effective manner. Planning strategies include:

- Prioritizing capital projects using a decision model that considers public safety.
- Improving customer service.
- Pursuing cost savings.

- Scheduling maintenance work and equipment replacement to get maximum return on district equipment.
- Cross-training field employees so that they can be deployed across multiple projects as needed.
- Consolidating new development projects with existing infrastructure to build easier-to-manage irrigation systems.
- Creating future operations efficiencies and better service delivery.

## Saving

As part of KID's policy of managing for both the short and long term, the district has created a number of special internal funds focused on fiscal efficiency and long-term planning. All expenditures from these funds require approval from the board of directors. The funds include:

- **Risk Management Fund:** An emergency fund that builds up over time, "to be used only in the event the District loses control of water in canals, waste ways, and pipes." This is an example of financial prudence to counteract potential losses related to canal and pipe breaks.
- **Drought Mitigation Reserve:** Initially front loaded with \$1 million, this reserve is annually funded with \$75,000 from operating funds, up to a designated reserve level targeted to cover extra expenses the district incurs in drought years. This reserve ensures that funds are

available during already-difficult drought years without an adverse effect on that fiscal year's budget or KID customers.

- **Conservation Capital Project Reserve:** Contributions from operating funds create a funding source designated for conservation-related capital improvement projects. For example, these funds can be used for KID's matching share of WaterSMART grants.
- **Capital Upgrade and Improvement Fund:** Funds from capital assessments, capital grants, and interfund transfers are available for the improvement and extension of irrigation delivery infrastructure. Projects are selected from the 6-year capital plan and as opportunities present themselves.
- **(Nonirrigation) Capital Upgrade and Improvement Fund:** This reserve is for nonirrigation infrastructure capital improvements.
- **Equipment Replacement Fund:** This fund accumulates to replace existing operations equipment, spreading the replacement costs over the life cycle of a piece of equipment.
- **New Water Infrastructure and Supply Fund:** This fund was developed in response to requests from customers, during meetings and other communications during the 2015 drought for the district to pursue additional sources of water. Funded by per-acre and per-account charges, this fund accumulates resources to develop new water sources for the district, especially for use in drought years. It will give the district flexibility to develop and respond to potential new water opportunities.
- **Realty Reserves:** This reserve is funded by proceeds and interest earned from the lease or sale of parcels of real property determined to be surplus and unnecessary to the district by the board of directors. These reserves are used only to enhance the district's ability to achieve long-term strategic planning goals, to provide prudent redundancy of other funding sources, and to provide funds to sustain the benefits of irrigation to the customers in the case of unforeseen changes in the irrigation sector.

Each fund collects for current and future activities, so that as needs arise, addressing them will not affect the current fiscal year's budget. In many cases, the funds are accumulated slowly over time, and costs for one-time events are spread over a span of years.

## Commitment to Stewardship

KID's focus on forward thinking and long-term planning demonstrates KID's choice to be a cautious and thoughtful steward of its current and future fiscal resources. The commitment to responsible stewardship includes optimizing fiscal resources intended for operations, capital projects, and development and use of resources derived from the use, sale, or lease of properties from the KID land portfolio in a judicious and measured way. ■

## Help From our Friends

As part of its commitment to be a responsible steward of public funds and to maximize the utility of KID's fiscal resources, the district has received three federal WaterSMART grants. These grants have allowed KID to accelerate its canal lining program, making its canals safer and more water conservative while saving the district \$2.8 million.

## Building for the Future

The water delivery infrastructure for development of the Southridge area in Kennewick was one new development project. Further development in this area will take place over the next 10 to 20 years. In 2016, district staff installed more than 2 miles of large diameter ductile iron pipeline due to an accelerated development schedule.

The district elected to self-fund this multimillion-dollar installation, knowing the cost savings in the long run would exceed 33 percent. This pipeline is part of KID's \$12 million irrigation infrastructure development plan for the Southridge area that will be primarily funded by development fees. This plan was created by KID in anticipation of the overall development of the Southridge area over the next two decades. KID's goal is to create the most cost-effective and efficient way to deliver irrigation water to that area for the next 100 years.

## Using a Treasured Resource

The Realty Reserve fund is a key strategic resource for KID's future. Any expenditure from this fund must be approved by the board. The KID management team is focused on the need to preserve the capital in this fund. Whenever using realty funds for a special project is discussed, there is also a discussion of how those funds could be repaid to the Realty Reserve.

The Realty Reserve Fund provided critical funding to the Red Mountain Project. The funding was made knowing that the principle and interest would be repaid from a secure and dedicated income stream. The interest rate was established based on commercial market rates (6.2 percent annually) and is in excess of the interest the funds were earning previously. Proceeds from the Red Mountain Project allowed KID to enhance operational capacity to start replacing aged infrastructure.

# LIFE

## AT THE END OF THE

# PROJECT

Water Supply for the  
Kennewick Irrigation District



Supplying irrigation water to more than 65,000 urban and agricultural customers at the end of the Yakima Project in a highly regulated and drought-prone river system is a challenge that Kennewick Irrigation District (KID) faces year in and year out.

The Kennewick Division was the last Bureau of Reclamation Yakima Project division to be completed. Authorized by Congress in 1948, construction of the division was completed in 1958, where KID took over operation of the irrigation delivery component of the division in 1958. The Yakima River is an overappropriated basin; in dry years, supply is not adequate to meet demand. The Yakima Project's five completed storage reservoirs can hold just over one million acre-feet of water, or 30 percent of the average total natural runoff in the basin. Total irrigation entitlements and instream flow needs in the basin above Parker Dam are approximately three million acre-feet. The difference is made up in snowpack. Known as the sixth reservoir, snowpack supplies basin water needs into late spring and early summer before demands require that the reservoirs be tapped.

Water shortages have been a periodic occurrence in the

Yakima basin since the creation of the Yakima Project, which was authorized by Congress on December 12, 1905. To develop the five storage reservoirs that would serve the project, the state of Washington granted the United States the right to use eminent domain to acquire land, water, and property; this action directly led to the withdrawal of the unappropriated waters of the Yakima basin. These withdrawn waters hold a priority date of May 10, 1905, and are subject to prorationing in water-short years. In those years, water users with senior water rights (prior to May 10, 1905) will receive 100 percent of their entitlement. Water users with proratable water rights (May 10, 1905) will receive reduced proportions of their usual entitlement, depending on the amount of water available after senior entitlements are fulfilled. KID holds a small amount of senior water rights; however, the majority of KID's entitlement (84 percent) is proratable.

Water shortages have caused the curtailment of prorated water rights on average once every four years over the past 20 years. Early disputes over water shortages in the basin led to the District Court of Eastern Washington issuing the 1945 Consent Decree, which determined water

delivery entitlements in the Yakima Basin above Parker gage and defined the prioritization of water rights to be in place during drought years, including prorationing. The consent decree applied a unit of measurement known as *total water supply available* (TWSA). TWSA is the total amount of water expected to be available for all uses in the basin above the Parker gage from April 1 to September 30 of any given year. The amount of water that makes up TWSA includes reservoir storage contents, usable return flows above Parker gage, and runoff forecasts.

Outside TWSA, water supply for the KID is, and was intended to be return flows in the lower Yakima River. The 1945 Consent Decree illustrated that the existing system was not adequate to meet all needs in water-short years and that prorationing would occur in those situations. Despite being an irrigation district with mostly prorable water rights, KID has typically fared better overall than other Yakima Project irrigation districts that hold water rights that are entirely prorable. This is why return flows that supply KID are important to water supplies in the entire Yakima Basin.

KID's position in the lower Yakima River below Parker gage positions it to take advantage of return flows that enter the river above the district's diversion at Prosser Dam. Even with inadequate storage within the basin and the 1945 Consent Decree in place, Reclamation recognized that sufficient return flows were available in the lower Yakima River to supply KID. Four major Yakima Project irrigation entities divert water above Parker gage and provide irrigation return flows to the lower river: Roza Irrigation District, Kittitas Reclamation District, Wapato Irrigation Project, and Sunnyside Valley Irrigation District. Water entering the river below Parker gage is outside the TWSA definition but is crucial in providing water supplies for KID and for providing flows for fish. Reclamation manages the Parker gage to pass flows required to meet federal instream flow targets at the gage, as well as identical flow targets located downstream at Prosser Dam. KID depends on the water that returns to the river between the two points for the district's supply, especially in water-short years.

KID's water supply contract with Reclamation allows it to take all waters above flow targets at Prosser Dam, provided that the district does not call on storage for targeted delivery. During periods of prorationing, this has huge impacts on KID and other water users in the basin. First, by taking return flows as a supply, KID is able to take more water than the prorated amount during water-short years (although these increased amounts tend to not

be available when needed during the hot days of mid-summer). Second, other prorable districts benefit from KID not taking water out of TWSA during water-short years; KID calling on storage during a drought would require a recalculation of TWSA and would result in a reduction in the prorated amount of water delivered.

**Title XII has been successful in modernizing irrigation canal infrastructure and providing water for biologically beneficial flows.**

Although return flow supplies have been a good deal for KID water users and other prorable water users in the Yakima River basin, the amount and timing of the return flows that have sustained KID for nearly 60 years have changed. Concerns about declining salmon and steelhead populations and greatly reduced instream flows led to landmark legislation passed by Congress in 1994. The legislation, Title XII, authorizes an aggressive, federally funded water conservation program designed to increase instream flows in the Yakima River and to provide security to participating irrigation districts during drought conditions. Title XII has been successful in modernizing irrigation canal infrastructure and providing water for biologically beneficial flows.

Although the Title XII conservation program has certainly been beneficial to both program participants and instream flows, it has directly reduced the amount of return flows that are available for diversion in the Yakima River. Fortunately, KID and others anticipated this, and as a result, a special section was added to the Title XII legislation: Chandler Electrification. Chandler Electrification authorizes the installation of electric pumps to replace the hydro pumps that supply KID's irrigation water. These pumps are used during drought conditions when limited flows are available to drive the hydro pumps, which require 1.25 buckets of water for every bucket pumped into the head of the KID main canal. KID is actively pursuing the installation of electric pumps at Chandler. Recent modeling completed by Reclamation shows that upbasin water conservation projects will continue to reduce the return flows that supply KID, yet a switch to electric pumps in water-short years could provide KID with an adequate water supply in all but the worst years. Additional modeling is in progress to consider varying climate change scenarios and the potential effect on KID's water supply.

Life at the end of the ditch has not always been easy, especially in recent years. Upstream conservation projects have reduced water supplies, and droughts have exacerbated swings in river levels that, at times, made meeting irrigation demands an impossible task. The KID board and staff are dedicated to making the right decisions that will allow KID to flourish for the next 100 years and beyond. ■



## THE INTEGRATED PLAN:

### Yakima River Basin Water Enhancement Program

The Yakima Basin Integrated Water Resource Management Plan is a comprehensive plan to address water supply and fisheries problems in the Yakima River watershed. Participants in the process include federal and state agencies, the Yakama Nation, irrigation districts, cities, counties, and environmental advocacy groups. The Integrated Plan consists of seven elements: fish passage, fish habitat enhancement, existing structures and operations modification, surface storage, market-based reallocation, groundwater storage, and enhanced water conservation. When complete, the multibillion-dollar project will improve stream and habitat conditions for salmon and other fish and wildlife species, as well as provide farmers and communities in the basin with greater water supply reliability. It is expected to take 30 to 50 years to complete the project.

KID continues to work closely with the Bureau of Reclamation to perform detailed modeling of the lower river so that the effects of Integrated Plan actions (including water conservation) on KID water supplies can be evaluated. Preliminary modeling results suggest that KID's water supply will be harmed by upstream water conservation projects, both under the Integrated Plan and under other federal programs, such as the Yakima River Basin Water Enhancement Program. Results of the

modeling will guide decisionmakers in the protection of KID's water supply.

KID also continues to lead a subgroup of regional stakeholders in lower Yakima River issues, including fish habitat conditions and water supply enhancements such as the electrification of the Chandler pumps. The group is currently in the process of formulating an action plan to improve habitat conditions and water supplies in the lower Yakima River, which includes specific projects to be carried out in the coming years:

- Electrifying the pumps at Chandler to enhance instream flows in the bypass reach and to mitigate KID water supplies lost to up basin conservation.
- Assessing opportunities to enhance cold water refugia for fish in the lower river through aquifer recharge
- Adding more water quality monitoring stations in the lower river.
- Supporting the breach of the causeway at Bateman Island to improve flows and temperature conditions for fish in the Yakima River delta.

KID strongly supports these projects and greatly appreciates its relationships with the Yakama Nation, the Washington Department of Fish and Wildlife, the Benton Conservation District, the National Marine Fisheries Service, and other stakeholders. ■

# INVESTING IN KENNEWICK'S FUTURE

## The Capital Improvement Program



**K**ennewick Irrigation District's (KID) board of directors has been investing in the district's future for decades. During the 1960s and 1970s, the district worked with the Bureau of Reclamation to rebuild the main canal following a string of canal failures. One canal failure caused the derailment of an Amtrak passenger train in Badger Canyon. In the 1980s, the district piped some of its smaller lateral ditches for public safety purposes after a child fell into a small ditch and drowned.

Over the last decade, KID's Capital Improvement Program evolved with the establishment of the Capital Improvement Surcharge, which charges each account a flat rate that generates approximately \$1.4 million annually. These dollars are used as the local match to leverage funds received from our successful grant applications to Reclamation's WaterSMART program. In 2010, the board of directors set public safety as its number one goal, and KID has focused on lining its earthen canals for public safety for the densely urbanized district. KID received these grant funds for water conservation and savings but chose to line canals to increase safety. Throughout this process, KID is making the canals stronger, safer, and less prone to breaches.

Since 2007, KID has spent approximately \$12 million and has been awarded \$7.5 million in grant funds to line over 20 miles of earthen canals. Over the next 8 years, KID will line the remaining canal sections with high-density polyethylene.

In addition to canal lining, the board of directors

challenged KID employees to develop and execute a plan to address its aging pipeline network. KID has over 300 miles of buried pipe throughout the cities of Kennewick, south Richland, West Richland, and unincorporated Benton County. KID employees met the challenge and are replacing old pipelines that have a history of causing serious property damage. KID has funded this program without drawing on the existing capital program funding or raising rates for its customers. With its new funding source, KID has hired more employees, accelerated work on these projects, and purchased a large excavator and paving machine to enhance its productivity and efficiency.

When the Red Mountain Project was in development, KID only received 66 percent of project costs in a grant/loan package from the Department of Ecology. KID financed the remaining third. Like other public entities in Washington State, KID is limited as to what it can invest in. For example, the approved state investment program provides a low rate of return—currently less than 1 percent annual interest. Working with its financial advisor, KID decided to invest in the Red Mountain Project and started earning 6.11 percent on its investment. The interest, approximately \$551,000 this year, is funding the pipeline replacement program. KID demonstrated the sustainability of this funding stream for more than 10 years, and it hired hire the staff to speed up this program without asking for a rate increase. KID hopes to replace 1 to 3 miles per year. It will take 25 years to replace 100 miles of the piping networks most at risk of failure. ■

# THE LOWER RIVER SUBGROUP

Meeting the Challenge of Salmon  
Recovery and Resilient Water Supply  
in the Lower Yakima River



**THE HISTORIC SNOWPACK DROUGHT OF 2015 UNCOVERED UNPRECEDENTED CHALLENGES** in meeting lower Yakima River water supply demands and providing the safe passage of salmon through the lower river. Because of upbasin conservation efforts and other operations and management decisions, KID was able to convince the Bureau of Reclamation to create a stakeholder committee to study the lower river and recommend actions that would benefit water supplies and salmon runs. The result was the creation of the Lower River Subgroup of the Yakima River Basin Water Enhancement Program (YRBWEP) Workgroup. The subgroup members are from the Yakama Nation, the National Marine Fisheries Service, the Washington Department of Fish and Wildlife, Benton County, KID, Sunnyside Valley Irrigation District (SVID),

and the environmental community. Reclamation and the Washington Department of Ecology provide technical information and guidance throughout the process.

The subgroup's mission is twofold. First, recommend YRBWEP Workgroup actions and priorities consistent with the overall objectives of the Integrated Plan in the lower basin. For example, the Yakima River below the Parker gage and the tributaries and return flows to that reach of the Yakima River. The second is to act as a liaison between the YRBWEP Workgroup and entities engaged in actions related to accomplishing the overall Integrated Plan objectives in the lower basin.

One of the very first projects initiated was led by David Child, a biologist for the Yakima Basin Joint Board, who completed a float down the Yakima River along with Joel

***The great work that the Integrated Plan has accomplished to date in improving the upper Yakima River basin for fish and farms will be for naught if the lower river remains in its current state.***

The temperature data collected during the float will be used with other data collected by the Benton Conservation District to aid in the identification of areas where groundwater recharge projects could be initiated to enhance thermal refugia locations. An additional study is being proposed by the subgroup to look at issues such as the timing of recharge. It is imperative that the recharge water applied in the irrigation offseason does not reenter the river until needed in the critical low-flow months of summer when the salmon are migrating up the river to reach spawning grounds in the upper tributaries.

Another project supported by the subgroup is a lower river smolt survival study. This study will be similar to one recently completed upstream on the Roza Reach of the Yakima River. The study will seek to better understand survival rates of outmigrating salmon smolts past lower river diversion dams, including Wapato Dam, Sunnyside Dam, and Prosser Dam. Predation on smolts by nonnative smallmouth bass is believed to be a large contributor to smolt mortality in the lower river, and the data collected during this study may shed light on possible solutions for predator control.

The electrification of the hydraulic pumps that provide water to KID is the major water supply project under consideration by the subgroup. Other issues include improving water quality, performing improved hydrologic modeling, and establishing continuous data collection stations along the lower river.

The group has met several times over the past two years and will continue to do so for the foreseeable future to improve conditions in the lower river for fish and farms. The great work that the Integrated Plan has accomplished in improving the upper Yakima River basin for fish and farms will be for naught if the lower river remains in its current state. The collective efforts of the dedicated membership of the Lower River Subgroup will ensure that this critical part of the Yakima River basin will not be ignored. ■

Hubble, a fish biologist with Reclamation. The purpose was to identify critical reaches where fish passage might be impeded by low flows and channel conditions and to identify areas that could potentially be improved by flow or structural solutions. They also collected spot location temperature data grabs to identify areas of thermal refugia, in which cooler water inputs may provide areas where migrating sockeye and Chinook salmon can take refuge from the hotter river water during their upstream migration in summer. The float took place on July 28, 2016, with a follow-up survey on September 6, 2016. The float focused on the section of the lower Yakima River known as the Chandler Bypass Reach, which is an approximately 12-mile-long stretch of the river from the Prosser Dam to the Chandler Power Station that can suffer from low flows in the summer months.



# THE NEXT 25 YEARS

## The Chandler Electrification Project

### What is the Chandler Electrification Project?

The Chandler Power and Pumping Plant is located at river mile 35.5 on the lower Yakima River and is part of the Kennewick Division of the Bureau of Reclamation's Yakima Project. The Kennewick Division is a large irrigation system designed to divert return flows from the Yakima River and deliver that water to the residents, farms, and public entities served by KID within parts of the Tri-Cities of Washington State. The Chandler Power and Pumping Plant is located in a critical reach of the Yakima River, which is important as habitat during the migration life stage of some anadromous fish.

Currently, the Chandler Power and Pumping Plant lifts water into the KID main canal with hydraulic pumps, which means that water power is used to operate the pumps and deliver water to the KID main canal. This method requires a greater amount of water to be diverted from the river to operate the hydraulic pumps and deliver irrigation water that would need to be diverted for pumps operated by electricity alone. One and a quarter gallons of drive water for every gallon of deliverable water is needed to operate the Chandler hydraulic pumps.

Electrification of the pumps at the Chandler Power and Pumping

plant is authorized for two main purposes: (1) to mitigate the water supply of KID caused by upbasin water conservation projects and (2) to increase the volume of water left in the Yakima River in the critical reach area to meet federally mandated targets, which will result in an increase in stream flows to benefit migrating fish. Electrification would allow for less water to be diverted at Prosser Dam, since only the amount required for delivery to the KID main canal would need to be diverted from the river. Under electrification, what was formerly the drive water would be left in the river to help meet federally mandated target flows, thus increasing flows in the river between Prosser Dam and the Chandler Power and Pumping Plant. During low-flow drought conditions, KID would receive more water into the head of the canal as extra water that is no longer



needed to drive hydraulic pumps. As much as 431 cubic feet per second of water could be added to the Yakima River between Prosser Dam and Chandler Power and Pumping Plant. At KID's peak, instantaneous delivery of 345 cubic feet per second could occur if the pumps were electrified ( $345 \times 1.25 = 431$ ).

### Why does Chandler need electrification?

Although KID is generally supportive of the Yakima Basin Integrated Plan (YBIP) and the benefits it will bring to much of the Yakima basin, there are elements of the plan that are concerning to KID. In-depth modeling and analysis were required to properly evaluate the potential effects on KID's water supply.

Water conservation is one of the seven components of the YBIP. Although water conservation projects can be complex and do not always result in additional instream flows or additional consumption, the YBIP targets up to 170,000 acre-feet of water for conservation. KID depends on return flows for its water supply, and recent modeling performed by Reclamation has shown that KID water supplies will be reduced up to 32 percent by certain upstream YBIP conservation scenarios.

KID is the only major stakeholder to be negatively affected by the YBIP, without receiving any benefits in return. Despite this,

KID believes the YBIP is necessary for the greater good of the Yakima basin and is confident that the reduction in water supply to KID users is a consequence of the YBIP that can be remedied through electrification of the hydro pumps at Chandler.

### Who will it benefit?

Increased flows in the lower Yakima River may provide benefits to various fish and wildlife species that are significant to the citizens of Washington State and the Yakama Nation. Specifically, the availability of water left in the river may benefit fish species during the incubation, rearing, and migration life stages. Wildlife dependent on these fish species may also benefit. Additionally, farmers and urban customers who receive their water from the Yakima River would benefit from the project. This is because electrification of the Chandler pumps increases the amount of water delivered to the KID main canal in times of drought by eliminating the amount of water diverted at Prosser Dam to operate the hydraulic pumps. Any unneeded water left in the river can be used to meet federally mandated target flows at Prosser Dam while allowing for the deliverable portion of the diversion to meet KID demand.

### How much will it cost?

Congress authorized Chandler electrification in 1994, but it was not fully funded. The estimated cost to complete the project based on a new scope of work is \$23.1 million; previously, it ranged from \$30–\$90 million. In 2015, KID hired a local engineering firm that specializes in large production agriculture irrigation pumping systems to evaluate a new concept developed by the KID Engineering Department. As part of the congressional authorization for the project, Reclamation would pay for electricity to operate the pumps as mitigation for negative effects on the KID water supply and instream flows in the lower river caused by upbasin conservation projects. ■

# The Case for Title Transfer

In 2024, KID will pay off its original 1953 loan to the Bureau of Reclamation for the construction of its project. Today, funds are in the bank to pay off the remaining loan obligation. Since this payoff is imminent, the board of directors inquired if KID will own what district ratepayers paid for and learned that once the loan is repaid, the rate payers do not own the facilities they paid for. There is a separate process—title transfer—that the district has to go through to gain title to its facilities.

The district should proceed with the title transfer process to take ownership of what the ratepayers paid for. Title transfer will empower the KID board of directors' decisionmaking authority over the infrastructure the district maintains and operates and will provide local solutions to local needs.

Additionally, Reclamation is not always timely in meeting the needs of the communities KID serves. Developers in Kennewick have waited for years for Reclamation's approval to move easement lines on developer properties, and the wait has affected the private development of those properties.

The title transfer process has two main components: (1) meeting the administrative requirements of Reclamation and (2) obtaining authorization from Congress. KID is making progress on both fronts. Recently, KID and Reclamation entered into a memorandum of agreement that identified the roles and responsibilities of the parties. The agreement is intended to transfer title of the identified works from the United States to KID. KID is also working with Representative Dan Newhouse (R-WA) and Senator Maria Cantwell (D-WA) to draft legislation that would allow Congress to authorize the title transfer of the transferred works. ■





# THE NEXT 100 YEARS



Predecessors of the modern KID existed under different names dating back to the late 1800s and made major contributions to the city of Kennewick's creation, writes Dorothy Zeisler-Vralsted in her dissertation, *History of the Kennewick Irrigation District, State of Washington, 1880 to 1987*.

Today, KID is part of the Kennewick Division of the Yakima Project of the Bureau of Reclamation. The importance of our predecessors' efforts to create the framework for the modern KID cannot be underestimated. Confident promoters of bringing irrigation water to Kennewick organized KID in 1917 but would have to wait until 1948 for congressional authorization of the Kennewick Division, with the irrigation system coming on line 9 years later when the new Chandler Hydraulic Pumps delivered project water into the main canal for the first time in 1957. It will take the same visionary approach today to ensure that KID is still prospering 100 years from now.

The district's priority over the next 100 years will be water supply. With adverse effects of climate change looming, KID will take advantage of new technologies to help manage its allocation in times of plenty and in times of drought. The biggest challenge will be securing new water rights to meet new irrigation demands in areas surrounding the district that are prime targets for agricultural expansion.

With its ample, drought-resistant flows, the nearby Columbia River is the obvious water source, but it comes at a high cost, estimated at over \$100 million today for a new pump station and related infrastructure. And, these costs will continue to rise. However, there are opportunities in the Tri-Cities region for partnerships that would benefit all local water users. Opportunities for cooperation,

coordination, or consolidation with other water users would radically change how water is managed and delivered to customers in the Tri-Cities.

On the south bank of the Columbia River, there are three irrigation districts serving the Tri-Cities area of Benton County: Badger Mountain Irrigation District (BMID), the Columbia Irrigation District (CID), and KID. If these three agencies work together, great things would materialize for our region. BMID has an existing Columbia River water right and pumping facility, and CID's main canal is approximately 75 feet away from the BMID pumping plant. KID receives up to 6 cubic feet per second per day of its water carried by CID under an agreement from the early 1920s. CID is the last major Yakima River water user, diverting at the Wanawish Dam located 18 miles upstream from the confluence with the Columbia River.

A large expense for KID is the pumping of water from the Columbia River to higher elevation areas in the district; however, if BMID pumps new water for KID and discharges it into CID's main canal, KID could pick it up a few miles down canal to serve lower elevation customers. This could reduce the lift required compared to a direct pump from the Columbia River, and higher elevations could continue to be served with Yakima River water. The challenge is to bring together these three districts, which have a long history of working together on smaller projects. These districts must focus their efforts on the next big water project to allow for irrigated agriculture and a vibrant urban landscape far into a new century while creating drought resiliency that will allow KID to continue to make the desert bloom. ■



