The
Communicator
Published by The Central Nebraska Public Power and Irrigation District

2018-19 water year best described as 'unusual'

To say it has been an unusual year is perhaps an understatement.

The 2018-19 water year ended on Sept. 30 (a water year runs from Oct. 1 to Sept. 30) and it was a year marked by heavy and frequent rain, floods, planting delays, bone-chilling winter temperatures, and even "bomb cyclones," among other anomalies in terms of weather and water.

While Central's area was largely spared from the calamities that befell other parts of the state, it has also been an unusual year for Lake McConaughy. While total water year inflows were above average, the 1.19 million acre-feet barely cracked the Top 20, finishing at 19th highest in the reservoir's history. (An acre-foot of water that would cover one acre with 12 inches.)

But it was summer inflows that made the water year unusual. Normally inflows are highest in October and then in May and early June. In fact, from October of last year through May, inflows were pretty much in line with the normal monthly averages.

Then came summer. Inflows to Lake McConaughy during June were twice the normal amount; more than two and a half times normal in July; and 348 percent of normal in August. The 162,843 acre-feet (a-f) that flowed into Lake McConaughy in August was the highest monthly total for the year. Historically, as one would expect in a snowmelt-fed basin, August inflows are normally low; only slightly above July (median inflows of 46,815 a-f in August and 45,718 a-f in July).

Several factors converged to yield this outcome. First, mountain snowpack in Colorado and Wyoming was above average in all three basins – the upper and lower North Platte basin and the South Platte basin – that affect river flows into Nebraska. Snowmelt runoff, particularly in the North Platte Basin in which Lake McConaughy is located, entered U.S. Bureau of Reclamation (USBR) reservoirs in Wyoming that were already holding plentiful supplies from last year.

Second, frequent precipitation across much of the Platte Valley suppressed demand for irrigation. Rainfall during the growing season (April through September) collected in Central's Holdrege gauge totaled 25.44 inches, compared with the 20-year average of 18.63 inches and 19.0 inches since 1957. Average deliveries to Central's customers were only 3.8 inches/acre.

However, the frequency of precipitation perhaps played a more significant part in reducing irrigation demand than the amount of rainfall. Few weeks went by this summer without some amount of rain, which was often enough to dissuade an irrigator from taking deliveries.

Finally, a mid-July tunnel collapse on an irrigation canal that delivers water to two projects in Wyoming and Nebraska's Panhandle prevented delivery of water to about 107,000 acres in the two states.

(continued on p. 2)

(Water year, cont'd.)

With abundant water already in storage and the approaching need to make room for next year's inflows, releases from the USBR reservoirs that normally would have been diverted into the two canals continued downstream to Lake McConaughy.

Lake McConaughy's lowest elevation (3,252.5 feet above sea level) during the 2018-19 water year occurred on Oct. 1, 2018, the first day of the water year. The reservoir's peak elevation occurred on July 15 at 3,260.1 feet, declining to elevation 3,257.9 in mid-August and currently stands near elevation 3,258.0, about seven feet below full elevation.

And here's an interesting observation: Lake McConaughy's elevation of 3,258.7 feet on Aug. 31 was the same as it was on Aug. 1. A check back through the data reveals that that has never happened in the reservoir's 79 years. While August's inflows were well short of a record amount, the monthly total did rank fifth behind 2010, 1973, 2011 and the record of more than 328,000 a-f in 1983.

Central uses UAVs for efficiency and safety

Central's use of unmanned aerial vehicles, also known as UAVs or "drones" continues to expand. Starting in 2016, Central had one licensed operator and a single UAV, used primarily for taking aerial photography. Since then, Central has tested and expanded the use of the drone to such things as habitat lands management, dredging volume calculations, inventories of project land uses, and mapping shoreline erosion locations.

Following recent training and testing, Central has increased its number of licensed UAV operators, and Central plans to acquire additional drones in the near future. Likewise, the list of things Central uses drones for also continues to grow; for example, this year Central started using UAVs for inspections of project facilities such as radio towers, bridges, and other difficult-to-inspect structures.

Using drones allows Central employees to cover larger areas over shorter periods of time and/or for them to be safer while they do their work. Additionally, because of the rapid advancements in drone technology, Central's acquisition of a small, consumer-grade drone with GPS capabilities can save costs over the long run as a supplement or replacement of more traditional methods of doing the same type of work.

Drone photo taken by Central staff showing Jeffrey Reservoir and the siltation ponds used during dredging projects over the past years. These settling ponds were made possible through a collaborative effort between the land owner, tenant and the District.

Tri-Basin introduces new water conservation program

Tri-Basin Natural Resource District launched a Water Conservation Incentive Program (WCIP) earlier this year that gave groundwater irrigators an incentive to conserve water. The voluntary project is intended to help area producers to increase irrigation efficiency and maintain or improve ground water levels throughout the district.

TBNRD announced recently that they are expanding the WCIP to encourage irrigators with access to both surface water turnouts and groundwater wells (comingled parcels) to use canal water rather than pumping groundwater to irrigate.

TBNRD is offering five-year contracts to Central's customers and landowners who have individual surface water rights. TBNRD will pay landowners the equivalent of one acre-inch of water credit up to $5/acre/year, with the understanding that payments will be reduced by a set amount per acre inch of groundwater used during the contract period. However, if Central is unable to deliver a full amount of contracted water to a parcel for any reason, that customer will be allowed to pump groundwater without penalty.

TBNRD has set a cap of 8,000 acres to enroll for the WCIP. Customers will be able to enroll up to 320 acres in WCIP. Applications will be ranked, if necessary, to select those which will provide the greatest benefit to groundwater resources in within TBNRD.

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On the Lakefront

One of the responsibilities of the land administration team is the implementation of the District's permitting program.

During the 2019 season, the team processed and issued more than 250 applications and permits, and conducted nearly 800 project site visits in an effort to assist customers with their construction projects.

As the 2020 permitting season approaches, it is important to know and have marked the lot boundaries, buildable area or SWAF placement zone prior to commencing any permitted activity.

If you have questions about allowable construction or the District's permitting process, please contact the appropriate Land Administrator listed below.

Eagle Viewing Facilities open

Saturday, Dec. 28

and

Sunday, Dec. 29

for the season!

For more information visit www.cnppid.com/eagles

Land Administrator	Project subject matter	Contact Info
Luke Ritz	• Land and Shoreline Management Plan • Permit rules and regulations • Certified Contractor Program • Lease questions	Office: (308) 537-3582 Cell: (308) 529-0009 lritz@cnppid.com
Dustin Ehlers	• Shoreline & Water Access Facility Permit POC • Erosion Control Permit POC • Pre-Construction / On Site Meetings	Office: (308) 537-3582 Cell: (308) 991-9778 dehlers@cnppid.com
DeAnna Bartruff	• Dwelling and related construction • Dredge, Excavate, Fill Permits Concession Leases • Residential Lease Questions & Transfers • Pre-Construction / On Site Meetings	Office: (308) 995-3563 Cell: (308) 991-5565 dbartruff@cnppid.com

Email Address Collection Form

Central has decided to attempt to collect email addresses from interested parties to be used **ONLY** for emergent information distribution, event and meeting information sharing, and any other important notices that Central staff deems worthy. If you would like to be included on this list, please visit https://www.cnppid.com/email-submissions/ or visit our homepage, scroll down and click on the image shown to the right.

The Central Nebraska Public Power
and Irrigation District
P.O. Box 740
Holdrege, NE 68949-0740

Return Service Requested

Bulk Permit
U.S. Postage
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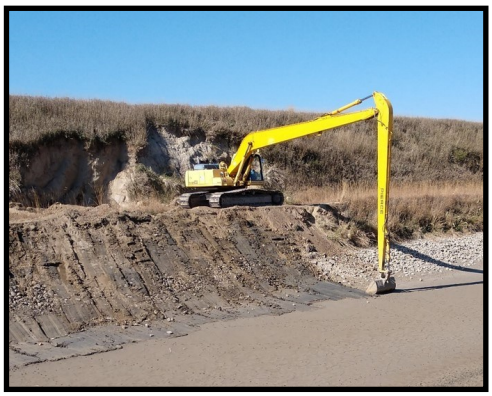
Holdrege, NE

Irrigation repairs and maintenance projects begin

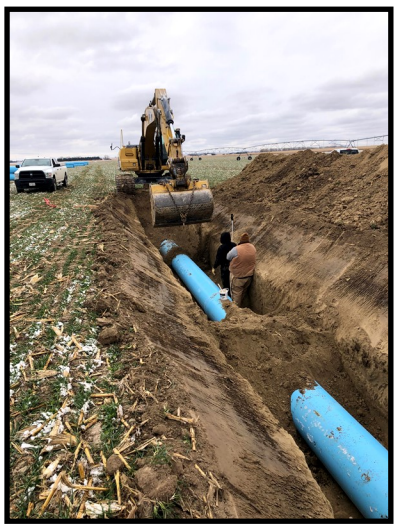


Maintenance and installations are the primary objectives for Central's irrigation and maintenance divisions during October through March. Repairs to banks, turn out structures, pump stations, and other facilities make up much of the work during the winter season.

Pipeline installations and bridge replacements also take place during the fall and winter months, since these jobs can't easily be done when there is water flowing through the system.

***Left**—An equipment operator uses a long-stick excavator to repair a damaged canal bank. The irrigation division will be adding new riprap to many canal banks this winter.*

***Below**—Irrigation employees install a new pipeline north of Holdrege in a field where a farmer opted to replace an open lateral with pipe to allow his pivot to travel more efficiently through the field.*



http://www.cnppid.com

On the Web

A major goal for 2019 has been to improve Central's digital media platforms. If you're looking for the most up-to-date information, please visit (and "like") our Facebook page at:

www.facebook.com/cnppid

to keep tabs on the latest news and updates from the Central District. Central has also begun using Instagram to share photos and videos of current events and scenic views, as well as Twitter and LinkedIn to share quick, newsworthy information and career-related information. Find us @CNPPID on each platform.