

SYNOPSIS

General

This year is the 59th consecutive year that an Annual Operating Plans (AOP) has been prepared for the Federally-owned dams and reservoirs in the Niobrara, Lower Platte, and Kansas River Basins. The plan has been developed by the Water Operations Group in McCook, Nebraska for the 16 dams and reservoirs that are located in Colorado, Nebraska, and Kansas. These reservoirs, together with 9 diversion dams, 9 pumping plants, and 20 canal systems, serve approximately 269,744 acres of project lands in Nebraska and Kansas. In addition to irrigation and municipal water, these features serve flood control, recreation, and fish and wildlife purposes. A map at the end of this report shows the location of these features.

The reservoirs in the Niobrara and Lower Platte River Basins are operated by either irrigation or Reclamation districts. The reservoirs in the Kansas River Basin are operated by either the Bureau of Reclamation (Reclamation), or the Corps of Engineers. Kirwin Irrigation District provides operational and maintenance assistance for Kirwin Dam. The diversion dams, pumping plants, and canal systems are operated by either irrigation or Reclamation districts.

A Supervisory Control and Data Acquisition System (SCADA) located at McCook is used to assist in operational management of all 11 dams under Reclamation's jurisdiction that are located in the Kansas River Basin. A Hydromet system collects and stores near real-time data at selected stations in the Nebraska-Kansas Projects. The data includes water levels in streams, canals, and reservoirs and also gate openings. This data is transmitted to a satellite and downloaded to a Reclamation receiver in Boise, Idaho. The data can then be accessed by anyone interested in monitoring water levels or water usage in an irrigation system. The Nebraska-Kansas Projects currently have 65 Hydromet stations that can be accessed. The McCook Field Office has installed and maintains 40 of these Hydromet stations. These stations can be found on the Internet by accessing Reclamation's home page at <http://www.usbr.gov/gp>. From the home page, select "Hydromet Data Center" under the Water Operations heading.

The Headlines 2011 that follows this synopsis is indicative of the awareness that the local people have of the natural resource development and conservation in the Niobrara, Lower Platte, and Kansas River Basins.

2011 Summary

Climatic Conditions

Precipitation at the project dams during 2011 ranged from 71 percent of normal at Cedar Bluff Dam to 137 percent of normal at Merritt Dam. Temperatures during the first 3 months of the year were generally above normal throughout the projects area. Precipitation totals varied from 52 percent to 161 percent during January through March. January and February precipitation was near normal with the exception of northern Nebraska where above normal precipitation was recorded. March precipitation was well below normal in most of the project areas.

Temperatures were near normal during the spring and precipitation during April and May was generally above normal throughout the basin.

Temperatures were above normal during the summer with well above normal temperatures recorded in July. Total precipitation for June and July varied considerably across the projects with June precipitation averaging slightly below normal and July slightly above normal. August precipitation was generally above normal project wide.

Precipitation during the fall and early winter varied from month to month. Precipitation recorded in September and November was well below normal throughout the project areas with none of the dams recording above normal precipitation in either month. Precipitation during October and December was generally above normal. Temperatures in September were slightly below normal while temperatures during October and November were generally above normal throughout the project areas. December temperatures began the month well below normal and ended the month well above normal.

Storage Reservoirs

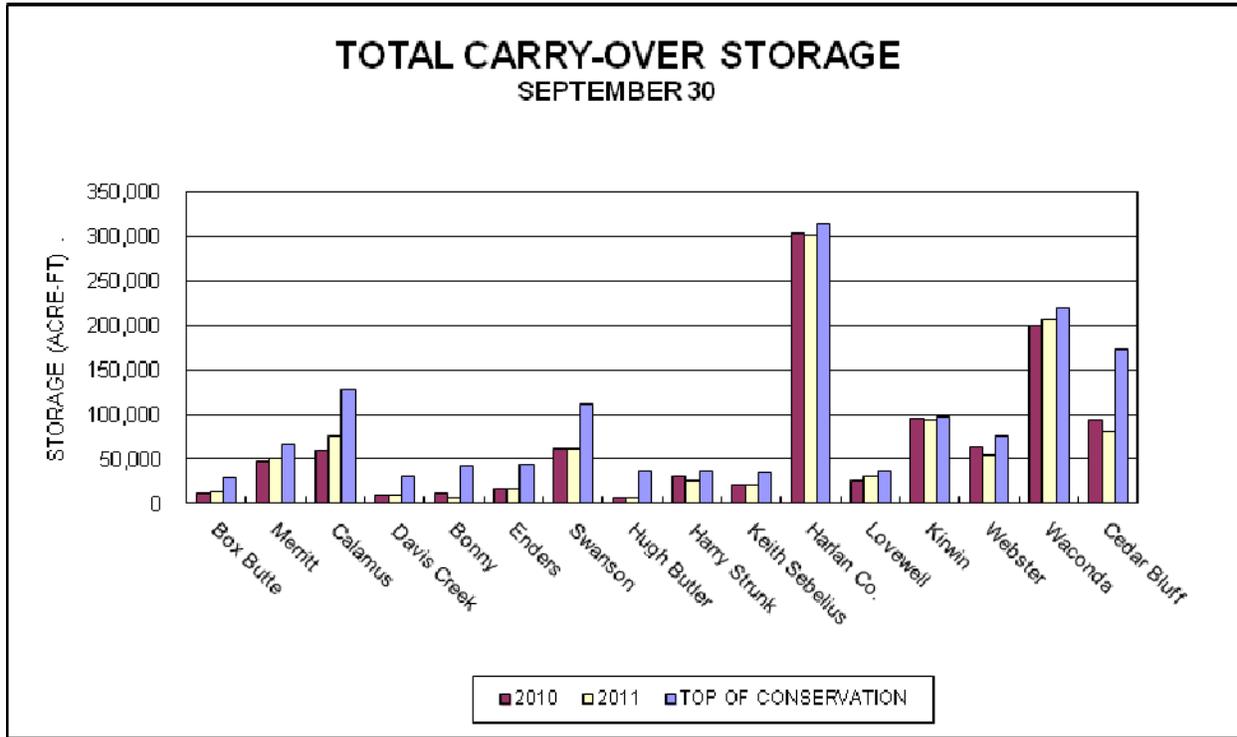
1. Conservation Operations: The 2011 inflow was above the dry-year forecast at all 16 of the reservoirs. Bonny, Enders, Webster, and Cedar Bluff Reservoirs along with Swanson Lake had inflows between the dry-year and normal-year forecasts. Box Butte, Merritt, Davis Creek, and Kirwin Reservoirs along with Hugh Butler, Harry Strunk, Keith Sebelius, Waconda, and Harlan County Lakes had inflows between the normal-year and wet-year forecasts. Calamus and Lovewell Reservoirs had inflows above the wet-year forecast.

Ten of the sixteen reservoirs had below average carryover storage from the 2010 water year. Reservoir releases were made from Merritt, Virginia Smith, Medicine Creek, Harlan County, Kirwin, and Glen Elder Dams to maintain or reduce reservoir levels prior to the 2011 irrigation season. Just prior to the irrigation season, Enders and Box Butte Reservoirs, along with Keith Sebelius, Swanson, and Hugh Butler Lakes, did not have sufficient storage to provide water users with a full water supply. Harry Strunk, Harlan County, and Waconda Lakes and Lovewell, and Kirwin Reservoirs had some flood storage occupied prior to the irrigation season. Irrigation demands only minimally reduced storage in these project reservoirs as early summer inflows maintained the reservoir pools. Reservoir storage was below normal at nine reservoirs at the end of 2011.

On September 20, 2011, the State of Colorado ordered that Bonny Reservoir be drained for Republican River Compact Compliance. The conservation pool was essentially empty by the end of December. The order currently remains in effect and inflows continue to be bypassed.

Hugh Butler Lake continues to be maintained near the dead pool level due to the embankment cracking discovered in 2009. Safety of dam work began at this facility in 2011 and is expected to continue through the fall of 2013.

The following graph shows a comparison of 2010 and 2011 carry-over storage conditions as compared to the top of conservation storage for all reservoirs in the Niobrara, Lower Platte, and Kansas River Basins as of September 30.



2. Flood Control Operations: Harry Strunk, Harlan County, and Waconda Lakes, and Lovewell, and Kirwin Reservoirs utilized flood pool storage and made flood releases in 2011. The water year 2011 flood damages prevented by the operation of Reclamation’s Nebraska-Kansas Projects facilities was \$40,254,000 as determined by the Corps of Engineers. An additional benefit of \$10,447,200 was credited to Harlan County Lake. The accumulative total of flood control benefits for the years 1951 through 2011 by facilities in this report total \$2,066,406,100 (see Table 5). Box Butte, Merritt, Calamus, and Davis Creek Reservoirs do not have a designated flood pool and have not accrued any flood benefits to date.

A summary of precipitation, reservoir storage and inflows at the facilities of the Nebraska-Kansas Projects during 2011 can be found in Table 7.

Water Service

There was 343,094 acre-feet (AF) of water diverted to irrigate approximately 206,822 acres of project lands in the 12 irrigation districts (see Tables 3 and 6). The project water supply was either inadequate or limited for 84,302 acres of the total project lands. This includes lands in Mirage Flats, Frenchman Valley, H&RW, Frenchman-Cambridge, and Almena Irrigation Districts. The project water supplies for the other units mentioned in this report were more than adequate in 2011.

The water requirements of three municipalities, one rural water district, and two fish hatchery facilities were furnished from storage releases or natural flows.

Irrigation Production

The 2011 crop yields on lands receiving project water in the Nebraska-Kansas Projects were slightly higher than 2010. The average corn yield, the principal crop of all reporting districts, was 170 bushels per acre. This was approximately 7 bushels per acre more than in 2010. The start of irrigation releases from project reservoirs varied considerably but was generally near normal. Above normal rainfall was experienced during much of the growing season with a few exceptions. Temperatures averaged above normal during the season. Crop maturity progressed near normal during the growing season. Most irrigation districts had finished with irrigation releases by early September and all irrigation districts had finished delivering water by the end of September. Corn harvest generally commenced in late October and concluded in November. Only two canals did not divert water in 2011 as a result of short water supplies.

Fish and Wildlife and Recreation Benefits

The National Recreational Fisheries Policy declares that the Government's vested stewardship responsibilities must work in concert with the state managing agency's recreational fisheries constituency and the general public to conserve, restore, and enhance recreational fisheries and their habitats. The Nebraska-Kansas Area Office is available for meetings if requested with Nebraska, Colorado, and Kansas state management agencies to discuss the Annual Operating Plans (AOP). Information is solicited from the agencies to enhance fisheries resources within the flexibility allowed while still meeting contractual obligations with the various irrigation districts.

During the 2011 season, normal reservoir operations were favorable for recreation and fish and wildlife uses at those project reservoirs with full or nearly full conservation pool levels. Higher water levels experienced at Lovewell Reservoir and Waconda Lake due to spring flood events negatively affected both recreation benefits and late summer shoreline revegetation. Increased water levels submerged existing shoreline vegetation early in the year. Low water levels experienced at Bonny Reservoir and Hugh Butler Lake also diminished recreation benefits.

Meeker-Driftwood, Red Willow, and Cambridge Units, Frenchman-Cambridge Division in Nebraska

General

Service is provided for Frenchman-Cambridge Irrigation District by Meeker-Driftwood Canal to 16,855 acres; Red Willow Canal to 4,797 acres; Bartley Canal to 6,353 acres; and Cambridge Canal to 17,664 acres. The water supply for these lands is provided by storage in Swanson, Hugh Butler, and Harry Strunk Lakes, and inflows of the Republican River and Red Willow and Medicine Creeks. The Frenchman-Cambridge Irrigation District has replaced all of the open ditch laterals which were economically feasible with buried pipe which has significantly increased both system and on-farm efficiencies.

2011 Summary

The annual precipitation total of 19.99 inches at Trenton Dam was 100 percent of normal. The inflow of 33,791 AF to Swanson Lake was slightly less than the normal-year forecast. The lake level began the year at elevation 2740.15 feet and gradually increased to a peak elevation of 2745.40 feet (6.60 feet below the top of conservation) on June 21. The reservoir level decreased throughout the irrigation season and reached an elevation of 2740.17 feet on September 3. The district diverted 21,538 AF from June 20 through September 2 and delivered 7,998 AF to the farms. At the end of the year the reservoir level was 11.84 feet below the top of conservation at 2740.16 feet. The Corps of Engineers determined that Swanson Lake prevented \$59,300 in flood damages.

During a 2007 dam inspection it was noted that bedding material along the upstream riprap slope protection was exposed in several areas at Trenton Dam. A repair contract was awarded in 2011 for the placement of additional riprap in those areas identified. Construction was completed in October. The bridge at Trenton Dam was also repaired in 2011. The construction contract included repair of the bridge bearing supports, deck joints, exposed rebar, and other miscellaneous items.

The annual precipitation total of 21.58 inches at Red Willow Dam was 110 percent of normal. The annual inflow of 17,863 AF into Hugh Butler Lake was between the normal-year and the wet-year forecasts. The reservoir level at the first of the year was 2553.52 feet, 28.28 feet below the top of conservation. Due to dam safety concerns, releases were made throughout the year to maintain the reservoir elevation between 2552.00 and 2554.00 feet. May precipitation totaled 6.61 inches, the second greatest May total recorded at the site. Runoff from the late May storms increased the reservoir level to a peak of 2556.68 feet on May 29. River releases were increased to reduce the pool level to elevation 2554.00 feet. Releases varied from 24 cfs up to 125 cfs during the summer months in maintaining the desired reservoir level. No irrigation releases were made from Hugh Butler Lake in 2011. The end of year storage at Hugh Butler Lake was the lowest end of December storage ever recorded at the site (elevation 2553.45 feet), 28.35 feet below the top of conservation. The Corps of Engineers determined that Hugh Butler Lake prevented \$3,362,100 of flood damages during 2011.

During an inspection at Red Willow Dam in July 2005, a small quantity of fine sand was discovered near the river outlet works stilling basin drain outlet. Five piezometers were installed in April 2006 adjacent to the outlet works and spillway stilling basins, and temporary plugs were placed in the underdrain outlets in May. An Internal Alert was issued and grouting of the underdrain system was completed in the fall of 2010. On October 21, 2009, a small hole was observed on the face of the downstream embankment in a location 130 feet upstream of the outlet works gatehouse on the alignment of the outlet works conduit. Dye was introduced into the hole and subsequent excavation revealed cracks in the embankment material. Reclamation geotechnical engineers and geologists were onsite to conduct the investigations in coordination with the NKAO staff. A Response Level I was declared and remains in effect. A Dam Safety decision document was signed calling for a reduction of the reservoir water surface elevation to a range within 2552 to 2554 feet msl.

A Corrective Action Study (CAS) began in March 2010 to identify structural alternatives for repairing the dam, estimate risk for potential failure modes, and to document the technical cost, and constructability of the various alternatives. The December 2010 CAS Decision Document identified the preferred alternative consisting of a full-height full-length filter/drain and construction of a berm/buttress to protect the filter and drains. The Modification Report, Finding of No Significant Impact, and Environmental Assessment were transmitted to Congress in July 2011. Final designs and contract documents were prepared during the summer of 2011. In September 2011 a contract was awarded for the dam modification and construction began in late 2011. Releases will continue as necessary to maintain the reservoir level within the operating level of 2552.00 to 2554.00 feet until permanent corrective actions are completed.

The annual precipitation total of 23.06 inches at Medicine Creek Dam was 111 percent of normal. The inflow of 44,135 AF was between the normal-year and wet-year forecasts. The reservoir level at the beginning of 2011 was only .4 foot below the top of conservation. Releases were made during the first 3 months of 2011 to maintain the reservoir elevation approximately .5 foot below the flood pool. The reservoir was allowed to fill on April 17 (elevation 2366.10 feet) and the reservoir level gradually increased to elevation 2367.00 feet on May 3. Medicine Creek Dam recorded 6.99 inches of precipitation during May, 217 percent of average. Runoff from the late May storms increased the pool level to a peak elevation of 2368.38 feet on May 30. Uncontrolled spills along with minimal irrigation releases slowly decreased the pool level through mid July. Irrigation releases began in earnest on July 17 and ran through September 9 reducing the reservoir level to 2359.21 feet. The district diverted 28,850 AF into Cambridge Canal and delivered 10,801 AF to 16,071 acres of district lands. Late fall and early winter inflows increased the level of Harry Strunk Lake to only 0.9 foot below the top of conservation at the end of the year (2365.24 feet). The Corps of Engineers determined that Harry Strunk Lake prevented \$3,473,900 in flood damages.

The SOP for Medicine Creek Dam was revised in 2011.

The district was selected for a 2011 WaterSMART Water and Energy Efficiency Grant (WEEG) for a project which consists of installing a pumping plant on Cambridge Diversion Dam and 2 miles of 30-inch diameter pipe to the Bartley Canal.

The pumping plant will include installation of four 2,500 gallon per minute pumps. This project will allow alternative water management options for the water supply in Bartley Canal. The project is expected to result in water savings of 4,660 acre-feet per year. Water conserved as a result of the project will be left in Swanson Lake. Reclamation is providing \$630,000 of financial and technical assistance for the estimated \$1.26 million project.

Almena Unit, Kanaska Division in Kansas

General

Service is available to 5,764 acres in the Almena Irrigation District. The project water supply is provided by Prairie Dog Creek flows and Keith Sebelius Lake storage.

The water service contract for the city of Norton, Kansas, provides for a maximum annual use of 1,600 AF from Keith Sebelius Lake.

In July of 2007, the Kansas Department of Wildlife and Parks and the Almena Irrigation District entered into a Memorandum of Agreement (MOA) to maintain a minimum pool elevation in the reservoir for 10 years. The MOA was approved by the irrigators within the district and provided that no water would be released for irrigation below elevation 2288.5 feet.

2011 Summary

The annual precipitation at Norton Dam totaled 34.36 inches, which is 140 percent of normal and the fourth greatest recorded at the site. The total inflow of 11,995 AF was between the normal-year and wet-year forecasts. The reservoir was 7.5 feet below the top of conservation pool at the first of the year (2296.81 feet). The reservoir level slowly increased to elevation 2298.18 feet on May 30.

Irrigation releases were made during July reducing the lake level by nearly 2 feet. Norton Dam received 10.42 inches of precipitation during August, the greatest ever recorded for the month. No irrigation releases were made in August and the lake level increased to 2297.02 feet by the end of August. Norton Dam recorded 7.26 inches of rainfall in October, the second greatest on record for the month. Runoff from the storms increased the lake level again and Keith Sebelius Lake ended the year at elevation 2298.43 feet (5.9 feet below the top of conservation). The Corps of Engineers determined that Keith Sebelius Lake prevented \$55,400 in flood damages.

The Almena Irrigation District reports that approximately 1,500 acres received 722 AF of water in 2011. There were 2,277 AF of water diverted into the Almena Canal. Farm delivery averaged about .48 foot per irrigated acre with a farm delivery efficiency of 32 percent in the district. The city of Norton used 339 AF of municipal water during 2011. A Periodic Facility Review was held at Norton Dam in May 2011.

Franklin, Superior-Courtland, and Courtland Units, Bostwick Division in Nebraska and Kansas

General

Harlan County Lake storage and Republican River flows provide a project water supply for 22,454 acres in the Bostwick Irrigation District in Nebraska, and 13,378 acres in the Kansas-Bostwick Irrigation District No. 2 above Lovewell Reservoir. This storage and natural flows, together with White Rock Creek flows and Lovewell Reservoir storage, furnish a water supply for 29,122 acres below Lovewell Reservoir in the Kansas-Bostwick Irrigation District.

The lands in the Franklin and Superior-Courtland Units are in the Bostwick Irrigation District in Nebraska. The lands in the Courtland Unit downstream of the Kansas state line are in the Kansas-Bostwick Irrigation District.

In accordance with the off-season flow alternative outlined in Reclamation's final environmental assessment dated December 16, 1983, and amended on November 21, 2002, Harlan County Lake releases will be 10 cfs during the months of December, January, and February, except when the reservoir is at low levels. During water-short years releases for these 3 months will be either zero or 5 cfs depending on reservoir levels.

Natural gain in streamflow, plus irrigation return flows, and operational bypass at Superior-Courtland Diversion Dam will provide some flow downstream.

The Kansas Department of Wildlife and Parks have requested that the Kansas Bostwick Irrigation District and Reclamation maintain, when possible, a flow of 20 cfs into Lovewell Reservoir when the Courtland Canal is in operation and the conservation pool is below capacity. This recommended inflow provides excellent fishing around the canal inlet to the reservoir. The seepage below Lovewell Dam into White Rock Creek maintains a small live stream throughout the year.

Harlan County Dam is currently operating under an Interim Operating Plan (IOP) initiated in 2003. The IOP resulted from a "Dam Safety Assurance Study" that evaluated the adequacy of the dam as required by Corps of Engineers dam safety regulations. There were three primary findings from this study: 1) Tainter gate bearings may experience significant bearing friction when operated under increasing water load; 2) concerns of spillway stability due to water pressure in the foundation of the dam; 3) spillway was found to be hydrologically deficient when modern hydrologic criteria were applied to the dam. The IOP has resulted in a decrease of flood protection capability.

The "Lovewell Reservoir Regulation Manual" was revised in 2010 to allow for a 2 foot raise in the conservation pool for water storage during drought years. Storing additional water during drought periods increases the project's irrigation beneficial purpose, without adversely affecting the ability to protect for the project design storm. A calculation of available water supply will be made at the end of March to determine if additional water can be stored in Lovewell Reservoir.

Bostwick Division - Harlan County Lake Operations

2011 Summary

The annual precipitation at Harlan County Dam totaled 30.69 inches of rainfall, which is 135 percent of normal. The 2011 inflow of 174,830 AF was between the normal-year and wet-year forecasts. Harlan County Lake began 2011 approximately 0.32 foot above the top of conservation pool, at 1946.05 feet. River releases varied from 50 cfs to 350 cfs during the first 3 months of the year and the lake level gradually filled to elevation 1947.40 feet by March 21. Additional water was temporarily stored into the flood pool so releases could be made to flush the downstream channel. The Corps of Engineers has cooperated with the state of Nebraska and the Twin Valleys Weed Management Group in making an elevated March release since 2009. These releases keep the Republican River channel from developing areas of vegetation and help re-establish channel capacity.

River releases were staged up from 300 to 1,000 cfs on March 21 and staged back down to 500 cfs on March 25. The release was decreased to 275 cfs on April 1 and to 200 cfs on April 28. The lake level was maintained near elevation 1946.5 feet through mid May. Precipitation during May totaled 6.73 inches at the dam, the fourth greatest recorded for the month. Runoff from the late May storms increased the reservoir level to an elevation of 1947.30 feet on May 31. River releases were staged up to 500 cfs during early June to maintain this elevation. Irrigation releases began on June 14 and continued through September 9. Harlan County Dam recorded 7.93 inches of precipitation during August, the greatest ever recorded for the month at the dam. Late summer rainfall significantly reduced irrigation demands. The lake level gradually decreased to elevation 1944.70 feet on October 6 and then increased through the fall and early winter. The reservoir elevation was 1946.39 feet (0.66 foot in the flood pool) on December 31, 2011. Harlan County Lake prevented \$10,447,200 of downstream flood damages during 2011 according to the Corps of Engineers. A total of 10,316 AF (approximately 12 percent of total inflow) was delivered to Lovewell Reservoir via Courtland Canal during the irrigation season.

Bostwick Division - Nebraska

2011 Summary

Irrigation diversions were made into Franklin, Naponee, Franklin Pump, Superior, and Courtland Canals in Nebraska in 2011. The district diverted 28,262 AF of water and delivered 9,108 AF to the farm headgates (32 percent delivery efficiency).

In 2011, the Bostwick Irrigation District in Nebraska was awarded a WaterSMART WEEG for a project which will replace approximately 8.3 miles of open ditch laterals with buried pipe. Franklin Laterals 30.9 and 41.9 will be replaced with buried pipe, resulting in an estimated water savings of 1,660 AF/year. Reclamation is providing \$250,000 of financial assistance and the district is providing nearly \$400,000 of funds and in-kind services. These pipe projects provide delivery system improvements by eliminating seepage losses, eliminating operational wasteways, improving water measurement and accounting by utilizing water meters, and providing on-farm benefits by allowing land owners the opportunity to convert to sprinkler irrigation.

Bostwick Division - Kansas

2011 Summary

The 2011 precipitation at Lovewell Dam totaled 27.87 inches, which was 101 percent of normal. May precipitation (8.34 inches) was the second greatest ever recorded for the month and the corresponding inflow was the greatest recorded for the month. The total inflow recorded at Lovewell Reservoir of 83,167 AF was above the wet-year forecast. The reservoir elevation at the beginning of 2011 was 1579.47 feet. The pool level gradually increased to elevation 1582.12 feet on May 18 (.5 foot below top of conservation). Spring diversions via Courtland Canal into Lovewell Reservoir were not required in 2011.

Three separate storm systems moved through North Central Kansas from May 18 through June 2. Each system resulted in 2 to 4 inches of rainfall with some localized areas receiving 5 to 6 inches. Runoff from the first storm system increased the level of Lovewell Reservoir to 4.5 feet into the flood pool with 30 percent of the flood pool occupied. The peak average daily inflow was approximately 3,300 cfs. A 500 cfs flood release was started on May 23 to decrease the level of the reservoir. A second storm system moved across the drainage basin overnight on May 24. Runoff from this storm increased the level of Lovewell Reservoir an additional 3 feet peaking at elevation 1590.12 feet on May 27 (7.5 feet into the flood pool with 53 percent of flood storage occupied). The peak average daily inflow from this storm was approximately 3,500 cfs. Flood releases were staged up to 1,250 cfs on May 26. A Response Level 1 was issued on May 26 due to the amount of flood storage occupied and 24-hour attendance was required at the dam while the pool level exceeded 1589.8 feet. The flood release decreased the pool level to 1587.11 feet by June 2 and the Response Level 1 was reduced to Internal Alert status. A third storm system overnight on June 2 resulted in the pool level increasing to 1588.26 feet by June 4. The peak average daily inflow from this storm was approximately 3,000 cfs. Flood releases continued at 1,250 cfs through June 6 dropping the pool level to elevation 1586.67 feet (4.1 feet into the flood pool). The flood release was staged off by June 8 as ordered by the Corps of Engineers to mitigate downstream flooding conditions on the Missouri River. Irrigation releases to the canal began on June 7 and continued through September 15. The reservoir level dropped from the flood pool on August 25 and ended the irrigation season at elevation 1580.86 feet. The pool level at the end of the year was 1581.31 feet (1.3 feet below top of conservation). Lovewell Reservoir prevented \$464,200 of downstream flood damages during 2011 according to the Corps of Engineers.

The Kansas-Bostwick Irrigation District diverted a total of 54,072 AF to serve 11,463 acres above Lovewell Dam and 25,784 acres below Lovewell Dam. Farm delivery efficiency averaged 46 percent in the district.

In 2011, the district was awarded a WaterSMART WEEG for a project which will replace approximately 5.5 miles of open ditch laterals with buried pipe. Courtland West Laterals 4.0 and 5.7 will be placed in pipe which will result in an estimated water savings of 2,064 AF/year. Reclamation is providing \$290,000 of funding assistance and the district is providing \$465,000 of financial and in-kind services.

Bostwick Division

TABLE 1
RESERVOIR DATA - NIOBRARA, LOWER PLATTE AND KANSAS RIVER BASINS

| RESERVOIR | | CAPACITY ALLOCATIONS 1/ | | | FLOOD CONTROL |
|-----------------------|-------------|-------------------------|----------|-----------|---------------|
| | | LIVE CONSERVATION | | | |
| | | DEAD | Inactive | Active | |
| Box Butte | - Elevation | 3969.0 | 3979.0 | 4007.0 | --- |
| | Total Acre- | 188 | 2,392 | 29,161 | --- |
| | Net Acre- | 188 | 2,204 | 26,769 | --- |
| Merritt | - Elevation | 2875.0 | 2896.0 | 2946.0 | --- |
| | Total Acre- | 774 | 4,662 | 66,726 | --- |
| | Net Acre- | 774 | 3,888 | 62,064 | --- |
| Calamus | - Elevation | 2185.0 | 2213.3 | 2244.0 | --- |
| | Total Acre- | 817 | 24,646 | 127,400 | --- |
| | Net Acre- | 817 | 23,829 | 102,754 | --- |
| Davis Creek | - Elevation | 1998.5 | 2003.0 | 2076.0 | --- |
| | Total Acre- | 76 | 172 | 31,158 | --- |
| | Net Acre- | 76 | 96 | 30,986 | --- |
| Bonny | - Elevation | 3635.5 | 3638.0 | 3672.0 | 3710.0 |
| | Total Acre- | 0 | 0 | 36,508 | 165,328 |
| | Net Acre- | 0 | 0 | 36,508 | 128,820 |
| Enders | - Elevation | 3080.0 | 3082.4 | 3112.3 | 3127.0 |
| | Total Acre- | 7,516 | 8,948 | 42,910 | 72,958 |
| | Net Acre- | 7,516 | 1,432 | 33,962 | 30,048 |
| Swanson Lake | - Elevation | 2710.0 | 2720.0 | 2752.0 | 2773.0 |
| | Total Acre- | 2,118 | 12,430 | 112,214 | 246,291 |
| | Net Acre- | 2,118 | 10,312 | 99,784 | 134,077 |
| Hugh Butler Lake | - Elevation | 2552.0 | 2558.0 | 2581.8 | 2604.9 |
| | Total Acre- | 5,185 | 8,921 | 36,224 | 85,070 |
| | Net Acre- | 5,185 | 3,736 | 27,303 | 48,846 |
| Harry Strunk Lake | - Elevation | 2335.0 | 2343.0 | 2366.1 | 2386.2 |
| | Total Acre- | 3,408 | 7,897 | 34,647 | 87,361 |
| | Net Acre- | 3,408 | 4,489 | 26,750 | 52,714 |
| Keith Sebelius Lake | - Elevation | 2275.0 | 2280.4 | 2304.3 | 2331.4 |
| | Total Acre- | 1,636 | 3,993 | 34,510 | 133,740 |
| | Net Acre- | 1,636 | 2,357 | 30,517 | 99,230 |
| Harlan County Lake 3/ | - Elevation | 1885.0 | 1927.0 | 1945.73 | 1973.5 |
| | Total Acre- | 0 | 118,099 | 314,111 | 814,111 |
| | Net Acre- | 0 | 118,099 | 196,012 | 500,000 |
| Lovewell | - Elevation | 1562.07 | 1571.7 | 1582.6 | 1595.3 |
| | Total Acre- | 1,674 | 11,644 | 35,666 | 86,131 |
| | Net Acre- | 1,674 | 9,970 | 24,022 | 50,465 |
| Kirwin | - Elevation | 1693.0 | 1697.0 | 1729.25 | 1757.3 |
| | Total Acre- | 4,969 | 8,515 | 98,154 | 313,290 |
| | Net Acre- | 4,969 | 3,546 | 89,639 | 215,136 |
| Webster | - Elevation | 1855.5 | 1860.0 | 1892.45 | 1923.7 |
| | Total Acre- | 1,256 | 4,231 | 76,157 | 259,510 |
| | Net Acre- | 1,256 | 2,975 | 71,926 | 183,353 |
| Waconda Lake | - Elevation | 1407.8 | 1428.0 | 1455.6 | 1488.3 |
| | Total Acre- | 248 | 26,237 | 219,420 | 942,408 |
| | Net Acre- | 248 | 25,989 | 193,183 | 722,988 |
| Cedar Bluff | - Elevation | 2090.0 | 2107.8 | 2144.0 | 2166.0 |
| | Total Acre- | 4,402 | 28,574 | 172,452 | 364,342 |
| | Net Acre- | 4,402 | 24,172 | 143,878 | 191,890 |
| Total Storage | | 34,267 | 271,361 | 1,467,418 | 3,824,985 |
| Total Net Acre-feet | | 34,267 | 237,094 | 1,196,057 | 2,357,567 |

1/ Includes space for sediment storage.

2/ Includes total active storage for Box Butte, Merritt, Calamus, and Davis Creek Reservoirs.

3/ Bottom of irrigation pool for Harlan County Lake is 1932.5 feet, 164,111 AF.

2/

**TABLE 2
SUMMARY OF 2011 OPERATIONS**

FRENCHMAN-CAMBRIDGE DIVISION
FRENCHMAN UNIT

ENDERS RESERVOIR

| Month | Inflow (AF) | Outflow (AF) | Gross Evap. (AF) | Precip. (Inches) | End of Month Content (AF) | CULBERTSON CANAL | | CULBERTSON EXT. CANAL | |
|--------------|----------------|-----------------|------------------------|---------------------|------------------------------------|--------------------------------|-------------------------------|--------------------------------|-------------------------------|
| | | | | | | Diversions To Canal (AF) | Delivered To Farms (AF) | Diversions To Canal (AF) | Delivered To Farms (AF) |
| Jan. | 709 | 307 | 68 | 0.37 | 17,077 | 0 | 0 | 0 | 0 |
| Feb. | 657 | 278 | 79 | 0.40 | 17,377 | 0 | 0 | 0 | 0 |
| Mar. | 745 | 307 | 144 | 0.78 | 17,671 | 0 | 0 | 0 | 0 |
| Apr. | 1,047 | 298 | 280 | 2.36 | 18,140 | 392 | 0 | 0 | 0 |
| May | 1,128 | 307 | 395 | 3.79 | 18,566 | 2,537 | 0 | 0 | 0 |
| June | 1,235 | 298 | 523 | 7.39 | 18,980 | 2,461 | 136 | 0 | 0 |
| July | 226 | 307 | 415 | 1.86 | 18,484 | 2,241 | 394 | 0 | 0 |
| Aug. | 234 | 307 | 472 | 2.30 | 17,939 | 1,755 | 455 | 0 | 0 |
| Sep. | 86 | 298 | 292 | 0.71 | 17,435 | 503 | 111 | 0 | 0 |
| Oct. | 313 | 307 | 249 | 0.96 | 17,192 | 0 | 0 | 0 | 0 |
| Nov. | 495 | 298 | 158 | 0.29 | 17,231 | 0 | 0 | 0 | 0 |
| Dec. | 641 | 307 | 81 | 0.25 | 17,484 | 0 | 0 | 0 | 0 |
| TOTAL | 7,516 | 3,619 | 3,156 | 21.46 | -- | 9,889 | 1,096 | 0 | 0 |

NOTE: Acres irrigated 2011: Culbertson Canal - 1,250 acres; Culbertson Extension Canal - 0 acres.

FRENCHMAN-CAMBRIDGE DIVISION (Continued)
MEEKER-DRIFTWOOD UNIT

SWANSON LAKE

| Month | Inflow (AF) | Outflow (AF) | Gross Evap. (AF) | Precip. (Inches) | End of Month Content (AF) | MEEKER-DRIFTWOOD | |
|--------------|----------------|-----------------|------------------------|---------------------|------------------------------------|-----------------------------|-------------------------------|
| | | | | | | Release To Canal (AF) | Delivered To Farms (AF) |
| Jan. | 2,501 | 61 | 259 | 0.38 | 64,266 | 0 | 0 |
| Feb. | 3,396 | 56 | 299 | 0.59 | 67,307 | 0 | 0 |
| Mar. | 4,545 | 61 | 553 | 0.46 | 71,238 | 0 | 0 |
| Apr. | 5,836 | 60 | 1,079 | 2.48 | 75,935 | 0 | 0 |
| May | 7,078 | 61 | 1,755 | 5.08 | 81,197 | 0 | 0 |
| June | 3,716 | 1,894 | 2,109 | 2.07 | 80,910 | 2,222 | 311 |
| July | 2,562 | 9,622 | 2,265 | 3.18 | 71,585 | 10,422 | 3,879 |
| Aug. | 745 | 7,837 | 1,627 | 3.37 | 62,866 | 8,522 | 3,613 |
| Sep. | 3 | 575 | 1,510 | 0.43 | 60,784 | 372 | 195 |
| Oct. | 27 | 61 | 975 | 1.29 | 59,775 | 0 | 0 |
| Nov. | 884 | 60 | 581 | 0.18 | 60,018 | 0 | 0 |
| Dec. | 2,498 | 61 | 299 | 0.48 | 62,156 | 0 | 0 |
| TOTAL | 33,791 | 20,409 | 13,311 | 19.99 | -- | 21,538 | 7,998 |

NOTE: Acres irrigated 2011: Meeker-Driftwood Canal - 13,016 acres.

FRENCHMAN-CAMBRIDGE DIVISION (Continued)
RED WILLOW UNIT

HUGH BUTLER LAKE

| Month | Inflow (AF) | Outflow (AF) | Gross Evap. (AF) | Precip. (Inches) | End of Month Content (AF) | RED WILLOW CANAL | | BARTLEY CANAL | |
|--------------|----------------|-----------------|------------------------|---------------------|------------------------------------|--------------------------------|-------------------------------|--------------------------------|-------------------------------|
| | | | | | | Diversions To Canal (AF) | Delivered To Farms (AF) | Diversions To Canal (AF) | Delivered To Farms (AF) |
| Jan. | 1,068 | 990 | 38 | 0.34 | 6,074 | 0 | 0 | 0 | 0 |
| Feb. | 1,058 | 1,055 | 44 | 0.37 | 6,033 | 0 | 0 | 0 | 0 |
| Mar. | 1,359 | 1,740 | 79 | 0.42 | 5,573 | 0 | 0 | 0 | 0 |
| Apr. | 1,950 | 1,236 | 190 | 2.27 | 6,097 | 0 | 0 | 0 | 0 |
| May | 2,786 | 633 | 290 | 6.61 | 7,960 | 0 | 0 | 2,258 | 18 |
| June | 1,955 | 2,815 | 349 | 1.78 | 6,751 | 0 | 0 | 2,072 | 201 |
| July | 1,863 | 1,932 | 337 | 3.68 | 6,345 | 0 | 0 | 2,367 | 1,139 |
| Aug. | 1,537 | 1,484 | 324 | 3.74 | 6,074 | 0 | 0 | 2,512 | 1,277 |
| Sep. | 805 | 978 | 199 | 0.36 | 5,702 | 0 | 0 | 509 | 143 |
| Oct. | 1,085 | 837 | 186 | 1.21 | 5,764 | 0 | 0 | 0 | 0 |
| Nov. | 1,093 | 555 | 93 | 0.33 | 6,209 | 0 | 0 | 0 | 0 |
| Dec. | 1,304 | 1,476 | 44 | 0.47 | 5,993 | 0 | 0 | 0 | 0 |
| TOTAL | 17,863 | 15,731 | 2,173 | 21.58 | -- | 0 | 0 | 9,718 | 2,778 |

NOTE -- Acres irrigated 2011: Red Willow Canal - 0 acres; Bartley Canal 4,655 acres.

FRENCHMAN-CAMBRIDGE DIVISION (Continued)
CAMBRIDGE UNIT

HARRY STRUNK LAKE

| Month | Inflow (AF) | Outflow (AF) | Gross Evap. (AF) | Precip. (Inches) | End of Month Content (AF) | CAMBRIDGE CANAL | |
|--------------|----------------|-----------------|------------------------|---------------------|------------------------------------|--------------------------------|-------------------------------|
| | | | | | | Diversions To Canal (AF) | Delivered To Farms (AF) |
| Jan. | 3,008 | 2,710 | 117 | 0.34 | 34,117 | 0 | 0 |
| Feb. | 2,806 | 3,253 | 129 | 0.42 | 33,541 | 0 | 0 |
| Mar. | 3,398 | 3,461 | 239 | 0.47 | 33,239 | 0 | 0 |
| Apr. | 4,113 | 607 | 602 | 2.49 | 36,143 | 0 | 0 |
| May | 6,612 | 2,924 | 850 | 6.99 | 38,981 | 4,297 | 119 |
| June | 4,941 | 4,836 | 1,141 | 2.05 | 37,945 | 5,545 | 1,027 |
| July | 4,402 | 8,176 | 1,090 | 3.14 | 33,081 | 8,701 | 4,417 |
| Aug. | 3,663 | 11,016 | 843 | 3.61 | 24,885 | 9,077 | 4,997 |
| Sep. | 2,403 | 1,543 | 466 | 0.46 | 25,279 | 1,230 | 241 |
| Oct. | 2,910 | 62 | 423 | 2.18 | 27,704 | 0 | 0 |
| Nov. | 2,759 | 60 | 240 | 0.27 | 30,163 | 0 | 0 |
| Dec. | 3,120 | 62 | 123 | 0.64 | 33,098 | 0 | 0 |
| TOTAL | 44,135 | 38,710 | 6,263 | 23.06 | -- | 28,850 | 10,801 |

NOTE -- Acres irrigated 2011: Cambridge Canal 16,071 acres.

**TABLE 2
SUMMARY OF 2011 OPERATIONS**

KANASKA DIVISION
ALMENA UNIT
KEITH SEBELIUS LAKE

| Month | Inflow (AF) | Outflow (AF) | Gross | | End of Month Content (AF) | Release To City Of Norton (AF) | ALMENA CANAL | |
|--------------|----------------|-----------------|---------------|---------------------|------------------------------------|---|--------------------------------|-------------------------------|
| | | | Evap. (AF) | Precip. (Inches) | | | Diversions To Canal (AF) | Delivered To Farms (AF) |
| Jan. | 547 | 50 | 105 | 0.51 | 20,992 | 20 | 0 | 0 |
| Feb. | 647 | 47 | 124 | 0.87 | 21,468 | 20 | 0 | 0 |
| Mar. | 648 | 51 | 228 | 0.43 | 21,837 | 20 | 0 | 0 |
| Apr. | 797 | 51 | 552 | 1.86 | 22,031 | 21 | 0 | 0 |
| May | 1,639 | 62 | 806 | 5.01 | 22,802 | 32 | 399 | 0 |
| June | 442 | 72 | 1,027 | 1.59 | 22,145 | 43 | 85 | 0 |
| July | 1,127 | 2,437 | 1,158 | 5.18 | 19,677 | 46 | 1,628 | 638 |
| Aug. | 2,203 | 67 | 884 | 10.42 | 20,929 | 36 | 165 | 84 |
| Sep. | 5 | 65 | 564 | 0.28 | 20,305 | 36 | 0 | 0 |
| Oct. | 2,837 | 58 | 463 | 7.26 | 22,621 | 27 | 0 | 0 |
| Nov. | 451 | 49 | 270 | 0.45 | 22,753 | 19 | 0 | 0 |
| Dec. | 652 | 50 | 137 | 0.50 | 23,218 | 19 | 0 | 0 |
| TOTAL | 11,995 | 3,059 | 6,318 | 34.36 | -- | 339 | 2,277 | 722 |

NOTE: Acres irrigated 2011: Almena Canal - 1,500 acres.

BOSTWICK DIVISION
FRANKLIN UNIT
HARLAN COUNTY LAKE

| Month | Data from Corps of Engineers | | | | End of Month Content (AF) | FRANKLIN CANAL | | NAPONEE CANAL | |
|--------------|------------------------------|-----------------|------------------------|---------------------|------------------------------------|-----------------------------|-------------------------------|-----------------------------|-------------------------------|
| | Inflow (AF) | Outflow (AF) | Gross Evap. (AF) | Precip. (Inches) | | Release To Canal (AF) | Delivered To Farms (AF) | Release To Canal (AF) | Delivered To Farms (AF) |
| Jan. | 12,180 | 1,773 | 801 | 0.74 | 327,970 | 0 | 0 | 0 | 0 |
| Feb. | 15,045 | 12,839 | 447 | 0.38 | 329,729 | 0 | 0 | 0 | 0 |
| Mar. | 18,208 | 18,587 | 1,515 | 0.49 | 327,835 | 0 | 0 | 0 | 0 |
| Apr. | 17,629 | 16,652 | 3,413 | 3.27 | 325,399 | 0 | 0 | 0 | 0 |
| May | 22,175 | 8,384 | 3,825 | 6.73 | 335,365 | 0 | 0 | 0 | 0 |
| June | 18,069 | 11,439 | 5,801 | 2.72 | 336,194 | 1,902 | 156 | 39 | 13 |
| July | 15,283 | 27,097 | 9,473 | 3.54 | 314,907 | 10,061 | 3,139 | 661 | 417 |
| Aug. | 14,549 | 16,336 | 7,216 | 7.93 | 305,904 | 5,986 | 2,236 | 482 | 275 |
| Sep. | 4,988 | 1,535 | 6,969 | 0.50 | 302,388 | 904 | 170 | 0 | 0 |
| Oct. | 22,007 | 0 | 4,814 | 3.42 | 319,581 | 0 | 0 | 0 | 0 |
| Nov. | 8,132 | 1,890 | 3,130 | 0.39 | 322,693 | 0 | 0 | 0 | 0 |
| Dec. | 6,565 | 4,457 | 1,837 | 0.58 | 322,964 | 0 | 0 | 0 | 0 |
| TOTAL | 174,830 | 120,989 | 49,241 | 30.69 | -- | 18,853 | 5,701 | 1,182 | 705 |

NOTE: Acres irrigated 2011: Franklin Canal - 7,357 acres; Naponee Canal - 660 acres.

BOSTWICK DIVISION (Continued)
SUPERIOR-COURTLAND UNIT
COURTLAND CANAL - ABOVE LOVEWELL

| Month | FRANKLIN PUMP CANAL | | SUPERIOR CANAL | | Total Diversions (AF) | NEBRASKA USE | | KANSAS USE | |
|--------------|------------------------------|-------------------------------|------------------------------|-------------------------------|-----------------------------|---------------|-------------------------------|-------------------------------|-------------------------------|
| | Diverted To Canal (AF) | Delivered To Farms (AF) | Diverted To Canal (AF) | Delivered To Farms (AF) | | Total (AF) | Delivered To Farms (AF) | Diversion To Canal (AF) | Delivered To Farms (AF) |
| Jan. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Feb. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mar. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Apr. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| May | 0 | 0 | 29 | 0 | 4,698 | 0 | 0 | 0 | 0 |
| June | 63 | 36 | 1,571 | 152 | 5,989 | 10 | 8 | 4,106 | 509 |
| July | 531 | 212 | 3,609 | 1,315 | 12,784 | 274 | 159 | 7,996 | 4,134 |
| Aug. | 135 | 68 | 1,770 | 696 | 9,000 | 144 | 50 | 4,308 | 1,631 |
| Sep. | 0 | 0 | 91 | 6 | 3,436 | 0 | 0 | 1,479 | 537 |
| Oct. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Nov. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dec. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 729 | 316 | 7,070 | 2,169 | 35,907 | 428 | 217 | 17,889 | 6,811 |

NOTE: Acres irrigated 2011: Franklin Pump Canal - 679 acres; Superior Canal - 5,595 acres.
Courtland Canal-Nebraska use - 1,097 acres.
Courtland Canal-Kansas use - 11,463 acres.

BOSTWICK DIVISION (Continued)
COURTLAND UNIT
LOVEWELL RESERVOIR

| Month | Est. Flow from White Rock Creek (AF) | Inflow from Courtland 34.8 (AF) | Total Inflow (AF) | Outflow (AF) | Gross Evap. (AF) | Precip. (Inches) | End of Month Content (AF) | COURTLAND (Below) | |
|--------------|---|--|-------------------------|-----------------|------------------------|---------------------|------------------------------------|-----------------------------|-------------------------------|
| | | | | | | | | Release To Canal (AF) | Delivered To Farms (AF) |
| Jan. | 1,252 | 0 | 1,252 | 12 | 143 | 0.64 | 28,151 | 0 | 0 |
| Feb. | 1,927 | 0 | 1,927 | 11 | 181 | 0.77 | 29,886 | 0 | 0 |
| Mar. | 1,584 | 0 | 1,584 | 12 | 350 | 0.68 | 31,108 | 0 | 0 |
| Apr. | 2,450 | 0 | 2,450 | 12 | 905 | 1.57 | 32,641 | 0 | 0 |
| May | 38,070 | 1,974 | 40,044 | 16,272 | 1,530 | 8.34 | 54,883 | 349 | 0 |
| June | 17,560 | 876 | 18,436 | 22,106 | 1,847 | 3.83 | 49,366 | 6,015 | 1,356 |
| July | 3,891 | 2,879 | 6,770 | 16,289 | 1,587 | 3.68 | 38,260 | 15,860 | 10,081 |
| Aug. | 3,091 | 2,826 | 5,917 | 9,244 | 974 | 5.34 | 33,959 | 9,387 | 4,418 |
| Sep. | 432 | 1,761 | 2,193 | 4,798 | 684 | 0.44 | 30,670 | 4,572 | 2,189 |
| Oct. | 141 | 0 | 141 | 12 | 671 | 0.48 | 30,128 | 0 | 0 |
| Nov. | 1,047 | 0 | 1,047 | 12 | 411 | 1.00 | 30,752 | 0 | 0 |
| Dec. | 1,406 | 0 | 1,406 | 12 | 208 | 1.10 | 31,938 | 0 | 0 |
| TOTAL | 72,851 | 10,316 | 83,167 | 68,792 | 9,491 | 27.87 | -- | 36,183 | 18,044 |

NOTE: Acres irrigated 2011: Courtland Canal below Lovewell 25,784 acres.

TABLE 3
ACRES IRRIGATED IN 2011

| Irrigation District and Canal | Acres With Service Available | Acres Irrigated in 2011 |
|---|------------------------------------|-------------------------------|
| Mirage Flats Irrigation District | | |
| Mirage Flats Canal | 11,662 | 10,709 |
| Ainsworth Irrigation District | | |
| Ainsworth Canal | 35,000 | 34,597 |
| Twin Loups Irrigation District | | |
| Above Davis Creek | 34,053 | 33,593 |
| Below Davis Creek | 21,063 | 20,389 |
| Total Twin Loups Irrigation District | 55,116 | 53,982 |
| Frenchman Valley Irrigation District | | |
| Culbertson Canal | 9,292 | 1,250 |
| H & RW Irrigation District | | |
| Culbertson Extension Canal | 11,915 | 0 |
| Frenchman-Cambridge Irrigation District | | |
| Meeker-Driftwood Canal | 16,855 | 13,016 |
| Red Willow Canal | 4,797 | 0 |
| Bartley Canal | 6,353 | 4,655 |
| Cambridge Canal | 17,664 | 16,071 |
| Total Frenchman-Cambridge Irrigation District | 45,669 | 33,742 |
| Almena Irrigation District | | |
| Almena Canal | 5,764 | 1,500 |
| Bostwick Irrigation District in Nebraska | | |
| Franklin Canal | 10,920 | 7,357 |
| Naponee Canal | 1,650 | 660 |
| Franklin Pump Canal | 2,090 | 679 |
| Superior Canal | 5,848 | 5,595 |
| Courtland Canal (Nebraska) | 1,946 | 1,097 |
| Total Bostwick Irrigation Dist. in Nebraska | 22,454 | 15,388 |
| Kansas-Bostwick Irrigation District | | |
| Courtland Canal above Lovewell | 13,378 | 11,463 |
| Courtland Canal below Lovewell | 29,122 | 25,784 |
| Total Kansas-Bostwick Irrigation District | 42,500 | 37,247 |
| Kirwin Irrigation District | | |
| Kirwin Canal | 11,465 | 8,154 |
| Webster Irrigation District | | |
| Osborne Canal | 8,537 | 4,605 |
| Glen Elder Irrigation District | 10,370 | 5,648 |
| TOTAL PROJECT USES | 269,744 | 206,822 |
| Non-Project Uses | | |
| Hale Ditch | 700 | 350 |
| TOTAL PROJECT AND NON-PROJECT | 270,444 | 207,172 |

TABLE 5**FLOOD DAMAGES PREVENTED BY NEBRASKA-KANSAS PROJECTS RESERVOIRS**

| RESERVOIR | DURING FY 2011 | PRIOR TO 2011 | ACCUMULATED |
|----------------|----------------|-----------------|-----------------|
| BONNY | \$54,700 | \$2,813,800 | \$2,868,500 |
| ENDERS | \$300 | \$3,573,700 | \$3,574,000 |
| SWANSON | \$59,300 | \$29,580,300 | \$29,639,600 |
| HUGH BUTLER | \$3,362,100 | \$3,026,600 | \$6,388,700 |
| HARRY STRUNK | \$3,473,900 | \$12,653,000 | \$16,126,900 |
| KEITH SEBELIUS | \$55,400 | \$4,011,500 | \$4,066,900 |
| HARLAN COUNTY | \$10,447,200 | \$218,127,500 | \$228,574,700 |
| LOVEWELL | \$464,200 | \$152,306,700 | \$152,770,900 |
| KIRWIN | \$520,700 | \$94,486,700 | \$95,007,400 |
| WEBSTER | \$167,600 | \$112,903,700 | \$113,071,300 |
| WACONDA | \$32,087,900 | \$1,247,288,600 | \$1,279,376,500 |
| CEDAR BLUFF | \$7,900 | \$134,932,800 | \$134,940,700 |
| TOTAL | \$50,701,200 | \$2,015,704,900 | \$2,066,406,100 |

Estimates of damages prevented are received from the Army Corps of Engineer's Kansas City District Office. The Accumulated Totals date from 1951 through 2011. Cumulative totals are revised by the Corps of Engineers in some cases to reflect data not previously included in the reporting and may not match previous cumulative totals.

Construction Cost of storage dams was \$208,954,130. The reservoirs upstream of Harlan County Lake did not receive benefits for damages prevented from 1972 to 1993.

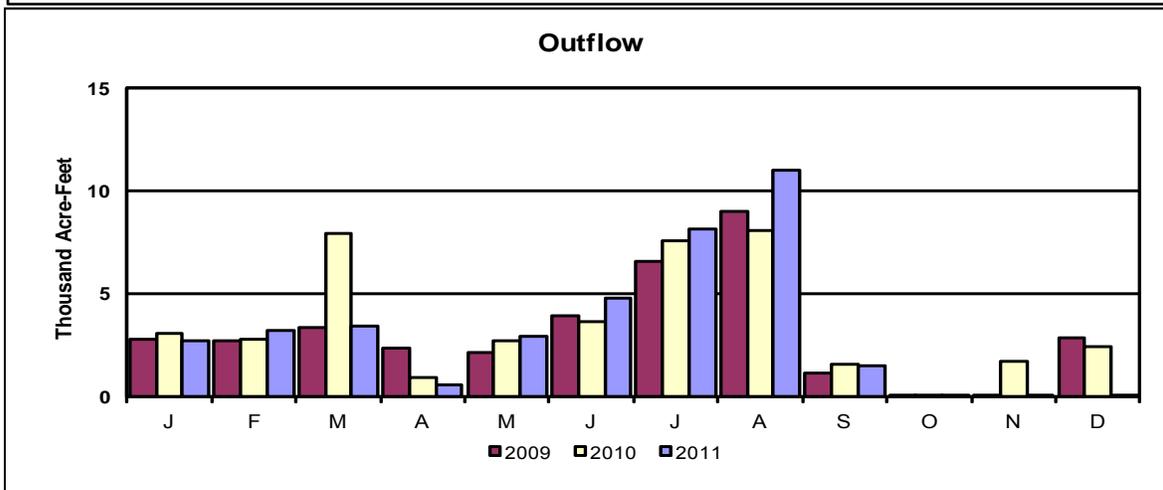
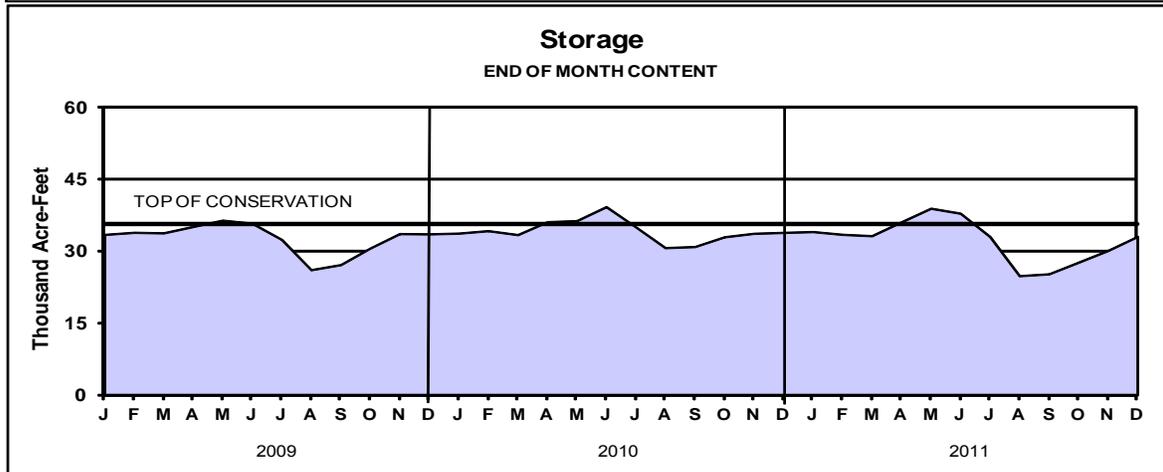
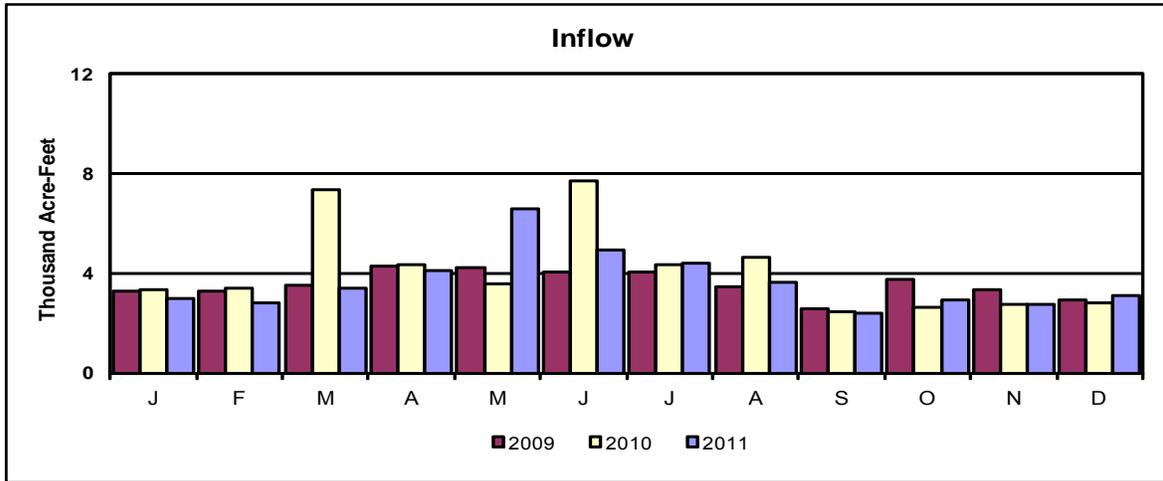
TABLE 6
WATER DIVERTED IN 2011
(Units - Acre-Feet)

| Irrigation District and Canal | 2011 Irrigation Operations | | 10-Year Average Diversion (2001-2010) | 2011 Diversion |
|--|----------------------------------|------|--|-------------------|
| | From | To | | |
| Mirage Flats Irrigation District | | | | |
| Mirage Flats Canal | 7/4 | 9/6 | 9,494 | 12,885 |
| Ainsworth Irrigation District | | | | |
| Ainsworth Canal | 5/15 | 9/18 | 75,226 | 63,664 |
| Twin Loups Irrigation District | | | | |
| Above Davis Creek | 4/18 | 9/15 | 44,648 | 45,090 |
| Below Davis Creek | 5/9 | 9/15 | 42,576 | 40,185 |
| Total Twin Loups Irrigation District | | | 87,224 | 85,275 |
| Frenchman Valley Irrigation District | | | | |
| Culbertson Canal | 4/25 | 9/12 | 5,840 | 9,889 |
| H & RW Irrigation District | | | | |
| Culbertson Extension | Did not run. | | 710 | 0 |
| Frenchman-Cambridge Irrigation | | | | |
| Meeker-Driftwood Canal | 6/20 | 9/2 | 7,045 | 21,538 |
| Red Willow Canal | Did not run. | | 1,804 | 0 |
| Bartley Canal | 5/2 | 9/9 | 3,459 | 9,718 |
| Cambridge Canal | 5/4 | 9/9 | 18,797 | 28,850 |
| Total Frenchman-Cambridge Irrigation District | | | 31,105 | 60,106 |
| Almena Irrigation | | | | |
| District Almena | 5/17 | 8/19 | 2,096 | 2,277 |
| Bostwick Irrigation District in | | | | |
| Franklin Canal | 6/22 | 9/9 | 12,165 | 18,853 |
| Naponee Canal | 6/29 | 8/30 | 970 | 1,182 |
| Franklin Pump Canal | 6/28 | 8/30 | 1,061 | 729 |
| Superior Canal | 6/14 | 9/12 | 5,973 | 7,070 |
| Courtland Canal (Nebraska) | 5/4 | 9/15 | 697 | 428 |
| Total Bostwick Irrigation District in Nebraska | | | 20,866 | 28,262 |
| Kansas-Bostwick Irrigation District | | | | |
| Courtland Canal above Lovewell | 5/7 | 9/15 | 15,356 | 17,889 |
| Courtland Canal below Lovewell | 5/23 | 9/15 | 35,210 | 36,183 |
| Total Kansas-Bostwick Irrigation District | | | 50,566 | 54,072 |
| Kirwin Irrigation | | | | |
| District Kirwin | 6/14 | 8/31 | 11,350 | 15,075 |
| Webster Irrigation District | | | | |
| Osborne Canal | 6/14 | 8/31 | 6,707 | 10,447 |
| Glen Elder Irrigation District | 5/1 | 9/19 | 6,499 | 1,142 |
| TOTAL | | | 307,683 | 343,094 |

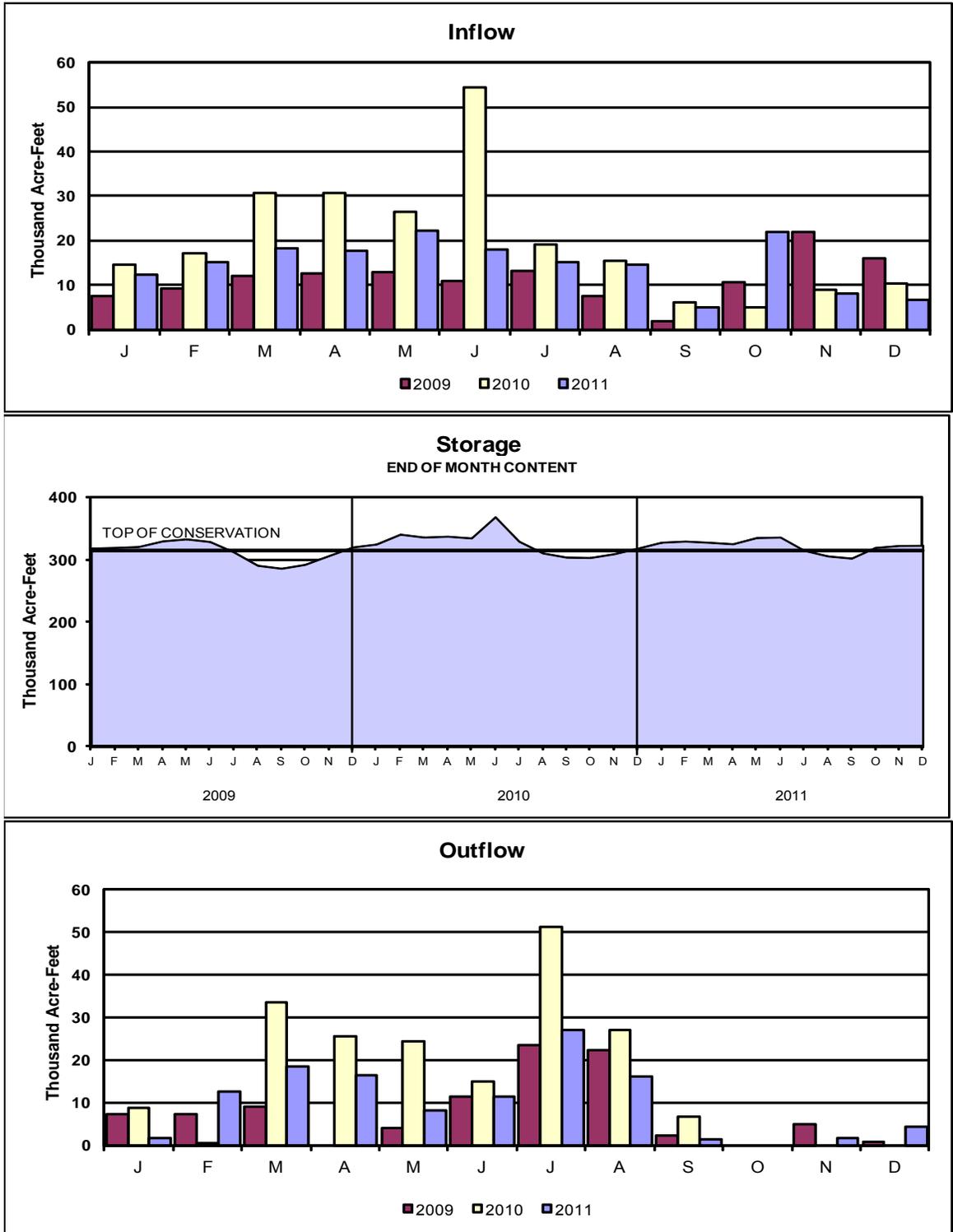
TABLE 7
NEBRASKA-KANSAS PROJECTS
Summary of Precipitation, Reservoir Storage and Inflows
CALENDAR YEAR 2011

| Reservoir | Total Precip. Inches | Percent Of Average % | Storage 12-31-10 AF | Storage 12-31-11 AF | Gain or Loss AF | Maximum Content AF | Storage Date | Minimum Content AF | Storage Date | Total Inflow AF |
|----------------|----------------------------|----------------------------|---------------------------|---------------------------|-----------------------|--------------------------|-----------------|--------------------------|-----------------|-----------------------|
| Box Butte | 20.94 | 124 | 14,523 | 15,464 | 941 | 24942 | JUL 4 | 12635 | SEP 6 | 17,737 |
| Merritt | 27.95 | 137 | 60,831 | 61,370 | 539 | 67602 | JUN 20 | 46824 | SEP 12 | 192,404 |
| Calamus | 24.22 | 100 | 108,981 | 105,099 | -3,882 | 129253 | JUN 27 | 75169 | OCT 1 | 317,697 |
| Davis Creek | 27.26 | 110 | 9,350 | 9,280 | -70 | 28234 | JUL 19 | 8772 | APR 13 | 44,921 |
| Bonny | 19.01 | 111 | 6,923 | 135 | -6,788 | 10724 | JUN 2 | 135 | DEC 25 | 9,008 |
| Enders | 21.46 | 113 | 16,743 | 17,484 | 741 | 19075 | JUN 21 | 16761 | JAN 1 | 7,516 |
| Swanson | 19.99 | 100 | 62,085 | 62,156 | 71 | 82354 | JUN 21 | 59393 | NOV 12 | 33,791 |
| Hugh Butler | 21.58 | 110 | 6,034 | 5,993 | -41 | 8007 | MAY 29 | 5429 | APR 14 | 17,863 |
| Harry Strunk | 23.06 | 111 | 33,936 | 33,098 | -838 | 39041 | MAY 30 | 24014 | SEP 9 | 44,135 |
| Keith Sebelius | 34.36 | 140 | 20,600 | 23,218 | 2,618 | 23219 | DEC 31 | 19571 | AUG 4 | 11,995 |
| Harlan County | 30.69 | 135 | 318,364 | 322,964 | 4,600 | 339236 | JUN 22 | 300830 | OCT 6 | 174,830 |
| Lovewell | 27.87 | 101 | 27,054 | 31,938 | 4,884 | 62412 | MAY 27 | 27105 | JAN 2 | 83,167 |
| Kirwin | 27.59 | 117 | 98,916 | 99,989 | 1,073 | 106268 | JUN 18 | 93654 | OCT 6 | 49,576 |
| Webster | 23.04 | 97 | 63,328 | 58,196 | -5,132 | 72886 | JUN 5 | 54173 | OCT 7 | 21,937 |
| Waconda | 30.80 | 121 | 198,060 | 211,190 | 13,130 | 398868 | JUN 6 | 175048 | APR 14 | 427,789 |
| Cedar Bluff | 14.99 | 71 | 91,110 | 79,365 | -11,745 | 91319 | MAR 23 | 78953 | DEC 3 | 7,116 |

HARRY STRUNK LAKE ACTUAL OPERATION

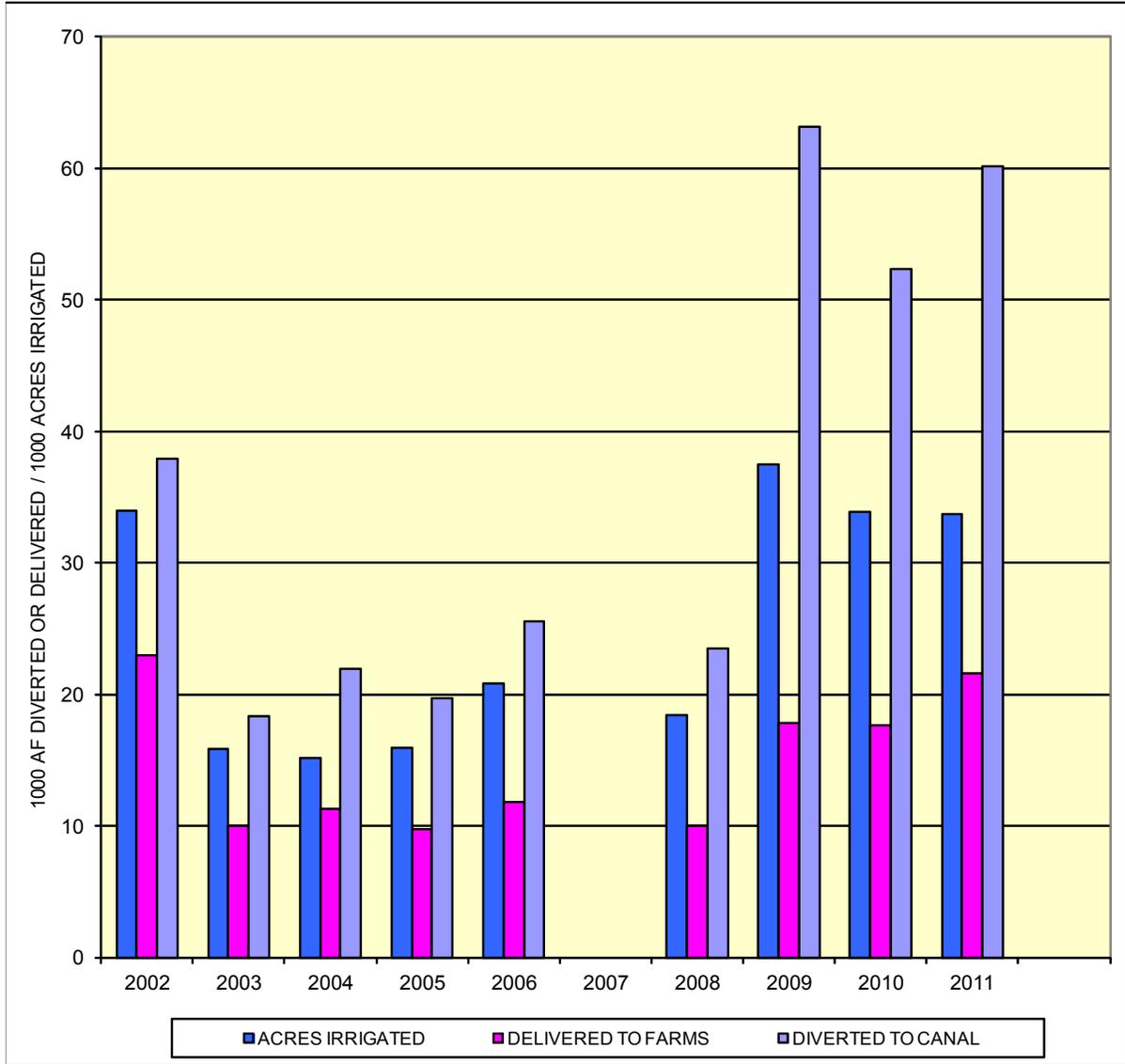


HARLAN COUNTY LAKE ACTUAL OPERATION



FRENCHMAN-CAMBRIDGE IRRIGATION DISTRICT

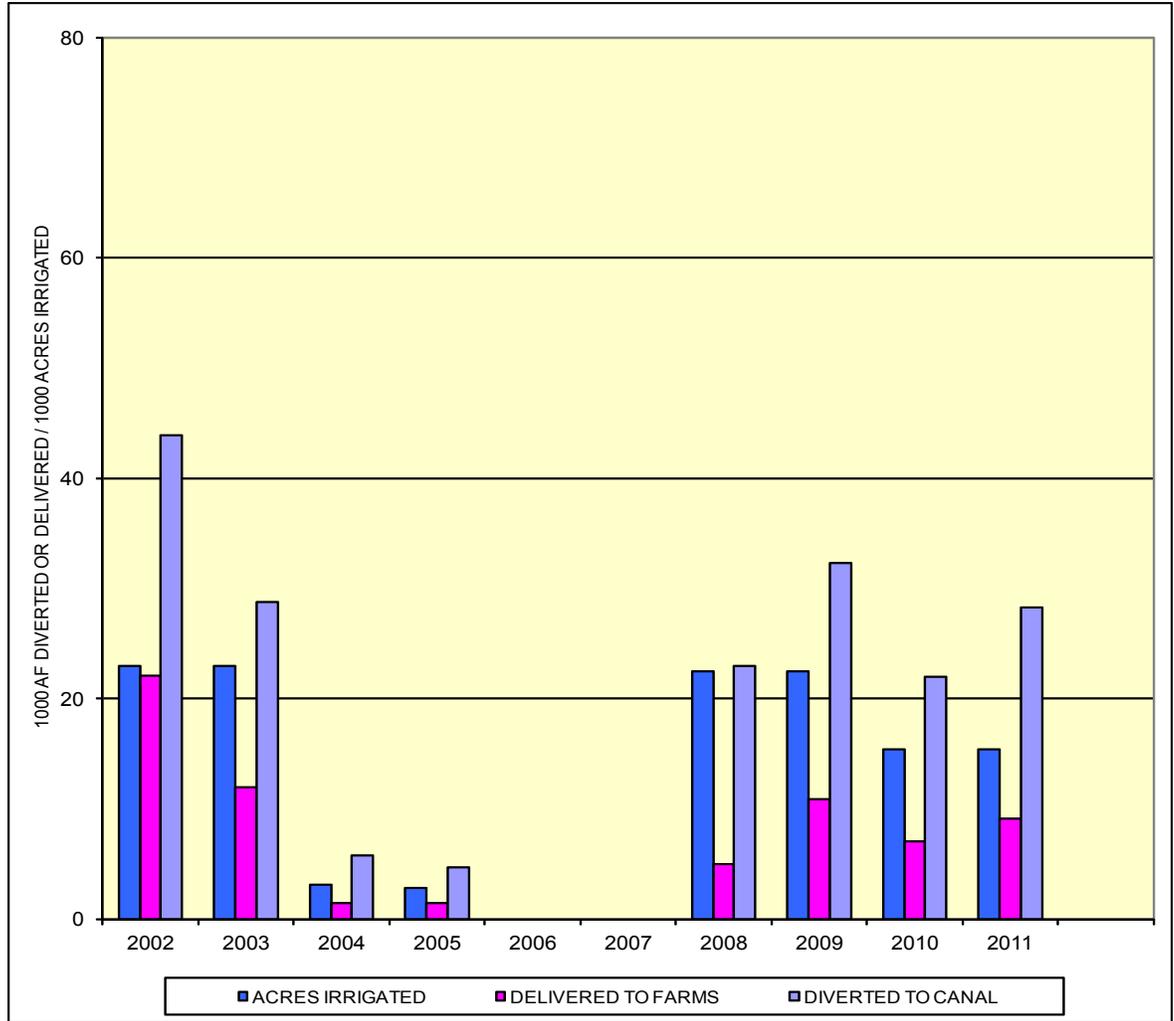
CANAL DIV., FARM DEL., AND ACRES IRRIG.



| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|-------------------|------|------|------|------|------|------|------|------|------|------|
| DIVERTED af/acre | 1.12 | 1.15 | 1.45 | 1.24 | 1.23 | 0.00 | 1.27 | 1.68 | 1.55 | 1.78 |
| DELIVERED af/acre | 0.67 | 0.63 | 0.74 | 0.61 | 0.57 | 0.00 | 0.54 | 0.47 | 0.52 | 0.64 |
| EFFICIENCY | 61% | 55% | 52% | 50% | 46% | 0% | 42% | 28% | 34% | 36% |

BOSTWICK IRRIGATION DISTRICT - NEBRASKA

CANAL DIV., FARM DEL., AND ACRES IRRIG.

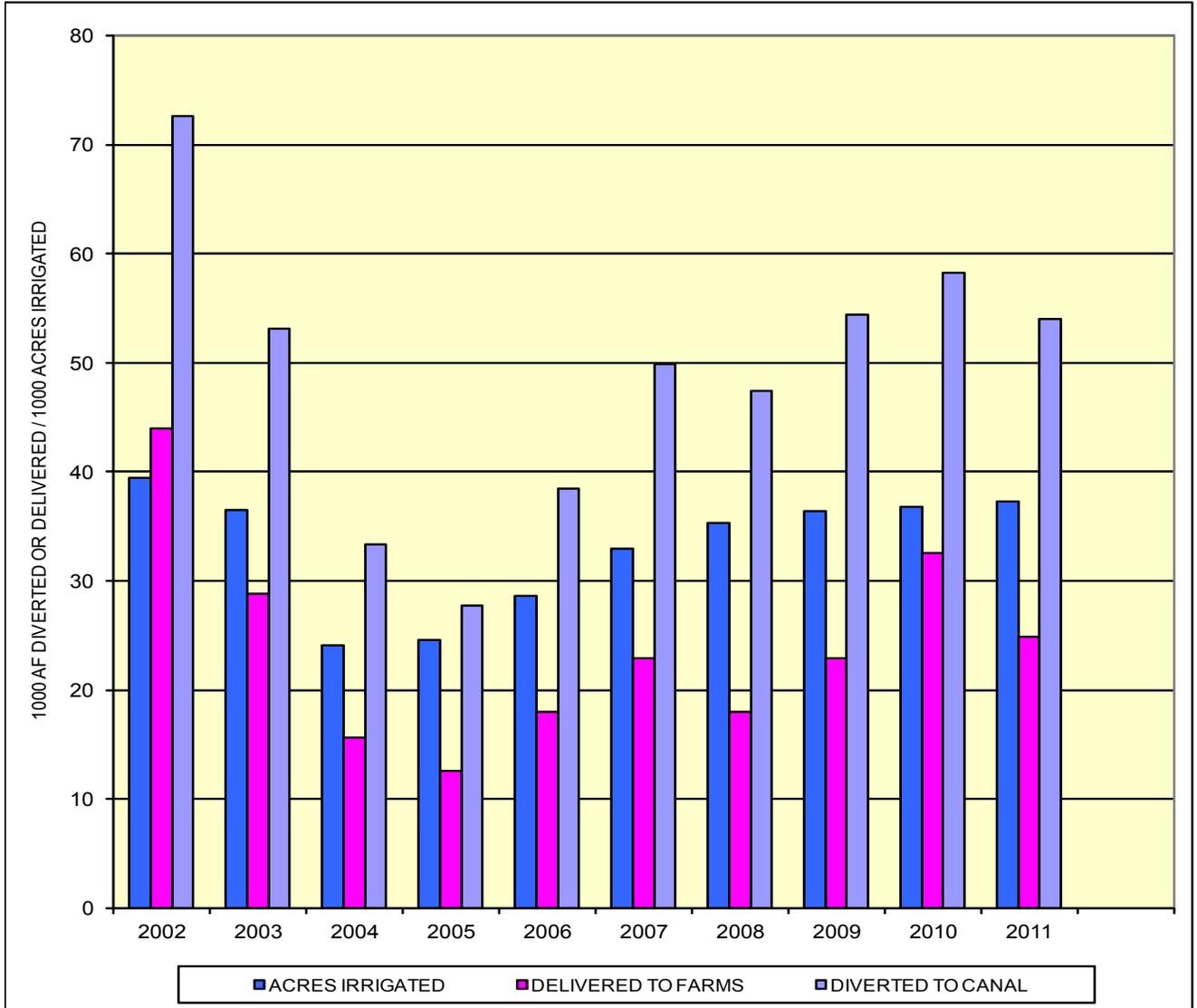


| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|-------------------|------|------|------|------|------|------|------|------|------|------|
| DIVERTED af/acre | 1.91 | 1.25 | 1.85 | 1.68 | 0.00 | 0.00 | 1.02 | 1.44 | 1.43 | 1.84 |
| DELIVERED af/acre | 0.96 | 0.52 | 0.47 | 0.53 | 0.00 | 0.00 | 0.22 | 0.48 | 0.46 | 0.59 |
| EFFICIENCY | 50% | 42% | 25% | 32% | 0% | 0% | 22% | 34% | 32% | 32% |

EXHIBIT 25

KANSAS-BOSTWICK IRRIGATION DISTRICT

CANAL DIV., FARM DEL., AND ACRES IRRIG.



| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|-------------------|------|------|------|------|------|------|------|------|------|------|
| DIVERTED af/acre | 1.84 | 1.46 | 1.38 | 1.13 | 1.35 | 1.51 | 1.34 | 1.50 | 1.58 | 1.45 |
| DELIVERED af/acre | 1.11 | 0.79 | 0.65 | 0.51 | 0.63 | 0.70 | 0.51 | 0.63 | 0.89 | 0.67 |
| EFFICIENCY | 61% | 54% | 47% | 45% | 47% | 46% | 38% | 42% | 56% | 46% |