

## FRENCHMAN VALLEY STUDY

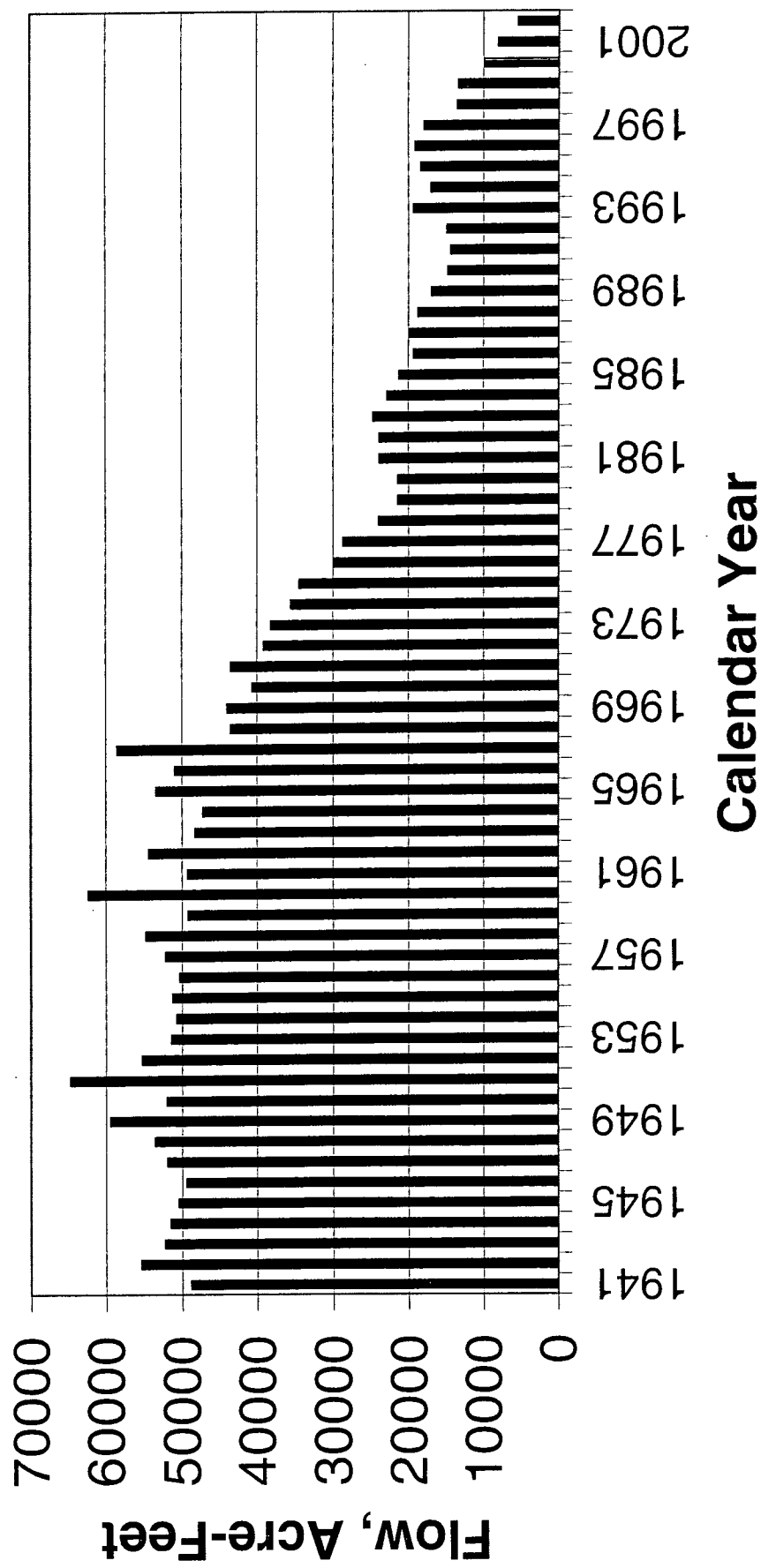
### Goal

To evaluate alternative program activities, structural measures or incentives that can assist in optimizing existing facilities, providing lake level benefits, and providing recharge facilities for Enders Reservoir and the irrigated area it serves.

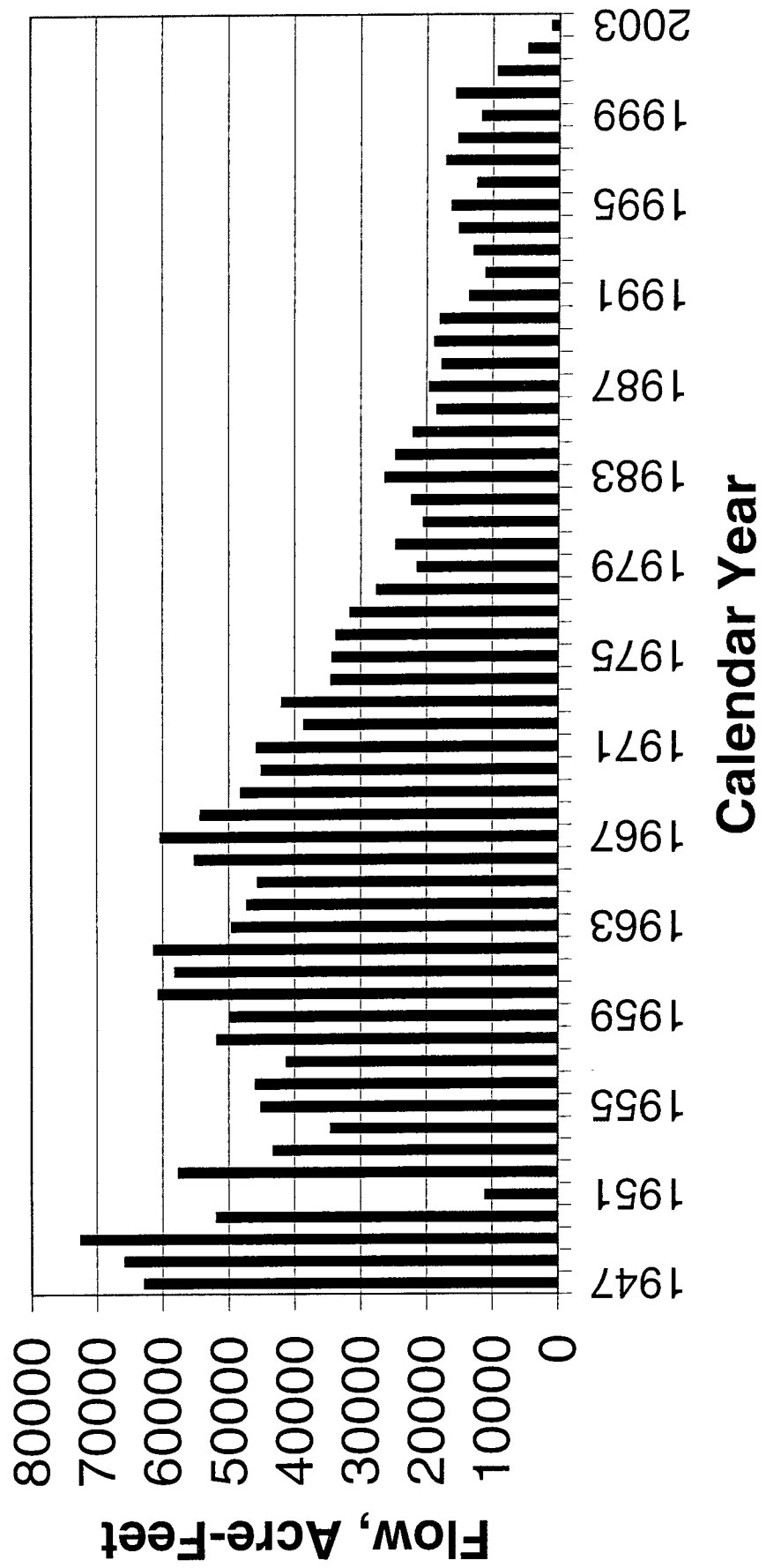
### Objectives

1. Describe the Study Area
2. Consult with stakeholder groups
3. Evaluate problems and opportunities
4. Evaluate alternative choices for optimizing existing facilities related to Enders Reservoir and the irrigated area it serves
  - a) Structural options
  - b) Program options and incentives
  - c) Other
5. Evaluate alternative choices for providing lake level benefits from Enders Reservoir
  - a) Structural options
  - b) Program options and incentives
  - c) Other
6. Evaluate alternative choices for providing recharge benefits through use of Enders Reservoir
  - a) Structural options
  - b) Program options and incentives
  - c) Other
7. Formulate alternative plans
8. Evaluate overall effects of plans
9. Compare plans
10. Provide recommendations

# Annual Flow of Frenchman Creek near Imperial, Nebraska



# Annual Flow of Frenchman Creek near Enders, Nebraska



Senior Water Right

Water Year	Basin	Closing Month	Closing Day	Senior Water Right (If Known)	Senior Water Right Number (If Known)	Priority Date	Comments
1945-1946	Republican			Culbertson Canal	024-25 & 29-30	5/16/1890	The closing orders applied to Frenchman Creek a few days each year.
1952	Republican						Daily regulation of canals was necessary from June to September, but storage water from Enders Reservoir made up the shortages.
1953-1954	Republican						All but the earliest priorities were closed to natural flow throughout major portions of the irrigation seasons.
1955	Republican						"The natural flow water supply" ... in the basin... "was less" ... "in any year since the dry thirties." The storage water provided by Bureau of Reclamation reservoirs that were being built at this very time were very beneficial to stream pumps.
1956	Republican						"The (basin) supply in 1956 was only slightly better than" 1955, but crop yields "were substantially better."
1957-58	Republican						Abundant precipitation precluded any regulation.
1959-60	Republican						Although there was some administration of natural flow rights, the presence of storage water from the relatively new storage reservoirs made it such "that no major administrative problems arose."
1961-1962	Republican						There was <u>apparently</u> some administration of natural flow appropriators during 1961, but the presence of abundant storage water prevented any administrative problems. Furthermore, during 1962 there so much natural flow "that very little storage water was used except on federal projects" and, therefore, apparently little if any administration was necessary.

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1963-1964	Republican						"The water supply in the Republican River Basin was deficient in both 1963 and 1964." Due to the presence of five federal storage reservoirs, this hadn't happened for a long time. When an irrigator would not have enough natural flow, he would buy storage water from the appropriate reservoir. However, more and more land was coming under irrigation in the Bureau of Reclamation (BOR) Frenchman-Cambridge Division, so BOR no longer had enough storage to satisfy both the irrigators with natural flow rights that were running short and also the Division. Since the Division was given preference to the individual irrigators, the irrigators couldn't buy enough storage water any longer and there was considerable administration of these irrigators with only natural flow rights. This was particularly true in 1963 for the Frenchman River and Medicine Creek junior pump diversions.
1970	Republican						As of 9/30, "the Republican basin reservoirs were the lowest in many years."
1975-1976	Republican	NA		Culbertson Canal	224-25 & 29-31	5/16/1890	The closing order which applied to the Frenchman River and Stinking Water Creek for both years remained in effect except for two brief periods until the end of August when Enders Reservoir's storage supply was exhausted.
1977-1978	Republican						Drought conditions prevailed during the biennium. <u>"It appears the increase in well development in the Republican Basin has brought about a continuing decrease in surface water supplies."</u> Storage in Swanson, Harry Strunk and Enders Reservoir was at the lowest levels since the reservoirs were initially filled.
1977-1978	Republican	June	last week	Culbertson Canal	224-25 & 29-31	5/16/1890	Closing orders were issued to irrigators on Frenchman River and Stinking Water Creek upstream and junior to the canal during the last week of June until the last week of August both years.
1979	Republican	April					In April, the Bureau of Reclamation requested that all storage reservoirs upstream and junior to Swanson, Enders, Hugh Butler and Harry Strunk reservoirs be prohibited from storing water. The orders were issued and remained in effect until July 6. <u>"This was the first time that the department regulated storage appropriators on a large scale."</u>

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1979	Republican	July	11	Culbertson Canal	024-25 &29-30	5/16/1890	The order which applied to Frenchman and Stinking Water Creeks was rescinded on July 25.
1979	Republican	August	2	Culbertson Canal	024-25 &29-30	5/16/1890	The report referred to this order which was rescinded on August 26 as regulation of natural flow, but the water in Frenchman Creek was storage water from Enders Reservoir indicating a storage right was at issue.
1980	Republican	July	3	Culbertson Canal	024-25 &29-30	5/16/1890	The order which applied to Frenchman and Stinking Water Creeks was rescinded on August 19.
1981	Republican	?	?	Culbertson Canal	024-25 &29-30	5/16/1890	The order which closed some 23 irrigators on Frenchman and Stinking Water Creeks with the exception of a few days near August 1 was rescinded on August 31.
1982	Republican	July	12	Culbertson Canal?	024-25 &29-30	5/16/1890	The order which closed some 23 irrigators on Frenchman and Stinking Water Creeks was rescinded on September 9.
1983	Republican	July	25	Culbertson Canal	024-25 &29-30	10/6/1890	The orders which applied to Frenchman and Stinking Water Creeks were rescinded no later than September 21.
1984	Republican	July	see comment	see comment			"Between July 9 and July 25, a total of 88 appropriations were closed for the benefit of the Culbertson, Red Willow and Cambridge Canals. They remained closed without interruption until mid-September."
1985	Republican	mid-June					"Natural flow appropriations on Red Willow Creek, Frenchman River, Stinking Water Creek and Medicine Creek were closed for the benefit of the Red Willow, Culbertson and Cambridge Canals" ....until the first week in September.
1986	Republican	mid-June					87 irrigators on Red Willow, Frenchman, Stinking Water, and Medicine Creeks; and a section of the Republican River were closed until September 10 for Red Willow, Cambridge and Culbertson Canals.
1987	Republican	late June					The closing order which applied to Frenchman, Stinking Water, Red Willow, and Medicine Creeks; and a portion of the Republican River below Trenton Dam were closed for the benefit of Culbertson, Red Willow, Bartley and Cambridge Canals until the order was rescinded at the end of August.
1987	Republican						"Four of the five major reservoirs contained fair storage supplies at the beginning of the irrigation season. Enders reservoir was the exception, continuing its history of inadequate supplies."
1988	Republican	mid-June					Earlier than usual water administration of Frenchman, Stinking Water, and Red Willow Creeks ran through mid-September.

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1988	Republican						Except for Enders Reservoir, the major reservoirs had good supplies. Harlan County and Harry Strunk Reservoirs had storage in the flood pool.
1989	Republican	late June					Natural flow appropriations on Red Willow Creek (23 permits), Frenchman and Stinking Water Creeks (37 permits) and Medicine Creek (51 permits); and a portion of the Republican River between Trenton Dam and Cambridge Diversion Dam (11 permits) were closed for the benefit of the Red Willow, Culbertson, Bartley and Cambridge Canals until the middle of September.
1990	Republican	mid-June					Natural flow appropriations on Red Willow Creek (23 permits), Frenchman and Stinking Water Creeks (37 permits) and Medicine Creek (51 permits); and a portion of the Republican River between Trenton Dam and Cambridge Diversion Dam (11 permits) were closed for the benefit of the Red Willow, Culbertson, Bartley and Cambridge Canals until the end of August.
1991	Republican	late June		Culbertson Canal	24-25 & 29-3	5/16/1890	38 upstream irrigators were closed above the Canal's headgate and 8 irrigators below the headgate were regulated until mid-August.
1992	Republican						Senior irrigators were regulated and junior irrigators were closed on Frenchman, Medicine, and Red Willow Creeks; and a portion of the Republican River between Trenton Dam and Cambridge Diversion Dam for the benefit of Culbertson, Red Willow, Bartley and Cambridge Canals from the beginning of July to mid-September.
1993	Republican	June	24	Culbertson Canal	24-25 & 29-3	5/16/1890	38 irrigators were closed on Frenchman Creek above Canal headgate. The was rescinded on August 25.
1994	Republican						"Senior appropriators were regulated and junior appropriators were closed as follows: 38 juniors on Frenchman Creek above Culbertson Canal from June 17 to August 15; 10 seniors and 23 juniors on Red Willow Creek from June 21 to September 2; 14 seniors and 42 juniors on Medicine Creek from June 28 to September 2; 1 senior and 14 juniors on the Republican River from the mouth of Medicine Creek to the Cambridge Canal diversion between June 28 and September 2; and 1 senior and 8 juniors on the Republican River from Trenton Dam to the Bartley Canal diversion between July 7 and September 2."

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1995	Republican						Senior appropriators were also closed for failure to have an approved measuring device.
							Senior appropriators were regulated and junior appropriators were closed as follows: from July 5 to September 6, 1 senior was regulated and 38 juniors closed on the Frenchman Creek above Culbertson Canal; from July 17 to September 25, 10 seniors were regulated and 23 juniors closed on Red Willow Creek, 14 seniors were regulated and 42 juniors were closed on Medicine Creek, and 1 senior was regulated and 14 juniors were closed on the Republican River from the mouth of Medicine Creek to Cambridge Diversion Dam; from July 28 to September 19, 112 permits were regulated on the Republican River from Harlan County Dam to Guide Rock Diversion Dam; from July 31 to September 15, 1 senior was regulated and 8 juniors closed on the Republican River from Trenton Dam to Bartley Canal Diversion Dam, and 7 seniors regulated on the Frenchman Creek below Culbertson Canal.
1995	Republican						Senior appropriators were regulated and junior appropriators were closed as follows: from July 1 to August 27, 1 senior was regulated and 20 juniors closed on the Frenchman Creek above Culbertson Canal; and from July 1 to September 9, 1 senior was regulated and 8 juniors closed on the Republican River from Trenton Dam to Bartley Diversion Dam, and 10 seniors were regulated and 23 juniors closed on Red Willow Creek.



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1997	Republican						Senior appropriators were regulated and junior appropriators were closed as follows: from June 24 to August 23, 1 senior was regulated and 21 juniors closed on the Frenchman Creek above Culbertson Canal; from June 24 to September 5, 4 permits were regulated on Frenchman Creek below the Culbertson Canal headgate; from July 3 to September 5, 10 seniors were regulated and 23 juniors were closed on Red Willow Creek; from July 8 to September 5, 3 seniors were regulated and 18 juniors closed on the Republican River from Trenton Dam to Bartley Diversion Dam; from July 15 to September 5, 14 seniors were regulated and 42 juniors closed on Medicine Creek, and 1 senior was regulated and 14 juniors were closed on the Republican River from the mouth of Medicine Creek to Cambridge Diversion Dam; and from July 17 to September 5, 175 permits were regulated on the Republican River from Harlan County Dam to Guide Rock Diversion Dam.
1998	Republican						Senior appropriations were regulated and junior appropriations were closed as follows: from June 20 to August 19, 1 senior was regulated and 21 juniors closed on Frenchman Creek above Culbertson Canal; from June 20 to September 4, 4 permits were regulated on Frenchman Creek below Culbertson Canal, 10 seniors were regulated and 23 juniors closed on Red Willow Creek, and 2 seniors were regulated and 19 juniors closed on the Republican River from Trenton Dam to Bartley Diversion Dam; from June 27 to September 4, 14 seniors were regulated and 42 juniors were closed on Medicine Creek, and 1 senior was regulated and 14 juniors were closed on the Republican River from the mouth of Medicine Creek to Cambridge Diversion Dam; and from July 1 to September 8, 175 permits were regulated on the Republican River from Harlan County Reservoir to Guide Rock Diversion Dam.
1999	Republican	June	28	Culbertson Canal	24-25 & 29-3	5/16/1890	The order which applied to Frenchman Creek closed 21 appropriators and was rescinded on August 18.
2000	Republican	June	10				The notice which applied to Republican River was issued for compliance with the legal limit of 1 appropriation.
2000	Republican	June	13				The regulating notice which applied to the Republican River was issued to get 1 appropriator to comply with the legal limit of their diversion.

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2000	Republican	June	14				The regulating notice which applied to the Republican River above Swanson Lake was issued to get 24 appropriators to comply with the legal limit of their diversion.
2000	Republican	June	14	Culbertson Canal	D24R & P506	5/16/1890	The order which applied to Frenchman Creek and its tributaries was issued to close 21 appropriations. It was fully rescinded on August 11. The order which applied to a tributary of the Republican River was issued to close an illegal diversion.
2000	Republican	August	3				The order which applied to the entire basin closed 169 appropriators for failure to file water use reports. Apparently between January 10 and June 22 the closing orders were rescinded, because the reports were filed, but as a result of the reports 95 appropriators were regulated possibly because the reports revealed they exceeded their legal limit during the previous water year.
2001	Republican	January	10				The regulating notice which applied to the mainstem from the Colorado stateline to Trenton Dam was sent to 14 appropriators to call for compliance with their legal limit.
2001	Republican	June	22				The regulating notice which applied to Muddy Creek near Stratton was sent to one appropriator to call for compliance with their legal limit.
2001	Republican	June	26				The regulating notice which applied to the mainstem was sent to 1 appropriator to call for compliance with their legal limit as a result of them filing their water use report.
2001	Republican	June	28				The regulating notice which applied to Indian Creek and the mainstem was sent to 3 appropriator to call for compliance with their legal limit as a result of them filing their water use report.
2001	Republican	July	2				The order which applied to Frenchman Creek and tributaries closed 20 appropriators. This was apparently rescinded on August 1 when the call for water for the canal was removed for 21 appropriators.
2001	Republican	July	3	Culbertson Canal	D24R & P506	5/16/1890	The regulating notice which applied to Frenchman Creek was sent to 5 appropriators to call for compliance with their legal limit.
2001	Republican	July	3				The notice indicated that the call for water on the Republican River by the Culbertson Canal and water right A3869 was removed for 31 appropriators. There didn't seem to be any closing order that matched with this opening date.
2001	Republican	August	1				

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2001	Republican	August	22				The order which applied to a tributary of Deer Creek closed an illegal diversion.
2001	Republican	September	10				The notice which applied to 1 appropriator on the mainstem opened the appropriator as a result of them filing a water use report.
2002	Republican	January	10				The order which applied to the entire basin closed 141 appropriators for failing to file a water use report for the previous irrigation season. The following number of appropriators complied with the order and filed their reports including the date they were filed and, therefore, when they were opened: 48 on January 31, 11 on March 1, 3 on April 2, 1 on April 30, 1 on May 20, 1 on June 18, 2 on June 25, and 5 on July 10
2002	Republican	April	19				The regulating notice which applied to the mainstem above Swanson Reservoir was given to 20 appropriators calling for compliance with their legal limit.
2002	Republican	June	29	Culbertson Canal	D24R & P506	5/16/1890	The order which applied to Frenchman Creek closed 21 appropriators because there was insufficient flow. The order was apparently rescinded on August 12.
2002	Republican	July	22	Culbertson Canal	D24R	5/16/1890	Inflows to Enders Reservoir on Frenchman Creek were passed through it for the benefit of Culbertson Canal. This was stopped on August 22. Apparently this was rescinded on August 12.
2002	Republican	August	6				A diversion was closed because it "exceeded 3 af" (acre-feet).
2002	Republican	August	6				The order which applied to Frenchman Creek closed an illegal diversion.