

SURVEY OF IRRIGATION ORGANIZATIONS

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**United States
Department of
Agriculture**

**ECONOMIC
RESEARCH
SERVICE**



**NATIONAL
AGRICULTURAL
STATISTICS
SERVICE**

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Please make corrections to name, address, and ZIP Code, if necessary.

We are collecting information on facilities, operation, revenue, costs, and practices for irrigation organizations. These are organizations that either deliver water directly to farms and ranches for irrigation or directly impact the use of groundwater by farms and ranches. Some organizations serve both water delivery and groundwater management roles. We need your help to make this information as accurate as possible.

The information you provide will be used for statistical purposes only. Your responses will be kept confidential and any person who willfully discloses ANY identifiable information about you or your operation is subject to a jail term, a fine, or both. This survey is conducted in accordance with the Confidential Information Protection provisions of Title V, Subtitle A, Public Law 107-347 and other applicable Federal laws. For more information on how we protect your information please visit: <https://www.nass.usda.gov/confidentiality>. Response is voluntary.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB number is . The time required to complete this information collection is estimated to average 60 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

We encourage you to refer to your organization's records and annual reports during the interview.

- Submit your report by mail or via the internet at www.agcounts.usda.gov
- If you have received multiple questionnaires, then you are associated with multiple organizations identified by USDA. The goal of this data collection effort is to better understand operations, investments, and management at the organizational level, so how you should respond depends on the specifics of these organizations. If the multiple organizations with which you are associated are legally, functionally, or in any other critical way separate, then you or someone else associated with the organizations should fill out a separate questionnaire for each separate organization.
- If you have questions or need assistance, call 1-888-424-7828

Print the information below for the person completing this form:

Name

xxxx

Area Code and Phone Number

xxxx

 - -

Date Completed (MM-DD-YYYY)

xxxx

 - -

E-mail

xxxx

Thank you for your cooperation.

SECTION 1 – ORGANIZATION OVERVIEW

Survey Screening Questions

1. During 2019, did this organization deliver water directly to farms or ranches?

xxxx 1 Yes 3 No

2. During 2015-2018, did this organization deliver water directly to farms or ranches?

xxxx 1 Yes 3 No

3. During 2019, did this organization directly influence groundwater use by farms or ranches in any of these ways?

a. Monitoring and reporting on groundwater conditions..... xxxx 1 Yes 3 No

b. Collecting metered or self-reported pumping data..... xxxx 1 Yes 3 No

c. Charging pumping fees or water right fees..... xxxx 1 Yes 3 No

d. Permitting development of new wells..... xxxx 1 Yes 3 No

e. Managing groundwater recharge..... xxxx 1 Yes 3 No

f. Managing groundwater quality..... xxxx 1 Yes 3 No

g. Other - specify: xxxx _____ xxxx 1 Yes 3 No

4. If you answered "Yes" to any of the questions in items 1-3, continue.
If you answered "No" to all of those questions, go to Section 10.

This survey is for:

- Organizations that deliver irrigation water directly to farms and ranches
- Organizations that directly influence on-farm groundwater pumping for irrigation

These types of organizations should continue to item 5.

Other water-related organizations that should NOT answer this survey include:

- Water research organizations
- Organizations that advocate for agricultural water supplies
- "Storage and pass-through" organizations that deliver water to irrigation districts and ditch companies but not directly to farms
- Drinking water (municipal and industrial) facilities

These types of organizations should go to Section 10.

Organization Details

5. What other functions does this organization serve? (Check all that apply.)

- xxxx Municipal or residential water
- xxxx Electricity generation
- xxxx Recreation or wildlife management
- xxxx Agricultural drainage management
- xxxx Flood retention - main river channel
- xxxx Other - specify: xxxx _____

6. What counties does this organization serve? (List top five.)

| State Abbreviation | County Name | What percent of irrigated acres served by this organization are in this county? |
|--------------------|-------------|---|
| XXXX | XXXX | XXXX |
| XXXX | XXXX | XXXX |
| XXXX | XXXX | XXXX |
| XXXX | XXXX | XXXX |
| XXXX | XXXX | XXXX |

Governance Structure

7. Is this organization registered as a non-profit organization?

- xxxx 1 Yes 3 No

8. Is this organization an association of multiple irrigation districts or ditch companies?

- xxxx 1 Yes 3 No

9. Do water users have input into this organization's management decisions in the following ways?

a. Through voting on key decisions at regular meetings..... xxxx 1 Yes 3 No

b. Through representatives on an appointed board..... xxxx 1 Yes 3 No

c. Through representatives on an elected board..... xxxx 1 Yes 3 No

i. If through an elected board, how are users' votes allocated? (Check one.)

- xxxx 1 On a proportional basis (e.g. one vote per share/acre/acre-foot)
- 2 One vote per user/customer/account
- 3 Other - specify: xxxx _____

SECTION 2 – DELIVERY OF OFF-FARM WATER

1. Complete this section if your organization delivered water directly to farms or ranches in 2019. Skip to Section 3 if your organization did NOT deliver water directly to farms or ranches in 2019.

2. Check the category that best describes your organization:

- xxxx 1 Unincorporated mutual (an informal partnership among ditch users)
- 2 Incorporated mutual (a legal entity owned by shareholders who use a ditch system)
- 3 Irrigation district (an entity given statutory authority to assess taxes and/or fees for water delivery)
- 4 Project operated by U.S. Bureau of Indian Affairs
- 5 Other - specify: xxxx _____

Water Supply

3. What is the total amount of water brought into this system's storage and conveyance facilities in 2019? This total will be broken down by water source in items 3a and 3b below. This total should equal the sum of items 3a, i-v and 3b, i-iv..... =

| |
|-------------------|
| Acre-Feet xxxx |
|-------------------|

a. Of the total amount of water brought into this system's storage and conveyance facilities in 2019 (item 3), how much did this organization obtain directly from each of the following sources, either by contract, agreement, or settlement?

| | | Acre-Feet |
|---|---|-----------|
| i. A federal irrigation organization or project..... | + | xxxx |
| ii. A state irrigation organization or project..... | + | xxxx |
| iii. A private or local irrigation organization or project..... | + | xxxx |
| iv. A municipal or industrial water system..... | + | xxxx |
| v. Any other supplier..... | + | xxxx |

b. Of the total amount of water brought into this system's storage and conveyance facilities in 2019 (item 3), how much did this organization divert directly from each of the following sources?

| | | Acre-Feet |
|---|---|-----------|
| i. Natural streams, lakes, or ponds..... | + | xxxx |
| ii. A reservoir not reported in items 4a-4e..... | + | xxxx |
| iii. Another organization's drainage water directly entering this system..... | + | xxxx |
| iv. Groundwater pumped from wells owned by this organization..... | + | xxxx |

(a) How many water supply wells did this organization operate in 2019 as a source of water conveyed to farms and ranches?.....

| |
|----------------|
| Number xxxx |
|----------------|

(i) What was the total capacity of those wells?.....

| |
|----------------------------------|
| Gallons per Minute (GPM) xxxx |
|----------------------------------|

OR

| |
|------------------------------|
| Total Capacity (CFS) xxxx |
|------------------------------|

Acreage and Water Deliveries

Note: Please provide your best estimate if exact measurements are not available.

| | | |
|-----|--|-----------------|
| 4. | How many commercial farms and ranches could have received irrigation water directly from this organization in 2019?..... | Number xxxx |
| 5. | How many commercial agricultural acres could have received irrigation water directly from this organization in 2019?..... | Acres xxxx |
| 6. | How many commercial farms and ranches actually received irrigation water directly from this organization in 2019?..... | Number xxxx |
| 7. | How many commercial agricultural acres were irrigated in 2019 with water delivered by this organization?..... | Acres xxxx |
| 8. | What percentage of the commercial agricultural acreage that received irrigation water from your organization in 2019 also received water from other water delivery organizations?..... | Percent xxxx |
| 9. | How much water was delivered by this organization to the following users? Report water at the point it left the control of this organization. | Acre-Feet |
| a. | Commercial farms and ranches..... | + xxxx |
| b. | Residential or domestic users (include small, non-commercial farms and ranches)..... | + xxxx |
| c. | Other irrigation organizations..... | + xxxx |
| d. | Industrial plants, municipal water systems, recreational organizations (e.g. golf courses), public installations, etc..... | + xxxx |
| e. | Total water delivered to users..... | = xxxx |
| 10. | In addition to water reported in item 9, how much other water exited this organization's system in the following ways? (Exclude on-farm losses and crop consumptive use.) | Acre-Feet |
| a. | Released from the system for down-stream users..... | xxxx |
| b. | Released to meet in-stream or environmental flow requirements..... | xxxx |
| c. | Diverted for groundwater recharge..... | xxxx |
| d. | Conveyance losses..... | xxxx |
| e. | Other releases..... | xxxx |

Scheduling

11. Describe the (field) turnouts on your system where water is delivered to farmers:

| Turnout Type | Structures/Gates Operated by Organization Staff (Number) | Structures/Gates Operated by the Irrigator (Number) | Metered Diversion Structures (Percent) |
|------------------------|--|---|--|
| Calibrated slide gates | xxxx | xxxx | xxxx |
| Manual metergates | xxxx | xxxx | xxxx |
| Automated flow control | xxxx | xxxx | xxxx |
| Crested weir | xxxx | xxxx | xxxx |
| Pump | xxxx | xxxx | xxxx |
| Siphon tubes | xxxx | xxxx | xxxx |

12. What rotation schedule best describes the way this organization delivers water? (Check one.)

- xxxx 1 Fixed rotation / Modified Rotation / Unlimited rotation
 2 Days between deliveries (use average if not a fixed rotation)
 3 Hours of advanced notice required to schedule a delivery (if not a fixed rotation)
 4 Other - specify: xxxx _____

Days

13. What is the average rotation length (e.g. days between deliveries) on your system?.....

| |
|------|
| xxxx |
|------|

14. Does this organization require advanced notice to turn off deliveries?

- xxxx 1 Yes 3 No

15. How flexible is this organization in adjusting the duration of deliveries? (Check one.)

- xxxx 1 Changes in duration rarely allowed
 2 Fixed duration (e.g. 12 or 24 hours)
 3 Varying durations are allowed

Hours

16. What is the average duration for deliveries (e.g. keeping turnout gates open) on your system?.....

| |
|------|
| xxxx |
|------|

Water Transfers by this Organization

17. Report the water rights for users of this organization -

| | Acre-Feet of Rights | Acre-Feet of Contracts |
|--|------------------------|---------------------------|
| a. held by the organization..... | xxxx | xxxx |
| b. held directly by the users (farms and ranches)..... | xxxx | xxxx |

18. How much of the water reported above was transferred into this system through a water market contract and what was the average price per acre-foot? (Exclude market transfers among users within the organization service area.)

| Type of Water Transfer Contract | Total Amount of Water (Acre-Feet) | Average Price (Dollars per Acre-Foot) |
|---|--------------------------------------|--|
| a. One-year lease of water in 2019 | xxxx | xxxx |
| b. Multi-year lease of water active in 2019 | xxxx | xxxx |
| c. Permanent water right purchased within the last five years | xxxx | xxxx |

19. Report transfers of water out of your organization's water allocation.

| Source of Water Transferred Prior to Entering this System | Total Amount of Water (Acre-Feet) | Average Price (Dollars per Acre-Foot) |
|---|--------------------------------------|--|
| a. One-year lease of water in 2019 | xxxx | xxxx |
| b. Multi-year lease of water active in 2019 | xxxx | xxxx |
| c. Permanent water right purchased within the last five years | xxxx | xxxx |

20. If water rights were not purchased or sold, indicate the reasons why. (Check all that apply.)

- xxxx Water rights transfers into or within our region are not allowed
- xxxx Water rights transfers out of our region are not allowed
- xxxx Available water rights are too expensive to purchase
- xxxx Buyers of water rights are not willing to pay enough to offset or entice a sale
- xxxx Water supplies (across surface and groundwater sources) were generally sufficient in 2019
- xxxx Other - specify: xxxx _____

Water Allocation Within Your System

21. Are users able to transfer water or trade allocations within your system?

- xxxx 1 Yes – Continue 3 No – Go to item 22

| | |
|---|----------------------------------|
| a. How many trades occurred in 2019?..... | Number xxxx |
| b. What was the total amount of water traded within this system in 2019?..... | Acre-Feet xxxx |
| c. What was the average price per trade?..... | Dollars per Acre-Foot xxxx |

Storage and Conveyance Facilities

22. How many reservoirs did this organization operate in 2019 and what was their total capacity?

| Type | Number | Total Capacity (Acre-Feet) |
|--------------------------------------|--------|----------------------------|
| Storage reservoirs | xxxx | xxxx |
| Regulating or return flow reservoirs | xxxx | xxxx |

23. Report the details of your three largest reservoirs below.

| Reservoir Number | National Inventory of Dams (NID) ID Number ¹ | Complete these columns if NID ID number is not provided. | |
|------------------|---|--|--|
| | | Total Filled Capacity (Acre-Feet) | Total Withdrawals for Irrigation in 2019 (Acre-Feet) |
| 1 | xxxx _____ | xxxx | xxxx |
| 2 | xxxx _____ | xxxx | xxxx |
| 3 | xxxx _____ | xxxx | xxxx |

¹ This is a seven character code consisting of a two letter state code followed by five digits, including leading zeros. (e.g. AK00311)

24. Report the number of pumps used by this organization to deliver water in 2019.

| Type | Number | Average Capacity | | | Average Vertical Lift (Feet) |
|--|--------|--------------------------|----|----------------------|------------------------------|
| | | Gallons per Minute (GPM) | OR | Total Capacity (CFS) | |
| a. Used on water supply wells | xxxx | xxxx | OR | xxxx | xxxx |
| b. Used for diversion from streams, reservoirs, lakes or ponds | xxxx | xxxx | OR | xxxx | xxxx |
| c. Other pumps (e.g. relift within system) | xxxx | xxxx | OR | xxxx | xxxx |

Percent of Water Diverted

25. What are the estimated conveyance losses within this organization's delivery system?.....

| |
|------|
| xxxx |
|------|

26. How does this organization estimate conveyance losses? (Check one.)

- xxxx 1 Measurement at multiple points within the system
 2 Modeling or estimation
 3 Average loss coefficient
 4 Other - specify: xxxx _____

27. Report the off-farm water conveyance facilities that were used to deliver water or drainage flows in 2019.

| Type | Total Length (Miles) | Length of High-Volume Facilities (>50 CFS) (Miles) |
|--------------------------------------|-------------------------|--|
| a. Unlined main canals | xxxx | xxxx |
| b. Lined main canals | xxxx | xxxx |
| c. Main pipelines | xxxx | xxxx |
| d. Unlined lateral canals or ditches | xxxx | xxxx |
| e. Lined lateral canals or ditches | xxxx | xxxx |
| f. Lateral pipelines | xxxx | xxxx |
| g. Drains maintained | xxxx | xxxx |
| h. Tunnels | xxxx | xxxx |

28. For unlined canals, report the reason(s) for keeping canals unlined. Report miles for all that are applicable. (Check all that apply.)

- xxxx Lining is too expensive: xxxx _____ Miles
- xxxx Water loss is limited due to soils and geology: xxxx _____ Miles
- xxxx Canals may provide groundwater recharge: xxxx _____ Miles
- xxxx Other - specify: xxxx _____ : xxxx _____ Miles

System Constraints

29. Under normal water supply conditions, what percentage of time can the organization's water delivery system provide the flow volume and rate requested by irrigators during peak-flow water demand? (Check one.)

- xxxx 1 100 percent
- 2 80 to less than 100 percent
- 3 Less than 80 percent

30. Under normal water supply conditions, what components of the organization's water delivery system are constraining on meeting peak-flow water demands of users? Rate the significance of each of the following components.

| Level of Significance | |
|-----------------------|--|
| 1 = Significant | |
| 2 = Moderate | |
| 3 = Minimal | |
| 4 = Not constraining | |
| 5 = Not applicable | |
| xxxx | |
| xxxx | |
| xxxx | |
| xxxx | |
| xxxx | |
| xxxx | |

- a. Diversion (or regulating) reservoir capacity.....
- b. Conveyance canal capacity (CFS).....
- c. Turnout technology.....
- d. Water allocation rules.....
- e. Energy or peak-load management in reservoir operations.....
- f. Supply constraints due to environmental flow, lake elevation, or flood control requirements.....

SECTION 3 – ON-FARM GROUNDWATER

1. If this organization directly influenced groundwater use by farms or ranches in 2019 (if any part of Section 1, item 3 was answered "Yes"), continue. If not, go to Section 4.

2. How many farms and ranches, or accounts, in your service area pumped groundwater from their own wells for irrigation in 2019?.....

| | | |
|--|-----------------------------|--------------------|
| | Number of Farms and Ranches | Number of Accounts |
| | xxxx | xxxx |

3. How many active irrigation wells were in your service area in 2019? (Include only on-farm wells, not district managed well fields.).....

| | |
|--|--------|
| | Number |
| | xxxx |

4. How many total acres were irrigated in 2019 from the wells in item 3?.....

| | |
|--|-------|
| | Acres |
| | xxxx |

5. How many irrigation wells in your service area have been capped or deactivated prior to 2019? (Include only on-farm wells, not district managed well fields.).....

| | |
|--|--------|
| | Number |
| | xxxx |

6. Is on-farm access to groundwater legally restricted or regulated in your service area?
 xxxx 1 Yes 3 No

7. In 2019 was on-farm groundwater pumping in your area restricted due to interactions with stream flow or surface water levels?
 xxxx 1 Yes 3 No

8. Did groundwater users in your service area transfer pumped water between fields in 2019?
 xxxx 1 Yes 3 No

9. Are users allowed to transfer groundwater withdrawal rights across years?
 xxxx 1 Yes 3 No

10. Did this organization manage groundwater storage in 2019? Report intentionally managed recharge. Do not include recharge from normal on-farm irrigation.
 xxxx 1 Yes – Continue 3 No – Go to Section 4

11. What is the number of recharge sites managed by this organization and the total amount of water intentionally recharged in 2019?

| | Number | Acre-Feet | Percent Recoverable |
|---|--------|-----------|---------------------|
| a. Recharge basins..... | xxxx | xxxx | xxxx |
| b. Injection wells..... | xxxx | xxxx | xxxx |
| c. Other methods (e.g. on-field spreading)..... | xxxx | xxxx | xxxx |

SECTION 4 – MEASUREMENT OF WATER

Metering and Reporting of Delivered or Pumped Water

1. In 2019 did this organization use the following methods to calculate the amount of water used by farmers and ranchers for irrigation?

- a. Metering: Direct metering of head gates, pumps, or wells..... xxxx 1 Yes 3 No
- b. Time of use: Estimation based on time of operation and flow calculation..... xxxx 1 Yes 3 No
- c. Self-reporting: Farmers and ranchers report how much water they use..... xxxx 1 Yes 3 No
- d. Other methods (include evapotranspiration (ET) calculations) - specify: xxxx _____ xxxx 1 Yes 3 No

2. Is this organization required to report a summary of the amount of water used for irrigation to any of the following partners or authorities? (Check all that apply.)

- xxxx Users or shareholders in annual reports
- xxxx Water project managers (state or federal suppliers of water)
- xxxx Regulatory authority (e.g. state engineer, state department of water resources, or regional district)
- xxxx Other - specify: xxxx _____

| Frequency of Measurement | |
|--|------|
| 1 = Continuous (during all operations) | |
| 2 = Daily | |
| 3 = Weekly | |
| 4 = Monthly | |
| 5 = Other | |
| 6 = Not measured or estimated in 2019 | |
| a. | xxxx |
| b. | xxxx |
| c. | xxxx |
| d. | xxxx |

3. In 2019 what was the typical frequency of measurement or estimation of water quantities at each point within your organization's system?

- a. At entry to the system.....
- b. At points between entry to the system and before delivery to irrigators.....
- c. At delivery to irrigators (e.g. turnouts).....
- d. At exit or release from this organization's system.....

4. Does this organization use remote operation and monitoring (e.g. SCADA) to control movement of water at any point in the system?

- xxxx 1 Yes 3 No

5. Which of the following sources of water supply and demand data did this operation use during 2019 and how useful were they?

| Type of Information | Level of Usefulness to this Organization's Decisions 1 = Critical 2 = Somewhat useful 3 = Not used |
|---|---|
| Snowpack monitoring (e.g. USDA SNOTEL) | xxxx |
| Streamflow monitoring (e.g. USGS network) | xxxx |
| Weekly Drought Monitor | xxxx |
| Daily weather reports | xxxx |
| Evapotranspiration (ET) estimates | xxxx |
| Private sector data products | xxxx |
| Groundwater monitoring wells | xxxx |

SECTION 5 – DROUGHT PLANNING AND RESPONSE

1. Over the last twenty years, for surface water and/or ground water, in how many years did this organization experience:

| | Surface Water (Number of Years) | Ground Water (Number of Years) |
|--|------------------------------------|-----------------------------------|
| a. severe water curtailment (more than 25% below average water use)?..... | xxxx | xxxx |
| b. moderate water curtailment (10 to 25% below average water use)?..... | xxxx | xxxx |
| c. neither water curtailment nor abundance (within 10% of average water use)?..... | xxxx | xxxx |
| d. moderate abundance of water (10 to 25% above average water use)?..... | xxxx | xxxx |
| e. extreme abundance of water (more than 25% above average water use)?..... | xxxx | xxxx |
| f. an unknown trend in water supply?..... | xxxx | xxxx |

Total = 20 years Total = 20 years

2. When water shortfalls or curtailments occur, how does this organization manage water deliveries? (Check one.)

- xxxx 1 Amount of water delivered for each diversion is reduced proportionately through reduced diversion time (hours) or flow rate for all users
- 2 Time interval (number of days) increases between deliveries for all users
- 3 Deliveries temporarily halted or postponed for all users
- 4 Deliveries limited to junior rights holders while maintaining deliveries to senior rights holders as allowed

3. Does this organization have a formal drought plan that defines how to operate contingent on drought conditions?

- xxxx 1 Yes – Continue 3 No – Go to item 4

a. Does this organization have a formal drought plan that includes any of the following?

- i. Drought-triggered restrictions on water application or withdrawal rates..... xxxx 1 Yes 3 No
- ii. Cropland fallowing..... xxxx 1 Yes 3 No
- iii. Increased water prices..... xxxx 1 Yes 3 No
- iv. Water banking, increased storage or reduced use during normal years..... xxxx 1 Yes 3 No
- v. Acquisition of other water supply..... xxxx 1 Yes 3 No

4. Did any individual farmers engage in groundwater recharge (e.g. intentional excess on-field water application) during 2019 in order to increase groundwater availability in future years?

- xxxx 1 Yes 3 No

5. Are users within this organization’s area able to increase groundwater withdrawals during drought?

- xxxx 1 Yes 3 No

6. Which of the following external sources of data is this operation using to make long-run decisions beyond 2019?

| Type of Information | Level of Usefulness to this Organization's Decisions 1 = Critical 2 = Somewhat useful 3 = Not used |
|---|---|
| Three-month or longer weather forecasts | xxxx |
| Climate simulation models or regional climate reports | xxxx |
| USGS or other groundwater models | xxxx |
| Groundwater monitoring and trend analysis | xxxx |
| Reservoir storage reports | xxxx |

SECTION 6 – WATER CONSERVATION AND ENVIRONMENTAL CONCERNS

1. Using its own funds, in the last five years did this organization make the following types of investments to conserve water?

- a. Diversion/regulating reservoirs..... xxx 1 Yes 3 No
- b. Canal lining and/or piping upgrades..... xxx 1 Yes 3 No
- c. Flow rate and volume measurement..... xxx 1 Yes 3 No
- d. Providing financial cost-share or loan programs to farms or ranches to make capital improvements..... xxx 1 Yes 3 No
- e. Land fallowing compensation..... xxx 1 Yes 3 No
- f. Other - specify: xxx _____ xxx 1 Yes 3 No

2. If you answered "Yes" to any of the questions in items a-f, were the conservation investments done for any of the following reasons?

- a. Crop and pasture yield increase (productivity)..... xxx 1 Yes 3 No
- b. Irrigation water supply variability and production risk..... xxx 1 Yes 3 No
- c. Future surface water-supply scarcity..... xxx 1 Yes 3 No
- d. Future groundwater availability, groundwater recharge..... xxx 1 Yes 3 No
- e. Drainage or recharge impacts on water quality..... xxx 1 Yes 3 No
- f. Wildlife benefits, instream flows, and legal return flow requirements..... xxx 1 Yes 3 No
- g. Other - specify: xxx _____ xxx 1 Yes 3 No

3. Does this organization have a problem with vegetation along canals and ditches (e.g. phreatophytes such as salt cedar, Russian olive, or willow)?

xxx 1 Yes 3 No 4 Not Applicable

4. Does this organization have a problem with sediment accumulation, ditch stabilization, or leaks due to porous substrate material?

xxx 1 Yes 3 No 4 Not Applicable

5. How many acres of land were short-run fallowed or long-run converted to dry land by your organization under the program types listed below?

| | Acres |
|--|-------|
| a. Fallowed but not compensated for..... | XXXX |
| b. Fallowed and compensated for by this organization..... | XXXX |
| c. Fallowed and compensated for by another organization..... | XXXX |
| d. Ditch company share or water right buyouts..... | XXXX |
| e. Well decommissioning..... | XXXX |

6. Are any of these groundwater overdraft issues a concern in your service area?

- | | | | | |
|---|------|--------------------------------|-------------------------------|-------------------------------|
| a. Abandoned wells..... | XXXX | 1 <input type="checkbox"/> Yes | 3 <input type="checkbox"/> No | 4 <input type="checkbox"/> NA |
| b. Land subsidence..... | XXXX | 1 <input type="checkbox"/> Yes | 3 <input type="checkbox"/> No | 4 <input type="checkbox"/> NA |
| c. Water quality..... | XXXX | 1 <input type="checkbox"/> Yes | 3 <input type="checkbox"/> No | 4 <input type="checkbox"/> NA |
| d. Declining well capacity (lower well yields)..... | XXXX | 1 <input type="checkbox"/> Yes | 3 <input type="checkbox"/> No | 4 <input type="checkbox"/> NA |
| e. Stream interaction or base flow effects..... | XXXX | 1 <input type="checkbox"/> Yes | 3 <input type="checkbox"/> No | 4 <input type="checkbox"/> NA |
| f. Other - specify: XXXX _____ | XXXX | 1 <input type="checkbox"/> Yes | 3 <input type="checkbox"/> No | 4 <input type="checkbox"/> NA |

7. Is your organization concerned with the following water quality measures?

| | Water Coming In | Water Going Out | Groundwater |
|-------------------------|---|---|---|
| a. Salinity..... | XXXX 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No | XXXX 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No | XXXX 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No |
| b. Sediment..... | XXXX 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No | XXXX 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No | XXXX 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No |
| c. Nitrates..... | XXXX 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No | XXXX 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No | XXXX 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No |
| d. Other nutrients..... | XXXX 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No | XXXX 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No | XXXX 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No |
| e. Pathogens..... | XXXX 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No | XXXX 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No | XXXX 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No |
| f. Heavy metals..... | XXXX 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No | XXXX 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No | XXXX 1 <input type="checkbox"/> Yes 3 <input type="checkbox"/> No |

SECTION 7 – ASSETS, LIABILITIES, AND INVESTMENT

1. Does this organization produce annual financial statements for members or shareholders?

xxxx 1 Yes – Continue 3 No – Go to item 2

a. Are these financial statements regularly audited?

xxxx 1 Yes 3 No

2. What are the total assets of this organization?

Dollars

| | |
|---|------|
| a. Financial reserves..... | xxxx |
| b. Capital infrastructure and facilities..... | xxxx |
| c. Land and buildings..... | xxxx |
| d. Other..... | xxxx |

3. What were the total liabilities of this organization chargeable to irrigation and drainage as of December 31, 2019? Include outstanding bonds, notes, repayment contracts, drought emergency loans, and construction obligations. Exclude current liabilities.....

Dollars

| | |
|--|------|
| a. How much of this amount was obligated to the U.S. Bureau of Reclamation?..... | xxxx |
| | xxxx |

4. Report any investments by this organization over the past five years (2015 - 2019) for the construction of additional facilities, purchases of added equipment, or improvements in facilities or equipment for irrigation and drainage.

| Type | Number of Projects | Total Cost (Dollars) | Percent Financed |
|----------------------------|--------------------|----------------------|------------------|
| Improvements to Existing - | | | |
| Conveyance infrastructure | xxxx | xxxx | xxxx |
| Storage infrastructure | xxxx | xxxx | xxxx |
| Other infrastructure | xxxx | xxxx | xxxx |
| New investment in - | | | |
| Conveyance infrastructure | xxxx | xxxx | xxxx |
| Storage infrastructure | xxxx | xxxx | xxxx |
| Other infrastructure | xxxx | xxxx | xxxx |

SECTION 8 – REVENUE AND PRICE STRUCTURE

1. What was the total operating revenue for this organization in 2019? This total will be broken down by revenue source in items 1a-1g below. This total should equal the sum of items 1a-1g..... Dollars
xxxx

a. How much of the total operating revenue (item 1) was derived from volumetric (per acre-foot) price for irrigation water delivered to agricultural users?..... Dollars
xxxx

i. What was the average price for delivery of each acre-foot of water in 2019?..... Dollars per Acre-Foot
xxxx .__ __

- ii. Within your system, does the volumetric price vary in any of the following ways?
- (a) Varies by land class (e.g. water right seniority, soil type, location in system)..... xxxx 1 Yes 3 No
 - (b) Varies by crop choice..... xxxx 1 Yes 3 No
 - (c) Varies over time during the season..... xxxx 1 Yes 3 No
 - (d) Increases with the quantity of water delivered (e.g. increasing block rate)..... xxxx 1 Yes 3 No
 - (e) Decreases with the quantity of water delivered (e.g. decreasing block rate)..... xxxx 1 Yes 3 No

b. How much of the total operating revenue (item 1) was derived from groundwater pumping fees?..... Dollars
xxxx

i. What was the groundwater pumping fee per acre-foot?..... Dollars per Acre-Foot
xxxx .__ __

c. How much of the total operating revenue (item 1) was derived from assessments or taxes?..... Dollars
xxxx

i. What was the average per acre assessment or tax in 2019?..... Dollars per Acre
xxxx .__ __

- ii. The assessment -
- (a) varies by land class (e.g. water right seniority, soil type, location in system)..... xxxx 1 Yes 3 No
 - (b) varies by crop choice..... xxxx 1 Yes 3 No

d. How much of the total operating revenue (item 1) was derived from water delivered to non-agricultural users?..... Dollars
xxxx

e. How much of the total operating revenue (item 1) was derived from water delivered to other irrigation organizations?..... Dollars
xxxx

f. How much of the total operating revenue (item 1) was derived from electricity sales from hydropower?..... Dollars
xxxx

g. How much of the total operating revenue (item 1) was derived from other sources?..... Dollars
xxxx

Dollars

2. What amount of any non-irrigation revenue was credited back to irrigation users (e.g. dividends from electricity sales based on company shares)? Enter zero if there were no credits to irrigation users.....

| |
|------|
| xxxx |
|------|

3. Were any of the fees in 2019 (on the previous page) higher than prior years for any of the following reasons?

- a. A capital improvement..... xxxx 1 Yes 3 No
- b. Drought..... xxxx 1 Yes 3 No
- c. Other one-time organizational expense..... xxxx 1 Yes 3 No

SECTION 9 – COST OF OPERATION AND MAINTENANCE

Dollars

| |
|------|
| xxxx |
|------|

1. What were the total expenditures for this organization in 2019?

Percent

| |
|------|
| xxxx |
|------|

2. What percentage of the total expenditures were related to irrigation in 2019?.....

3. How much was spent by this organization in 2019 for water purchased through contracts or markets?

| Source of Water | Number of Contracts or Trades | Total Water (Acre-Feet) | Total Cost (Dollars) |
|---|-------------------------------|-------------------------|----------------------|
| Contracted water from federal water projects | xxxx | xxxx | xxxx |
| Additional deliveries from federal water projects | xxxx | xxxx | xxxx |
| Contracted from state water or local projects | xxxx | xxxx | xxxx |
| Non-contracted from state or local water projects | xxxx | xxxx | xxxx |
| Spot markets or leases for water deliveries | xxxx | xxxx | xxxx |

4. What were the total annual energy expenditures for this organization's irrigation activities in 2019?

| Fuel Source | Total Expense (Dollars) | Pumping Expense (Percent) |
|--------------|-------------------------|---------------------------|
| Electricity | xxxx | xxxx |
| Natural gas | xxxx | xxxx |
| Diesel oil | xxxx | xxxx |
| Other source | xxxx | xxxx |

5. What was the total amount spent on salaries and benefits for the irrigation operation in 2019?

| | Number of Full-Time Employees | Number of Part-Time Employees | Total Salary Costs (Dollars) | Total Benefit Costs (Dollars) |
|--|-------------------------------|-------------------------------|------------------------------|-------------------------------|
| Organization and office staff | xxxx | xxxx | xxxx | xxxx |
| Field staff (e.g. ditch riders, maintenance crews) | xxxx | xxxx | xxxx | xxxx |
| Outside staff (e.g. consultants) | xxxx | xxxx | xxxx | xxxx |
| Uncompensated labor | xxxx | xxxx | | |

- Dollars
6. What was the total amount spent on liability insurance for this organization in 2019?.....
- Dollars
7. What was the total amount spent on operation, maintenance, and repair of irrigation facilities, not including the water, energy, and labor costs listed above?.....
- Dollars
8. What was the total expenditure on debt payments in 2019?.....
- Percent
- a. What percentage of these payments were for interest?.....
- Dollars
9. What was the total expenditure on taxes in 2019?.....
10. What was the total expenditure for any treatment of irrigation water prior to delivery?.....
11. What was the total expenditure for any treatment of irrigation return flows prior to discharge or final release from the system?.....

SECTION 10 – CONCLUSION

1. Please describe, beyond the questions asked earlier in this survey, any major constraints on your organization's operations or on water use by the farms and ranches served by your organization:

2. Please describe, beyond the questions asked earlier in this survey, any management tools or programs that your organization relies on to engage in water conservation or drought preparedness:

3. Please provide any other information or notes about your organization that you feel are relevant to this survey:

| OFFICE USE ONLY | | | | | | | | | | | | | |
|------------------|------|-------------|------|-----------------------|------|-------|-------|---------|--------|-----------------------------|------|------|------|
| Response | | Respondent | | Mode | | Enum. | Eval. | R. Unit | Change | Office Use for POID | | | |
| 1-Comp | 9901 | 1-Op/Mgr | 9902 | 1-PASI (Mail) | 9903 | 9998 | 9900 | 9921 | 9985 | 9989 | | | |
| 2-R | | 2-Sp | | 2-PATI (Tel) | | | | | | _ _ _ _ - _ _ _ _ - _ _ _ _ | | | |
| 3-Inac | | 3-Acct/Bkpr | | 3-PAPI (Face-to-Face) | | | | | | Optional Use | | | |
| 4-Office Hold | | 4-Partner | | 6-Email | | | | | | 9907 | 9908 | 9906 | 9916 |
| 5-R – Est | | 9-Oth | | 7-Fax | | | | | | | | | |
| 6-Inac – Est | | | | 19-Other | | | | | | | | | |
| 7-Off Hold – Est | | | | | | | | | | | | | |
| S/E Name | | | | | | | | | | | | | |