APPENDIX (Section E)

IRRIGATION SCHEDULES
EXPLANATIONS AND INSTRUCTIONS
### CENSUS OF IRRIGATION: 1940

#### DEPARTMENT OF COMMERCE—BUREAU OF THE CENSUS

**WASHINGTON**

**SIXTEENTH CENSUS OF THE UNITED STATES: 1940**

**IRRIGATION—1**

This schedule is to be used ONLY for irrigation enterprises serving AREAS

**1—MANAGEMENT AND LOCATION OF ENTERPRISE**

1. Name of this canal or irrigation enterprise

2. Individual, partnership, or company controlling this enterprise:

3. Post-office address

4. Location:
   - State:
   - County (or counties):
   - Name of stream or other source:

5. Person furnishing information:

6. Address

**II—SOURCE OF WATER SUPPLY**

- Indicate type by X (if more than one type, mark each):
  - Stream
  - Pumped well
  - Flowing well
  - Spring
  - Stored storm water
  - Lake
  - City water
  - Sewage

**III—WATER RIGHTS**

6. Indicate type by X (if more than one type, mark each):
   - (a) Riparian rights
   - (b) Appropriation rights
   - (c) All other rights

**IV—TYPE OF ENTERPRISE**

9. Indicate type of enterprise as permitted by X:
   - Individual
   - Partnership
   - Cooperative

**V—LANDS—Continued**

10. (a) Area of land on which work is capable of supplying water in 1940

11. Area actually irrigated in 1939

12. Irrigated land from which crops were harvested in 1939

13. Irrigated area upon which crops failed in 1939 or no crops were planted for harvest in 1939

14. Irrigated land used only for grazing or pasture in 1939

**VI—DRAINAGE OF IRRIGATED LANDS**

Note: These questions relate only to lands that have been irrigated or are to be irrigated by this enterprise.

15. Area for which drains or drainage pumps have been installed

16. Additional area in need of drainage

**VII—DESCRIPTION OF WORKS**

Note: Figures on works not completed, and other helpful information should be given briefly on the back of this schedule, with actual reference to specific numbers:

- (a) Capacity of main canal heading:
  - Cub. ft. per sec.

- (b) Earth canal, length:
  - Miles

- (c) Lined canals (excluding flumes), length:
  - Miles

- (d) Concrete flumes (per cent):

- (e) Other materials (per cent):

90. Pipe lines, including check lines and farm pipe distribution lines. Report lengths to nearest tenth of mile:

<table>
<thead>
<tr>
<th>Material</th>
<th>Diameter in Inches</th>
<th>1-12 inches</th>
<th>13-24 inches</th>
<th>Over 24 inches</th>
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<tbody>
<tr>
<td></td>
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<td>Feet</td>
<td>Feet</td>
<td>Feet</td>
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<tr>
<td>(a) Concrete</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>(b) Metal (sheet, etc.)</td>
<td></td>
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<tr>
<td>(c) Wood-stave</td>
<td></td>
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<tr>
<td>(d) Other</td>
<td></td>
<td></td>
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</tbody>
</table>

- (e) Quantity per cent:

91. Reservoirs (a) Number (b) Total capacity (acres)

If reservoir is jointly owned, list below the name of reservoir, names of participating enterprises, and share of water in acre-feet.

92. Pumping equipment:

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Electric</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) Diesel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) Fluid</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(d) Gas</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(e) Other</td>
<td></td>
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<tr>
<td>(a) Centrifugal</td>
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<tr>
<td>(b) Turbine</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>(c) Plunger</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(d) Other</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

93. Amount of water pumped in 1939, acre-feet

94. Flowing wells (a) Number (b) Total yield (g.p.m.)

95. Pumped wells (a) Number (b) Total yield (g.p.m.)

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**CODES**

- Source of Supply Code
- Drainage Basis Code
- Water Rights Code
- Type Code

- Reduced facsimile
SCHEDULES

names or identity, from your census reports. Only sworn census employees will see your statements. Data collected will be used solely for preparing Census Reports Cannot Be Used for Purposes of Taxation, Regulation, or Investigation.

VIII.—CAPITAL INVESTED IN ENTERPRISE

<table>
<thead>
<tr>
<th>SCHEDULE</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>20. Cost of irrigation works and equipment to date 1929...</td>
<td>8.95</td>
</tr>
<tr>
<td>21. If works were not completed December 31, 1929, estimate additional investment required for completion</td>
<td>(Cost item)</td>
</tr>
<tr>
<td>27. Amount actually expended for water rights...</td>
<td>8.25</td>
</tr>
</tbody>
</table>

IX.—MAINTENANCE AND OPERATION

<table>
<thead>
<tr>
<th>SCHEDULE</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>20. Cost of maintenance and operation in 1929...</td>
<td>8.25</td>
</tr>
<tr>
<td>23. If works were owned or operated, amount paid for labor and materials</td>
<td>(Cost item)</td>
</tr>
</tbody>
</table>

X.—QUANTITY OF WATER USED IN 1929

<table>
<thead>
<tr>
<th>SCHEDULE</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>20. Total quantity of water delivered to irrigators during season of 1929...</td>
<td>8.25</td>
</tr>
</tbody>
</table>

EXPLANATIONS AND INSTRUCTIONS

LEGAL REQUIREMENT.—A report of every irrigation enterprise in the United States or Alaska, required by the Decennial Census Act of the Congress, approved June 18, 1929.

DEFINITION OF AN IRRIGATION ENTERPRISE.—An irrigation enterprise, for the purpose of the census, is a canal or other water-conducting system, project, works, or a reservoir supplying water for irrigation, or a combination of these operated under a single management by either an individual, a partnership, or an incorporated enterprise. Water enterprises not for irrigation purposes, are not included.

Land should be classified as irrigated which has water supplied to it for agricultural purposes by artificial means or by seepage from canals, reservoirs, or irrigation lands; land for which natural ground water sufficiently near the surface to support plant life should not be classified as irrigated. Land which is irrigated during high-water months should be classified as irrigated if water is caused to flow over it by dams, canals, or other works, but should not be classified as irrigated if the overflow is due to natural causes alone.

This schedule is to be used by enumerators to report irrigation enterprises serving less than five farms. Reports for larger enterprises will be received by enumerators only when they are specifically instructed by their superiors to do so, and enumerators will then use schedule—2. However, enumerators are cautioned to return reports for all pumping plants, wells, canals, or reservoirs operated by individuals or groups of four or less who also obtain water from enterprises serving more than four farms.

If the Farm and Ranch Schedule (Questions 31 and 20) shows that the farm was irrigated, the enumerator should ask whether the irrigation enterprise reported under Question 20 serves less than five farms in all. If the answer is “Yes,” he should obtain the names of all the farms involved, and, for other suitable enterprises, obtain the information needed to fill out this Irrigation Schedule, unless, upon further inquiry, he is told that the Irrigation Schedule has already been filled out, and returned, from the Bureau of the Census. If such a schedule has been received, he should ask whether it has been completed and return it. In the absence of this information, the enumerator should make an entry to that effect on his daily report. The enumerator should satisfy himself, however, that it was actually a United States Decennial Census Irrigation Schedule, and not some other form of schedule, which was received and filled out, and that the irrigation enterprise is described was none other than the one about which he is inquiring.

If the enterprise has received an Irrigation Schedule by mail and has not filled it out, or has filled it out but has not returned it, the enumerator should obtain it. Only a few schedules will have been received by mail by enumerators serving less than five farms, these being individuals or partnerships in isolated sections, or enterprises whose size was not definitely known by the Bureau of the Census.

ALL QUESTIONS ARE TO BE ANSWERED.—If exact information is not available, get the best estimate possible and write “Est.” beside the answer. Use the margin or back of this schedule when additional space is necessary to make the answers clear, definite, and complete.

SECTION I.—If a farm is supplied with water by more than one canal or enterprise, and three canals supply water to more than three other farms, a separate schedule should be used for each canal; but if a farm is supplied with water by more than one canal or enterprise, and these canals supply water to other farm or farms, all main canals should be included on a single schedule. The names, if the canals are named, should be written on the blank lines under Question 2.

SECTION II.—If water is assured from more than one source, each should be marked and the principal source immediately identified. If water is assured from two or more streams or other sources, the name of each should be given.

"Stored storm water" refers to reservoirs filled by storing storm water from channels that carry water only during storms and are not classed as streams. If water is obtained from a reservoir filled from a stream, the stream should be given as the source.

Under "Drainage basin," the name of the smallest stream that is well kept and which is shown on ordinary maps should be given. The inquiry should be answered, even if water is not obtained from a stream.

SECTION III.—These questions relate to the rights of the enterprise to take water from the stream or other source from which it is obtained. Each enterprise has several rights, each of which should be shown; and many enterprises will fall in more than one of the classes. In the instance the right should be reported in the class in which it stands at the time of enumeration.

SECTION IV.—"Individual" or "Partnership" enterprises are those belonging to individual farmers or groups of farmers associated without formal organization. "Cooperatives" enterprises are controlled by the water users combined in some organized form of cooperation under State laws, the most common form being the stock company, the stock of which is owned by the water users.

SECTION V.—The answer to Question 20 must conform to the Census definition of a farm, as shown on the Farm and Ranch Schedule.

SECTION VI.—This section relates only to lands which have been irrigated or will be irrigated by this enterprise. This "Additional area in need of drainage" will normally be small. Enumerators should only include the number of acres which they consider possible, based on information furnished by the officials of the enterprise and by others in the community; otherwise, they should not attempt to make extended field observations.

SECTION VII.—Main canal is any channel conveying water from the source of supply to the tract of land to be irrigated. A lateral canal is a branch of a main canal conveying water from a main canal to one or more farms. Farm ditches, which distribute the water within the boundaries of the individual farms, should not be reported. Farm pipe distribution lines should be reported, using best figures obtainable. If the capacity of a canal is not actually measured, it should be estimated by multiplying the area (in acres) of the water surface when reservoir is full, by the average depth (in feet) above the bottom, by the width of the canal in feet.

Under "Kinds of motor or engines," if windmills are used, for "Capacity," give diameters of wheels rather than horsepower. If any unusual type of pump or other water-using device is used, describe it briefly on the margin or back of this schedule, with suitable references to the question number.

"Average depth," gives the vertical distance, in feet, between the average level of the water in the source of supply when the pipe is run through the usual capacity and the average level to which the water is lifted. Do not consider litter or velocity losses or horizontal distances. If more than one pump is reported, give the average depth for each pump separately, with corresponding yield.

SECTION VIII.—In answering Question 25, include the original cost of the irrigation works plus the cost of extensions and improvements; also the cost of equipment, buildings, and land used for maintenance and operation, but no water rights. If works are not completed, give investment to December 31, 1929. If there are no records of cost, or if the owners have done all the work of the construction, the best estimate may be secured and reported, including the estimated value of the work done by the owners. If irrigation works have been built, do not include their cost in the answer to Question 25.

SECTION IX.—In answering Question 28, report only the costs of maintenance, including ordinary cleaning and repairs; and operation, including fuel and power and attendance.

SECTION X.—The answer to Question 29, if the total supply is pumped, should be the same as the answer to Question 25(a). If the water supply is in excess of two or more sources, pumped or gravity, the answer to Question 29 should be the total amount of water delivered from all sources.
DEPARTMENT OF COMMERCE—BUREAU OF THE CENSUS
WASHINGTON

SIXTEENTH CENSUS
OF THE
UNITED STATES: 1940

IRRIGATION—2

IV.—TYPE OF ENTERPRISE

Nutts.—The types of enterprises recognized by the census are as follows: Individual or partnership enterprises, which belong to individual farmers or to groups of farmers associated without formal organization. It is not always possible to distinguish between partnership and cooperative enterprises, but in the absence of other evidence, this classification is important. Cooperative enterprises, which are controlled by the water users, are also organized in some organized form of cooperation under state laws. The most common form of organization is the stock company, the stock of which is owned by the water users. In New Mexico many of these cooperative associations are operated under rules regulating "common ditch" irrigation districts, which are public corporations established under State laws and empowered to issue bonds to fund the purchase or construction of irrigation works and to levy and collect taxes for the payment of bonds and interest thereon and for the payment of the cost of operation and maintenance. In some States there are called water improvement districts, water conservation districts, water storage districts, etc.

Carry Act enterprises, established under the Federal law of August 18, 1894, granting each of the States in the arid regions 1,000,000 acres of land on condition that the State provide for its irrigation and under amendments to that law granting additional acres to Idaho and Wyoming. Practically all Carry Act projects are now organized as irrigation districts or other cooperative enterprises and should be so reported.

Commercial enterprises, incorporated or otherwise, and including public utilities regulated by State commissions, which supply water for compensation to farmers who can sell the water to others. Irrigators obtaining water from such enterprises are required to pay annual charges based on the amount of water used. In some States irrigation districts have been established to purchase the water from the public utilities and sell it to the irrigators.

United States Bureau of Indian Affairs enterprises, established under various acts of the Congress providing for the construction by that Service of works for the irrigation of land in Indian reservation.

United States Bureau of Reclamation enterprises, established under the Federal law of June 17, 1902, providing for the construction of irrigation works with the surplus of the sale of public lands or other sources.

State enterprises.—In a few States the States themselves have carried out irrigation enterprises under special legislation.

City or sewage irrigation enterprises.—This type is self-explanatory.

V.—LANDS

10. (a) Are any lands in this enterprise irrigated by water supplied by any other enterprise? (Yes or No)

(b) If answer to Question 10(a) is "Yes," give names of other enterprises and show acreage of this enterprise irrigated by such water:

<table>
<thead>
<tr>
<th>Name of Other Enterprise</th>
<th>Acreage</th>
<th>Total Acreage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>XXXX XXXX</td>
</tr>
</tbody>
</table>

(c) Does this enterprise supply water to other enterprises? (Yes or No)

(d) If answer to Question 10(c) is "Yes," give names of the other enterprises receiving the water:

Name of Other Enterprises

<table>
<thead>
<tr>
<th>Code</th>
</tr>
</thead>
</table>

III.—WATER RIGHTS

11. Fares supplied with water by this enterprise in 1935 (see Explanations and Instructions). Number

12. Total irrigable acreage this project will cover when completed.

13. Area to which existing works are capable of supplying water in 1940

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### SCHEDULES

#### VII—LANDS—Continued

14. (a) Area actually irrigated in 1939. 
   - Acres

(b) Irrigated land from which crops were harvested in 1939. 
   - Acres

(c) Irrigated area upon which crops failed in 1939 and on which crops were planted for harvest in 1939. 
   - Acres

(d) Irrigated land used only for grazing or pasture in 1939. 
   - Acres

#### VI—DRAINAGE OF IRRIGATED LANDS

Notes: 1. On irrigation systems or lands that have been irrigated or are to be irrigated by this enterprise.

15. Areas for which drainage or drainage systems have been installed. 
   - Acres

16. Additional area in need of drainage. 
   - Acres

#### VII—DESCRIPTION OF WORKS

Notes: A trunk main is any channel conveying water from the source of supply to the trunk main in the irrigation district; a trunk main is a main channel conveying water from main trunk to one or more laterals. Trunk laterals, which distribute the water within the boundaries of the irrigation district, are shown on the map. Trunk laterals are not specified hereon and are given only as a check on the scope of the subdivision, with suitable references to the plans involved.

17. Diversion dam: (a) Number (b) Material

18. Storage dams: (a) Number (b) Material

19. Canals (main and laterals, not including farm ditches):

(a) Capacity at main headworks: Cu. ft. per sec.

(b) Earth canals, length: Miles

(c) Lined canals (including flumes), length: Miles

(d) Concrete: Miles (nearest tenth)

(e) Other (specify material): Miles (nearest tenth)

20. Pipe lines, including siphons and farm pipe distribution lines. Report lengths to nearest tenth of mile.

<table>
<thead>
<tr>
<th>Material</th>
<th>Diameter of Pipe</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1-12 inches</td>
</tr>
<tr>
<td>(a) Concrete</td>
<td>Miles</td>
</tr>
<tr>
<td>(b) Metal (iron, steel, etc.)</td>
<td>Miles</td>
</tr>
<tr>
<td>(c) Wood</td>
<td>Miles</td>
</tr>
<tr>
<td>(d) Other</td>
<td>Miles</td>
</tr>
</tbody>
</table>

21. Reservoir: (a) Number (b) Total capacity (ac.-ft.)

- To be stated as it appears on the plans of the irrigation enterprise. When the name of the reservoir is given on the plan, the name should be used.

22. Pumping equipment:

<table>
<thead>
<tr>
<th>Kind of Motor</th>
<th>Numbers</th>
<th>Total Horsepower</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Electric</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) Internal-combustion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Kind of Pump</th>
<th>Numbers</th>
<th>Total Capacity (gall. per min.)</th>
<th>Average Lift (ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Centrifugal</td>
<td></td>
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<tr>
<td>(b) Turbine</td>
<td></td>
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<td></td>
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<tr>
<td>(c) Plunger</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>(d) Other (specify kind)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(b) Amount of water pumped in 1939, acre-feet

23. Pumped wells: (a) Number (b) Total yield (g.p.m.)

24. Flowing wells: (a) Number (b) Total yield (g.p.m.)

#### VIII—CAPITAL INVESTED AND FINANCING

25. Cost of irrigation works and equipment to December 31, 1939. 
   - Dollars

26. If works were not completed December 31, 1939, estimate additional investment required for completion.

27. Total indebtedness, December 31, 1939. 
   - Dollars

28. Amount of water under consideration in 1939 (considering special assessments).

29. Amount actually invested in water rights to December 31, 1939. 
   - Dollars

30. Was the enterprise in arrears in payment of principal or interest on bonds or other fund obligations, December 31, 1939? 
   - Yes/No

31. Amount expended for construction, etc. (capital expenditures), in 1939. 
   - Dollars

#### IX—MAINTENANCE AND OPERATION

32. Cost of maintenance and operation in 1939. 
   - Dollars

33. Area under which annual charges were assessed in 1939.

34. Average annual charge per acre in 1939. 
   - Dollars

#### X—QUANTITY OF WATER USED IN 1939

35. Of the land assessed with the annual charge, what acreage used no water in 1939? 
   - Acres

36. Was the water measured as it was received by the system? 
   - Yes/No

37. Average volume of water entering the system during season of 1939, cubic feet per second. 
   - Cubic feet

38. Periods during which water was run for irrigation in 1939:

<table>
<thead>
<tr>
<th>Months</th>
<th>Day</th>
<th>Hours</th>
<th>For Cropper Use Only</th>
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</thead>
<tbody>
<tr>
<td>(1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2)</td>
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<td></td>
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<tr>
<td>(3)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Total</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

39. Is water measured as it is delivered to each irrigator? 
   - Yes/No

40. Total quantity of water delivered to irrigators during season of 1939, acre-feet.

41. Total amount of wages and salaries paid and payable for 1939. 
   - Dollars

42. Total number employed during week ending April 29, 1939. 
   - Number

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EXPLANATIONS AND INSTRUCTIONS

Legal requirements. — A report of every irrigation enterprise in the United States is required by the Decennial Census Act of the Congress, approved June 18, 1920.

Enterprises which mail their reports to the Bureau of the Census will not be visited by field representatives unless the reports are incomparably or have been delayed.

Definition of an irrigation enterprise. — An irrigation enterprise, for the purpose of the census, is a canal or other water conduit system, pumping plant, or reservoir supplying water for irrigation, or any combination of these operated under a single management by either an individual, a partnership, a company, or other organization. The classification of enterprises see note under Section IV on the face of the schedule.

Land should be classified as irrigated which has water supplied to it for agricultural purposes by artificial means or by storage. The land shall be classified as irrigated if water is stored during high-water periods should be classified as irrigated if water is secured to flow over the land by ditches, canals, or other works, but should not be classified as irrigated if the overflow is due to natural causes alone.

All questions are to be answered. — If correct information is not available, give the best estimate that can be made. Do not blank the answer. Use the blank lines following these Explanations and Instructions when additional space is necessary to make the answers clear, definite, and complete.

Section II. — Census tabulations are made according to counties. Therefore, if the enterprise includes lands in more than one county, a separate schedule should be prepared for the portions of the lands and system in each county. If more than a single schedule and further instructions are needed to make this separation accurately, the adjustment should be explained to the Bureau and the added additional blank and instructions will be supplied.

Section III. — If water is secured from more than one source, each should be marked and the principal source indicated by underlining. If water is secured from two or more sources or from a reservoir, the name of each should be given.

"stored storm water" refers to reservoirs filled by storing storm water from channels that carry water only during storms and are not classified as streams. When water is obtained from a reservoir filled from a stream, the stream should be given as the source.

Under "Drainage basin," give the name of the main river system to which the "stream or other source" is tributary and which drains the general region where the enterprise is located. If the source or sources of water are located in drainage basins different from the basin in which the land is served by the enterprise and located, the circumstances should be clearly explained in the space following these instructions.

Section IV. — These questions relate to the rights of the enterprise to take water from the "stream or other source." Some enterprises have several rights, each of which should be shown; and many rights will fall in more than one of several classes. In such instances the right should be reported in the class in which it stands on December 31, 1920.

Section V. — While most small partnership enterprises will be reported on the Irrigation—1 schedule by enumerators, this Irrigation—2 schedule should be filled out and returned by the enterprise to which it is sent even though it may include less than 5 farms. The extra copy should be retained in the files of the enterprise for future reference and to show to enumerators who may request a report.

Section VI. — In answering Question 11, the Census definition for a farm should be observed, as follows:

"A farm, for Census purposes, is all the land on which some agricultural operations are performed by one person, either by his own labor alone or with the assistance of members of his household, or hired employees. The land operated by a partnership is likewise considered a farm. A farm may consist of a single tract of land, or a number of separate tracts, and the several tracts may be held under different tenures, as when one tract is owned by the farmer and another tract is rented by him. When a landlord has one or more tenants, renters, croppers, or managers, the land operated by each is considered a farm. + + +

Do not report a farm as any tract of land of less than 3 acres, unless its agricultural products in 1939 were valued at $320 or more."

Under "Total irrigable acreage the project will cover when completed," only the acreage to which it is definitely planned to supply water should be reported. Possible extensions not yet definitely planned should not be included.

The answer to Question 14(a) should include all land to which the enterprise is ready and able to supply water, whether the land is farmed or not.

The "Area actually irrigated in 1939" should be limited to land to which water was actually supplied during that year. This should not include land which is under the system and sometimes irrigated, but which was not watered in 1939, and land not yet irrigated on farms that are in process of reclamation.

The answer to Question 14(a) should be the total of all land irrigated. If the cropland harvested, irrigated pasture, and irrigated area upon which crops failed do not equal the total reported under Question 14(a), write an explanation on the blank lines following these Instructions.

Section VII. — This section relates to lands which have been irrigated or are to be irrigated by this enterprise. The "Additional area in need of drainage" will necessarily be estimated. Officials should make the best estimates possible, based on information obtained from the records of the enterprise, from others in the community, and from their own observations, but they should not attempt to make extended field observations.

If water from drainage pumps or other drainage system is used for irrigation, report the name of the drainage enterprise in answering Question 6; include the amount of drainage water thus used in answering Question 41: include the amount of the capital costs of the drainage works which has been charged to irrigation in answering Question 23; and include the amounts of operating and maintenance costs of the drainage pumps or systems which are chargeable to irrigation in answering Question 22. Costs and other information should not be duplicated on the Irrigation Schedules and the Drainage Schedules. Regulate expenditures made between Irrigation and drainage items in spaces following these Instructions.

If water from drainage pumps or other drainage system is used for irrigation, report the name of the drainage enterprise in answering Question 6; include the amount of drainage water thus used in answering Question 41: include the amount of the capital costs of the drainage works which has been charged to irrigation in answering Question 23; and include the amounts of operating and maintenance costs of the drainage pumps or systems which are chargeable to irrigation in answering Question 22. Costs and other information should not be duplicated on the Irrigation Schedules and the Drainage Schedules. Regulate expenditures made between Irrigation and drainage items in spaces following these Instructions.

Section VIII. — The total length, in miles, of the distribution pipes on farms (main and laterals) for the entire project, should be included in the answer to Question 20, using the best figures or estimates obtainable. These farm pipe lines should be in addition to the pipe lines owned by the enterprise. The cost of farm pipe lines should not be included in the answer to Question 25. Describe the conditions in the space following these Instructions, showing lengths and sizes of the pipe lines owned by the enterprise separately from the lengths and sizes of the farm pipe lines.

If the capacity of a reservoir is not known, it should be estimated by multiplying the capacity in acres (in square feet) of the water surface when reservoir is full, by the average depth (in feet) above the level of the bottom of the outlet. The product will be "acre-feet."

If yields of other flowing or pumped wells are not known, obtain the best estimate possible.

Under "Kind of motor or engine," if windmills are used, give "Capacity" give diameters of wheels rather than horsepower.

Under "Kind of pump," if some unusual type of pump or other water-lifting device is used, describe it briefly on the blank lines following these Instructions.

Under "Avergage lift," give the vertical distance, in feet, between the average level of the water in the source of supply when the pump is running at usual capacity and the average level to which the water is lifted. Do not consider friction and velocity heads or horizontal distances. If more than one pump is reported, give the average lift for each pump separately, with corresponding yield.

Section IX. — In answering Question 25, include the original cost of the irrigation works plus the cost of extensions and improvements; also the cost of equipment, buildings, and land used for maintenance and operation, but not water rights. If works are not completed, give the estimated value of the work done by the owner. Only such costs for drainage works as are chargeable to irrigation should be included. (See Section VI.)

Under "Water rights," include filing and legal fees paid by the enterprise in securing them, and, if they were purchased by the enterprise, give the purchase price.

Section X. — In answering Question 29, report only the costs of maintenance, including ordinary cleaning and repairs, and operations, including fuel, electric current, oil, and attendance.

Section XI. — In replying to Question 37, if measurements of the water were made in units other than cubic feet per second, indicate the units actually used, such as "gallons per minute," "cubic feet per second," etc. If water was not measured, give best estimate possible in answer to Question 38.

The answer to Question 41, if the total supply is pumped, should be the same as the answer to Question 23(0). If the water supply is obtained from two or more sources, pumped or gravity, the answer to Question 41 should be the total amount of water delivered from all sources. If deliveries were not measured, give best estimate possible.

Section XII. — In replying to Question 42, show total amount paid to all employees, including officials and members of the organization, for services in 1939 on or for the benefit of that portion of the enterprise in the county for which this schedule is estimated. (See Instructions for Section 1.) Do not include payments to a contractor for work done by him or his employees, nor payments to employees working on drainage, power, or on any other operation not chargeable to irrigation or which has been reported on any other schedule.

In replying to Question 43, show only the number employed during the week specified, including officials and numbers in the management on or for the benefit of that area of the enterprise located in the county for which this schedule is made. (See Instructions for Section I.) Do not include employees of the owner or others not chargeable to irrigation or reported on other census schedules.