

2008 FARM AND RANCH IRRIGATION SURVEY

Form Number: 08-A062
(08/13/08)



National Agricultural
Statistics Service

Please return your
completed report to:

Census of Agriculture
1201 East 10th Street
Jeffersonville, IN 47132

OFFICE USE ONLY

0009	0010	0011

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

Everyone who receives a form must return one by mail or via the Internet at www.agcensus.nass.usda.gov. Your report is due by **February 17, 2009**. To fill out the paper form, use a black or pen ballpoint pen. **Duplicate forms?** If you received extra report forms for the SAME farming operation, return all report forms in the same envelope with this completed report.

Questions? Call us toll-free at **1-888-424-7828**. Thank you for your cooperation.

SECTION 1 ACREAGE IN 2008

Report land owned, rented, or used by you, your spouse, or by the partnership, corporation, or organization named on the label above. Include ALL LAND, REGARDLESS OF LOCATION OR USE - cropland, Conservation Reserve Program (CRP) and Wetlands Reserve Program (WRP) land, pastureland, rangeland, woodland, idle land, farmsteads, etc.

	NONE	Number of Acres
1. All land owned.	<input type="checkbox"/>	0025
2. All land rented or leased from others , including land worked by you on shares, used rent free, in exchange for services, payment of taxes, etc. Include Federal, State and railroad land leased on a per-acre basis. Exclude all land (i.e., private, Federal, State, railroad, etc.) used on a per-head or animal unit month (AUM) basis under a grazing permit.....	<input type="checkbox"/>	+ <div style="border: 1px solid black; padding: 2px;">0026</div>
3. All land rented or leased to others , including land worked on shares by others and land subleased.	<input type="checkbox"/>	- <div style="border: 1px solid black; padding: 2px;">0027</div>
		Number of Acres
4. TOTAL ACRES in this operation (Items 1 + 2 - 3 = item 4).	=	0028

PENALTY FOR FAILURE TO REPORT

Notice: Response to this inquiry is required by law (Title 7, U.S. Code). By the same law, YOUR REPORT IS CONFIDENTIAL and it will only be used for statistical purposes. Your report CANNOT be used for purposes of taxation, investigation, or regulation. The law also provides that copies retained in your files are immune from legal process.

SECTION 2 LAND IN 2008

Report all acres in this operation (SECTION 1, item 4) in column 1. If the same land had more than one use in 2008, report that land only once in the first use listed below that applies.

For column 2, report all irrigated land in this operation for items 1 and 3. In addition to fully irrigated land, report as irrigated any land to which partial, supplemental, or semi-irrigation was applied. Also include any acreage which received only preplant irrigation (watered before planting). Hayland, pastureland, or rangeland should be reported as irrigated if spring flood water was spread by canals, ditches, spreader dikes, pipes, or other works.

	NONE	Column 1 Number of Acres	NONE	Column 2 Acres Irrigated
1. Cropland – Report acres only once in one of the following categories:				
a. Cropland harvested - Include all land from which crops were harvested or hay was cut, all land in orchards, citrus groves, vineyards, berries, and nursery and greenhouse crops, Christmas trees, and short-rotation woody crops.	<input type="checkbox"/>	0029	<input type="checkbox"/>	0030
b. Cropland used only for pasture or grazing - Include rotation pasture and grazing land that could have been used for crops without additional improvements.	<input type="checkbox"/>	0031	<input type="checkbox"/>	0032
c. Other cropland – Include cropland used for cover crops, cropland on which all crops failed, cropland in cultivated summer fallow, and cropland idle.	<input type="checkbox"/>	0033	<input type="checkbox"/>	0034
2. Woodland – Include woodland pastured and woodland not pastured.	<input type="checkbox"/>	0035		
3. Other pastureland and rangeland – Include any pastureland other than cropland and woodland pastured.	<input type="checkbox"/>	0037	<input type="checkbox"/>	0038
4. All other land – Include land not reported above. Include land in farmsteads, buildings, livestock facilities, ponds, roads, wasteland, etc.	<input type="checkbox"/>	0039		
5. TOTAL ACRES - Add acres in each column and enter the totals. (Column 1 total should be same as SECTION 1, item 4.)	<input type="checkbox"/>	Number of Acres 0041	<input type="checkbox"/>	Acres Irrigated 0042

NOTE: If the total acres irrigated in column 2, item 5 is "0", go to SECTION 21.

	County Name	State
6. For this operation what county and State had the most irrigated acres? . . .	0950	0951

SECTION 3 GOVERNMENT PROGRAMS IN 2008

1. During 2008, did this operation receive direct payments, counter-cyclical payments, loan deficiency payments, marketing loan gains, or participate in any quota programs or any buy-out programs?

⁰⁶⁹¹ 1 Yes 2 No

2. Does this operation currently participate, or has it participated in the past five years, in a government payment program or technical assistance program for irrigation and/or drainage improvements? (Payment programs may include cost-share or incentive payments or only technical assistance for system design or on-farm management.)

⁰⁷⁹⁵ 1 Yes – Continue 2 No – Go to SECTION 4

a. Mark (X) all programs that apply –

- ⁰⁶⁹⁸ 1 USDA - Environmental Quality Incentive Program (EQIP) - Please check program →
- 2 Other USDA conservation payment programs (CSP, CRP, WRP, FWP, GRP, etc.)
- 3 USDA-NRCS Conservation Technical Assistance program
- 4 Non-USDA Federal programs – Include EPA, Bureau of Reclamation, or other programs
- 5 State programs (including CREP), local water management programs, or supply district programs
- 6 Other – Specify: _____

0794	
1	<input type="checkbox"/> EQIP – general
2	<input type="checkbox"/> Klamath River Basin
3	<input type="checkbox"/> Ground and Surface Water Conservation

SECTION 4 METHOD OF WATER DISTRIBUTION ON THIS OPERATION IN 2008

Report acres irrigated by each type of ON FIELD distribution or delivery system listed below. If same land was irrigated by more than one method of distribution, report acres irrigated by each method used.

DO NOT report information for the delivery system used to convey water from the source to the field. Report information for the field distribution system.

**Acres Irrigated by Gravity System
(Field Water Conveyance System)**

		None	Total	Open Un-lined Ditch	Open Lined Ditch	Poly Tubing (or other single-year-use, lay-flat tubing)	Above Ground Pipe(except poly-tubing) ¹	Under-Ground Pipe ²
1. Gravity irrigation								
a. Down rows or furrows.....	<input type="checkbox"/>		0855	0859	0857	0056	0057	0858
b. Controlled flooding (between borders or within basins).....	<input type="checkbox"/>		0865	0869	0867	0066	0067	0868
c. Uncontrolled flooding (rangeland, pastureland, etc.)..	<input type="checkbox"/>		0875	0879	0877	0076	0077	0878
d. Other.....	<input type="checkbox"/>		0885	0889	0887	0086	0087	0888

¹ Include gated-pipe and riser or hydrant systems connected to above ground pipe.

² Include riser or hydrant systems connected to underground pipe.

Acres Irrigated by Sprinkler System

		None	Very Low Pressure (Under 15 PSI)	Low Pressure (15 to 29 PSI)	Medium Pressure (30 to 59 PSI)	High Pressure (60 PSI or more)
2. Sprinkler irrigation – Inlet pressure						
a. Center pivot systems (circle).....	<input type="checkbox"/>		0569	0576	0575	0570
b. Linear move tower systems (and other linear continuous move drive systems).....	<input type="checkbox"/>		0571	0577	0578	0579
c. Solid set and permanent systems (except low-flow micro systems).....	<input type="checkbox"/>		0568	0565	0566	0567

Acres Irrigated (All pressures)

d. Mechanical move systems -		None	
(i) Side roll, wheel move, or other mechanical move systems and other discrete move systems.....	<input type="checkbox"/>		0240
(ii) Big gun or traveler systems.....	<input type="checkbox"/>		0241
e. Hand-move systems.....	<input type="checkbox"/>		0242

Acres Irrigated (All pressures)

3. Drip, trickle, or low-flow micro irrigation - except poly and lay-flat tubing			
a. Surface drip (on or above ground).....	<input type="checkbox"/>		0248
b. Sub-surface drip (root zone).....	<input type="checkbox"/>		0246
c. Low-flow micro sprinklers, sprays (apply water at low pressure and are not self-propelled or easily moved).....	<input type="checkbox"/>		0247

Acres Irrigated

4. Subirrigation – Water seepage, or use of a drainage system to maintain aquifer water table at a predetermined depth. Exclude methods reported above.....	<input type="checkbox"/>		0249
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SECTION 5

ACRES IRRIGATED, ESTIMATED QUANTITY OF WATER USED, AND OFF-FARM SUPPLIED WATER USED ON THIS OPERATION BY SOURCE IN 2008

Report quantity of water in the unit or units of measure used most on this operation. If exact measurements are not available, give your best estimate for quantity of water used. If total or average acre-feet cannot be estimated, give combined pumping capacity and duration in days, or total depth of water applied, or flow quantities and duration of flow in days.

By Water Source

Ground Water (from wells)	Surface Water	
	On Farm	Off-Farm (All Suppliers)
0444 acres	0449 acres	0454 acres

- Acres irrigated - Include cropland and pastureland.
- Estimated quantity of water used on this farm in 2008. Report for only one of the following options, items a through e, in the unit used most on this operation.

Total Acre Feet

0955	0960	0965
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- Total acre feet

OR

Acre Feet Per Acre

0445	0450	0966
------	------	------

- Average acre-feet per acre irrigated (One acre foot covers one acre one foot deep)

OR

Inches Per Acre

0448	0453	0967
------	------	------

- Average inches applied per acre

OR

GPM

0446	0451	0968
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- Average gallons of water applied per minute (GPM)

Duration

0447 days	0452 days	0969 days
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- Total number of 24-hour day equivalents water was applied.

OR

CFS

0956	0961	0970
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- Average flow in cubic feet per second (CFS)

- Total number of 24-hour day equivalents water flow was applied.

Duration

0957 days	0962 days	0971 days
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- Did this operation receive any water from an off-farm source?

⁰⁴⁵⁷ **Yes** – Continue **No** – Go to SECTION 6

Dollars

0456	
\$.00

- Total cost of off-farm supplied water.

- If water was received at no cost, check ⁰⁶⁷⁵ No cost – Go to item 4 below.

- Did the cost per unit of water (check one) -

- Increase as the amount of off-farm supplied water used increased?
- Remain the same as the amount of off-farm supplied water used increased?
- Decrease as the amount of off-farm supplied water used increased?

- Supplier of off-farm water – How much of this operation's off-farm water was supplied, delivered, or transferred through a project financed, constructed, or managed by –

- U.S. Bureau of Reclamation? Include reclamation water delivered through a local district.

0664	1 <input type="checkbox"/> None
	2 <input type="checkbox"/> Some
	3 <input type="checkbox"/> All
	4 <input type="checkbox"/> Unknown

- Other Federal agencies such as the U.S. Army Corp of Engineers, Bureau of Indian Affairs, USDA small watershed project, etc.?

0665	1 <input type="checkbox"/> None
	2 <input type="checkbox"/> Some
	3 <input type="checkbox"/> All
	4 <input type="checkbox"/> Unknown

- All other suppliers – Specify: _____

0666	1 <input type="checkbox"/> None
	2 <input type="checkbox"/> Some
	3 <input type="checkbox"/> All
	4 <input type="checkbox"/> Unknown

SECTION 6 WATER TRANSFERS IN 2008

Report water leased or rented on an annual or multi-year basis for use off this operation when the permanent right to the water was maintained by the operator. Include water rented or leased directly by this operation or this operation's irrigation provider.

1. Did this operation rent or lease water to others for use off this operation in 2008? Include both agricultural and non-agricultural purposes.

⁰⁵³¹ **Yes** – Continue **No** – Go to SECTION 7

2. Report the quantity of water transferred to others in 2008 for each source listed -

Water Quantity
(Acre Feet)

a. Ground water from on-farm wells.....	<input type="checkbox"/>	0532
b. Surface water from on-farm sources.....	<input type="checkbox"/>	0533
c. Water normally received from an off-farm supplier.....	<input type="checkbox"/>	0534

3. Mark (X) below all uses or recipients of transferred water –

- ⁰⁵³⁵
- 1 Other agricultural producers
 - 2 Municipal or industrial water users
 - 3 Environmental uses (water quality, in-stream flow, habitat improvement)
 - 4 Unknown use of transferred water - If unknown, check Item (a) or (b) below
- ⁰⁵³⁶
- 1 (a) Water was part of a pool used by several producers
 - 2 (b) Water rented or leased was arranged by your irrigation provider

SECTION 7 EXPENDITURES FOR IRRIGATION FACILITIES AND EQUIPMENT ON THIS OPERATION IN 2008

Report expenditures, purpose, and sources of funding assistance in 2008 for the construction of irrigation facilities and purchase of irrigation equipment and machinery on this operation. Include estimates of expenditures made by or shared with others (landlords or government agencies), including programs such as Environmental Quality Incentive Program (EQIP), etc. Report the cost of maintenance and repairs in SECTION 13.

	None	Total Expenditures (dollars)	Principal Purpose of Expenditures (Mark (X) principal purpose only)	Primary Source of Funding Assistance (Mark (X) primary source)
1. Purchase of new or replacement irrigation equipment and machinery – Include sprinklers, pipes, siphons, nozzles, pumps, motors, engines, etc. Do not include computers.....	<input type="checkbox"/>	\$.00	0511 0512 1 <input type="checkbox"/> Replacement 2 <input type="checkbox"/> Water conservation 3 <input type="checkbox"/> New expansion	0513 1 <input type="checkbox"/> No funding assistance 2 <input type="checkbox"/> EQIP 3 <input type="checkbox"/> Other USDA cost share program 4 <input type="checkbox"/> Non-USDA cost share program
2. New well construction or deepening of existing wells – Include drilling costs, cost of casing, and any costs to prepare well for installation of pump. Do not include cost of pumps or motors.....	<input type="checkbox"/>	\$.00	0515 0516 1 <input type="checkbox"/> Replacement 2 <input type="checkbox"/> Water conservation 3 <input type="checkbox"/> New expansion	0517 1 <input type="checkbox"/> No funding assistance 2 <input type="checkbox"/> EQIP 3 <input type="checkbox"/> Other USDA cost share program 4 <input type="checkbox"/> Non-USDA cost share program
3. Construction or improvement of permanent storage and distribution systems – Include dams, ponds, reservoirs, permanent ditches, canals, flumes, etc.....	<input type="checkbox"/>	\$.00	0519 0520 1 <input type="checkbox"/> Replacement 2 <input type="checkbox"/> Water conservation 3 <input type="checkbox"/> New expansion	0521 1 <input type="checkbox"/> No funding assistance 2 <input type="checkbox"/> EQIP 3 <input type="checkbox"/> Other USDA cost share program 4 <input type="checkbox"/> Non-USDA cost share program
4. Land clearing and leveling for irrigation purposes.....	<input type="checkbox"/>	\$.00	0523 0524 1 <input type="checkbox"/> Replacement 2 <input type="checkbox"/> Water conservation 3 <input type="checkbox"/> New expansion	0525 1 <input type="checkbox"/> No funding assistance 2 <input type="checkbox"/> EQIP 3 <input type="checkbox"/> Other USDA cost share program 4 <input type="checkbox"/> Non-USDA cost share program
5. Computers, control panels, and software for irrigation water management.....	<input type="checkbox"/>	\$.00	0544 0545 1 <input type="checkbox"/> Replacement 2 <input type="checkbox"/> Water conservation 3 <input type="checkbox"/> New expansion	0546 1 <input type="checkbox"/> No funding assistance 2 <input type="checkbox"/> EQIP 3 <input type="checkbox"/> Other USDA cost share program 4 <input type="checkbox"/> Non-USDA cost share program

SECTION 8 ACRES HARVESTED AND CROP YIELDS ON THIS OPERATION IN 2008

For each crop harvested, report separately the acreage and average yield from irrigated land and non-irrigated land. Report harvested crops as irrigated if any water was artificially applied either before planting or during the crop growing season in 2008. Report the crop as irrigated if water was applied to supplement rainfall, even if the amount of water applied was not sufficient to obtain maximum yields.

Crops	Irrigated Crops Include preplant and supplemental or semi-irrigation					Non-Irrigated Crops		
	Irrigated Acres Harvested	Average Yield Per Irrigated Acres Harvested	Estimated Quantity of Water Applied Per Acre (Average)			Non-Irrigated Acres Harvested	Average Yield Per Non-Irrigated Acres Harvested	
			Acre-Feet Per Acre	or	Inches Per Acre			
1. Corn for grain or seed – Exclude popcorn and sweet corn <input type="checkbox"/>	0050	0051 Bu.	0052	or	0053	0054	0055 Bu.	
2. Corn for silage or greenchop – Exclude popcorn and sweet corn <input type="checkbox"/>	0060	0061 Tons	0062	or	0063	0064	0065 Tons	
3. Sorghum for grain or seed <input type="checkbox"/>	0070	0071 Bu.	0072	or	0073	0074	0075 Bu.	
4. Wheat for grain or seed <input type="checkbox"/>	0080	0081 Bu.	0082	or	0083	0084	0085 Bu.	
5. Barley for grain or seed <input type="checkbox"/>	0090	0091 Bu.	0092	or	0093	0094	0095 Bu.	
6. Soybeans for beans <input type="checkbox"/>	0100	0101 Bu.	0102	or	0103	0104	0105 Bu.	
7. Beans, dry edible <input type="checkbox"/>	0110	0111 Cwt.	0112	or	0113	0114	0115 Cwt.	
8. Rice <input type="checkbox"/>	0120	0121 Cwt.	0122	or	0123			
9. Other small grains (oats, rye, etc.) <input type="checkbox"/>	0130		0132	or	0133	0134		
10. Alfalfa and alfalfa mixtures (dry hay, greenchop, and silage) <input type="checkbox"/>	0140	0141 Tons, dry	0142	or	0143	0144	0145 Tons, dry	
11. All other hay, including small grain, other tame, and wild hay (dry hay, greenchop, and silage) <input type="checkbox"/>	0150	0151 Tons, dry	0152	or	0153	0154	0155 Tons, dry	

SECTION 8
Continued

ACRES HARVESTED AND CROP YIELDS ON THIS OPERATION IN 2008

For each crop harvested, report separately the acreage and average yield from irrigated land and non-irrigated land. Report harvested crops as irrigated if any water was artificially applied either before planting or during the crop growing season in 2008. Report the crop as irrigated if water was applied to supplement rainfall, even if the amount of water applied was not sufficient to obtain maximum yields.

Crops	Irrigated Crops Include preplant and supplemental or semi-irrigation					Non-Irrigated Crops			
	Irrigated Acres Harvested	Average Yield Per Irrigated Acres Harvested	Estimated Quantity of Water Applied Per Acre (Average)			Non-Irrigated Acres Harvested	Average Yield Per Non-Irrigated Acres Harvested		
			Acre-Feet Per Acre	or	Inches Per Acre				
12. Peanuts	0550	0551	Lbs.	0552	or	0553	0554	0555	Lbs.
13. Cotton	0160	0161	Lbs. lint	0162	or	0163	0164	0165	Lbs.lint
14. Sugarbeets for sugar	0170	0171	Tons	0172	or	0173	0174	0175	Tons
15. Tobacco, all types	0180	0181	Lbs.	0182	or	0183	0184	0185	Lbs.
16. All land from which vegetables, potatoes, and melons were harvested	0186			0187	or	0188	0189		
a. Sweet corn	0850	0851	Cwt.	0852	or	0853	0854	0975	Cwt.
b. Tomatoes in the open	0860	0861	Cwt.	0862	or	0863	0864	0985	Cwt.
c. Lettuce and romaine	0870	0871	Cwt.	0872	or	0873	0874	0995	Cwt.
d. Potatoes – Exclude sweet potatoes	0190	0191	Cwt.	0192	or	0193	0194	0195	Cwt.
17. All berries	0560			0562	or	0563	0564		
18. Land in bearing and non-bearing fruit orchards, citrus or other groves, vineyards, and nut trees	0210			0212	or	0213	0214		
19. All other crops – Specify: _____	0220			0222	or	0223	0224		
20. Pastureland, all types	0230			0232	or	0233	0234		

SECTION 9

PRIMARY METHOD OF WATER DISTRIBUTION, APPLICATION OF AGRICULTURAL CHEMICALS IN IRRIGATION WATER, AND WATER SOURCE BY CROPS IRRIGATED ON THIS OPERATION IN 2008

PRESSURE and GRAVITY IRRIGATION SYSTEMS I.D. CODES for column 1 below

PRESSURE SYSTEMS	GRAVITY SYSTEMS
01 = Hand-move System	15 = Siphon-Tube System (from unlined ditches)
02 = Solid or Permanent Set System	16 = Siphon-Tube System (from lined ditches)
03 = Side Roll or Wheel Line System	17 = Portal- or Ditch-Gate System (from unlined ditches)
04 = Big Gun System	18 = Portal- or Ditch-Gate System (from lined ditches)
05 = Linear Move System (PSI less than 15)	19 = Poly-Pipe or Lay Flat Tubing System
06 = Linear Move System (PSI 15 to 29)	20 = Gated-Pipe System (not poly-pipe)
07 = Linear Move System (PSI equal to or greater than 30 and less than 60)	21 = Improved Gated Pipe (surge flow or cablegation, system, but not poly pipe)
08 = Linear Move System (PSI equal to or greater than 60)	22 = Subirrigation
09 = Center Pivot System (PSI less than 15)	23 = Open Discharge from well or pump
10 = Center Pivot System (PSI 15 to 29)	24 = Other Gravity System – Specify type: _____
11 = Center Pivot System (PSI equal to or greater than 30 and less than 60)	
12 = Center Pivot System (PSI equal to or greater than 60)	
13 = Low-Flow Irrigation (drip, trickle, or micro sprinkler systems)	
14 = Other Pressure System – Specify type: _____	

For each crop irrigated, report separately the primary distribution method, chemigation, and water source. Report only irrigated crops. Refer to the table above for ID codes for column 1.

Irrigated Crops	Primary Method of Water Distribution (Enter Irrigation System I.D. Code from Table above.)	Chemigation Using Irrigation System		Water Source (Column totals may exceed acres of crop when more than one water source was used.)				
		Column 1 Enter system code	Percent of Irrigated Crop Using System I.D.	Commercial Fertilizer (Acres)	Pesticide Application (Acres)	How many of the crop acres were irrigated using –		
						On-Farm Surface Water	Well Water	Water from Off-farm Suppliers ¹
1. Corn for grain or seed – Exclude popcorn and sweet corn. <input type="checkbox"/>	0250 ID	0251 %	0252	0253	0254	0255	0256	
2. Corn for silage or greenchop – Exclude popcorn and sweet corn. <input type="checkbox"/>	0260 ID	0261 %	0262	0263	0264	0265	0266	
3. Sorghum for grain or seed. <input type="checkbox"/>	0270 ID	0271 %	0272	0273	0274	0275	0276	
4. Wheat for grain or seed. <input type="checkbox"/>	0280 ID	0281 %	0282	0283	0284	0285	0286	
5. Barley for grain or seed. <input type="checkbox"/>	0290 ID	0291 %	0292	0293	0294	0295	0296	
6. Soybeans for beans. <input type="checkbox"/>	0300 ID	0301 %	0302	0303	0304	0305	0306	
7. Beans, dry edible. <input type="checkbox"/>	0310 ID	0311 %	0312	0313	0314	0315	0316	
8. Rice. <input type="checkbox"/>	0320 ID	0321 %	0322	0323	0324	0325	0326	
9. Other small grains (oats, rye, etc.) <input type="checkbox"/>	0330 ID	0331 %	0332	0333	0334	0335	0336	
10. Alfalfa and alfalfa mixtures (dry hay, greenchop and silage). <input type="checkbox"/>	0340 ID	0341 %	0342	0343	0344	0345	0346	
11. All other hay including small grain, other tame, and wild hay (dry hay, greenchop and silage). <input type="checkbox"/>	0350 ID	0351 %	0352	0353	0354	0355	0356	

¹ Off-farm water supplies may include water purchased from the U.S. Bureau of Reclamation; a State, county, or local district; mutual, private, cooperative, or neighborhood ditches; or commercial or municipal water systems.

SECTION 9
Continued

PRIMARY METHOD OF WATER DISTRIBUTION, APPLICATION OF AGRICULTURAL CHEMICALS IN IRRIGATION WATER, AND WATER SOURCE BY CROPS IRRIGATED ON THIS OPERATION IN 2008

PRESSURE and GRAVITY IRRIGATION SYSTEMS I.D. CODES for column 1 below

PRESSURE SYSTEMS	GRAVITY SYSTEMS
01 = Hand-move System	15 = Siphon-Tube System (from unlined ditches)
02 = Solid or Permanent Set System	16 = Siphon-Tube System (from lined ditches)
03 = Side Roll or Wheel Line System	17 = Portal- or Ditch-Gate System (from unlined ditches)
04 = Big Gun System	18 = Portal- or Ditch-Gate System (from lined ditches)
05 = Linear Move System (PSI less than 15)	19 = Poly-Pipe or Lay Flat Tubing System
06 = Linear Move System (PSI 15 to 29)	20 = Gated-Pipe System (not poly-pipe)
07 = Linear Move System (PSI equal to or greater than 30 and less than 60)	21 = Improved Gated Pipe (surge flow or cablegation, system, but not poly pipe)
08 = Linear Move System (PSI equal to or greater than 60)	22 = Subirrigation
09 = Center Pivot System (PSI less than 15)	23 = Open Discharge from well or pump
10 = Center Pivot System (PSI 15 to 29)	24 = Other Gravity System – Specify type: _____
11 = Center Pivot System (PSI equal to or greater than 30 and less than 60)	
12 = Center Pivot System (PSI equal to or greater than 60)	
13 = Low-Flow Irrigation (drip, trickle, or micro sprinkler systems)	
14 = Other Pressure System – Specify type: _____	

For each crop irrigated, report separately the primary distribution method, chemigation, and water source. Report only irrigated crops. Refer to the table above for ID codes for column 1.

Irrigated Crops	Primary Method of Water Distribution (Enter Irrigation System I.D. Code from Table above.)		Chemigation Using Irrigation System		Water Source (Columns may not add to total acres of crop when more than one water source was used.)		
	Column 1 Enter system code	Percent of Irrigated Crop Using System I.D.	Commercial Fertilizer (Acres)	Pesticide Application (Acres)	How many of the crop acres were irrigated using –		
					On-Farm Surface Water	Well Water	Water from Off-farm Suppliers ¹
None <input type="checkbox"/>	0580	0581	0582	0583	0584	0585	0586
12. Peanuts. <input type="checkbox"/>	ID	%					
	0360	0361	0362	0363	0364	0365	0366
13. Cotton. <input type="checkbox"/>	ID	%					
	0370	0371	0372	0373	0374	0375	0376
14. Sugarbeets for sugar. <input type="checkbox"/>	ID	%					
	0380	0381	0382	0383	0384	0385	0386
15. Tobacco, all types. <input type="checkbox"/>	ID	%					
16. All land from which vegetables, potatoes, and melons were harvested. <input type="checkbox"/>	ID	%					
	0474	0475	0476	0477	0478	0479	0480
a. Sweet corn. <input type="checkbox"/>	ID	%					
	0900	0901	0902	0903	0904	0905	0906
b. Tomatoes in the open. <input type="checkbox"/>	ID	%					
	0910	0911	0912	0913	0914	0915	0916
c. Lettuce and romaine. <input type="checkbox"/>	ID	%					
	0920	0921	0922	0923	0924	0925	0926
d. Potatoes – Exclude sweet potatoes. <input type="checkbox"/>	ID	%					
	0390	0391	0392	0393	0394	0395	0396
	0590	0591	0592	0593	0594	0595	0596
17. All berries. <input type="checkbox"/>	ID	%					
	0410	0411	0412	0413	0414	0415	0416
18. Land in bearing and non-bearing fruit orchards, citrus or other groves, vineyards, and nut trees. <input type="checkbox"/>	ID	%					
	0420	0421	0422	0423	0424	0425	0426
19. All other crops – Specify: _____ <input type="checkbox"/>	ID	%					
	0430	0431	0432	0433	0434	0435	0436
20. Pastureland, all types. <input type="checkbox"/>	ID	%					

¹ Off-farm water supplies may include water purchased from the U.S. Bureau of Reclamation; a State, county, or local district; mutual, private, cooperative, or neighborhood ditches; or commercial or municipal water systems.

SECTION 10

NUMBER OF IRRIGATION WELLS ON THIS OPERATION IN 2008, INCLUDING WELL DEPTH, AND PUMPING CAPACITY

1. Did this operation irrigate with water from wells in 2008?
⁰⁷⁶⁰ **Yes** – Continue **No** – Go to SECTION 11

2. How many wells were used in 2008? Number
0460

	Well #	Depth of Well (Feet)	Depth to Water at Start of Irrigation Season (Feet)	Depth to Bowls or Impellers (Feet)	Pump Capacity – Discharge From Well (GPM)	Operating Pressure at Well Head (PSI)	Size of Engine for All Motors, Including Electric (HP)	Total Hours Operated (For the Season)
a. Report for the first 3 primary wells pumped in 2008	1.	0461	0462	0463	0464	0676	0761	0762
	2.	0465	0466	0467	0468	0677	0763	0764
	3.	0469	0470	0471	0472	0678	0765	0766
		Average Depth of Well (Feet)	Average Depth to Water at Start of Irrigation Season (Feet)	Average Depth to Bowls or Impellers (Feet)	Average Pump Capacity – Discharge from Well (GPM)	Average Operating Pressure at Well Head (PSI)	Average Size of Engine for All Motors, Including Electric (HP)	Total Hours Operated (For the Season)
b. Report for all other wells pumped in 2008.		0481	0482	0483	0484	0681	0767	0768

3. How many pumping stations (wells from item 2 above with associated piping systems) used backflow prevention devices (check valves) in 2008? None Number
0770

a. In 2008, how many acres were irrigated with these (item 3) wells? Acres 0771

4. How many wells from item 2 above had flow meters or other flow measurement devices? None Number
0683

a. In 2008, how many acres were irrigated with these (item 4) systems? Acres 0772

5. Has the average depth to water for the wells supplying this operation changed in the last five years?
⁰⁷⁷³ **Yes** – Continue **No** – Go to item 6 below

a. If yes, check one ⁰⁴⁸⁷ Increased depth Decreased depth

6. How many of the wells used in 2008 are free flowing (artesian wells)? None Number
0486

7. How many wells were not used in 2008, but were capable of being used? Exclude abandoned wells. None Number
0485

SECTION 11 PUMPS, OTHER THAN WELL PUMPS, USED FOR IRRIGATION ON THIS OPERATION IN 2008

Report for all pumps on this operation, whether they were used or not in 2008.

	None	Number of Pumps	Vertical Lift (Average Feet)	Discharge Capacity (Average GPM)	Discharge Operating Pressure (Average PSI)
1. Tailwater pits.....	<input type="checkbox"/>	0490	0774	0491	0687
2. Ponds, lakes, reservoirs, rivers, canals, etc.....	<input type="checkbox"/>	0492	0775	0493	0688
3. Relifting or boosting water within system.....	<input type="checkbox"/>	0494	0776	0777	0778

SECTION 12 ENERGY USE ON THIS OPERATION IN 2008 FOR PUMPING WATER BY POWER SOURCE

Report the expenditures for fuel and power used in 2008 for irrigation pumping by each type of energy used on this operation. Include the cost of any additional charges such as the fuel adjustment charge or any other type of charge which was based on the amount of power or fuel purchased. Include landlord's share.

Power Source	None	Number of Wells or Pumps	Total Cost of Energy Used (Dollars)	Acres Irrigated by Water Source	
				Water From Wells ¹	Surface Water ²
Electricity.....	<input type="checkbox"/>	0495	0496 \$.00	0497	0781
Natural gas.....	<input type="checkbox"/>	0498	0499 \$.00	0500	0782
LP gas, propane, or butane.....	<input type="checkbox"/>	0501	0502 \$.00	0503	0783
Diesel and biodiesel fuel.....	<input type="checkbox"/>	0504	0505 \$.00	0506	0784
Gasoline and gasohol – Include ethanol blends.....	<input type="checkbox"/>	0507	0508 \$.00	0509	0785
Solar and other renewable.....	<input type="checkbox"/>	0779		0780	0786

¹ Include only acres for wells reported in Section 10, Item 2.
² Include only acres for pumps reported in Section 11.

SECTION 13 MAINTENANCE AND REPAIR COSTS FOR IRRIGATION EQUIPMENT AND FACILITIES ON THIS OPERATION IN 2008

Report all expenses in 2008 for keeping irrigation equipment and facilities in working order. Include expenses for tune-ups, oil changes, ditch and canal cleanout, repairs to pumps, motors, pipes, canals, and sprinkler systems, etc. Exclude construction or improvement costs reported in SECTION 7.

1. Amount spent for maintenance and repairs of irrigation equipment and facilities in 2008 including maintenance of on-farm ditches. Include payments made by landlords. Give estimate if actual figures are not available.....	None <input type="checkbox"/>	Dollars 0510 \$.00
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SECTION 14 LABOR COSTS FOR IRRIGATION ON THIS OPERATION IN 2008

Include gross cash payments to employees, including family members, before deductions for social security, taxes, insurance premiums, etc. and payments for contract labor. Exclude customwork.

1. Cash wages paid for -		Dollars
a. Hired irrigation labor.....	None <input type="checkbox"/>	0787 \$.00
b. Contract irrigation labor.....	<input type="checkbox"/>	0788 \$.00

SECTION 15 **IRRIGATION PRACTICES IN 2008**

1. How did you decide when to schedule water use in 2008? Mark (X) all that apply –

0527

- 1 Condition of crop (observation)
- 2 Feel of the soil
- 3 Use of soil moisture-sensing devices such as moisture blocks or tensionmeters
- 4 Use of plant moisture-sensing devices such as pressure (chamber) bombs or infrared (IR) thermometer
- 5 Use of irrigation scheduling service, including commercial and government
- 6 Reports on daily crop-water evapo-transpiration (ET) use (Internet, newspapers, radio, TV, fax, and email)
- 7 Water delivered by irrigation organization in turn (no choice by water user)
- 8 Personal calendar schedule
- 9 Computer simulation models (not from a commercial service)
- 10 When neighbors began to irrigate
- 11 Other – Specify: _____

2. Did you have to discontinue irrigation during 2008 long enough to affect crop yields?

0669

- 1 **Yes** – Continue 2 **No** – Go to SECTION 16

a. Mark (X) all reasons that apply –

0670

- 1 Shortage of surface water (water from reservoirs, lakes, streams, water supply organizations, etc.)
- 2 Shortage of ground water (lowering water level of wells or depletion of ground water)
- 3 Irrigation equipment failure
- 4 Energy price increases or energy shortage
- 5 Poor water quality
- 6 Loss of water rights not due to voluntary transfers
- 7 Cost of purchased water
- 8 Other – Specify: _____

SECTION 16 OTHER USES OF IRRIGATION WATER ON THIS OPERATION IN 2008

1. Report irrigation used for any of the following purposes –	None	Acres on Which Applied
a. Prevent freeze damage.....	<input type="checkbox"/>	0440
b. Crop cooling to delay early budding, blooming, or to reduce heat stress (cool crop canopy).....	<input type="checkbox"/>	0441
c. Leaching to remove salts from the soil (salinity control).....	<input type="checkbox"/>	0442
d. Disposal of liquid livestock waste.....	<input type="checkbox"/>	0488
e. To provide wildlife or waterfowl habitat.....	<input type="checkbox"/>	0439
f. Other – Specify: _____	<input type="checkbox"/>	0443

SECTION 17 WATER MANAGEMENT PRACTICES FOR GRAVITY IRRIGATION SYSTEMS

1. Did you use gravity irrigation systems to irrigate any of the acres on this operation (SECTION 4, item 1) in 2008?

0671

Yes – Continue

No – Go to SECTION 18

2. On how many acres did you use the following techniques?	None	Number of Acres
a. Irrigation water captured for further use (tailwater pits).....	<input type="checkbox"/>	0672
b. Water restricted from running off by diking end of field.....	<input type="checkbox"/>	0789
c. Surge flow or cablegation technique.....	<input type="checkbox"/>	0673
d. Shortening of furrow length.....	<input type="checkbox"/>	0684
e. Limited irrigation set time or number of irrigations, to reduce water applied.....	<input type="checkbox"/>	0685
f. Alternate row irrigation.....	<input type="checkbox"/>	0686
g. Water-soluble polyacrylamide (PAM).....	<input type="checkbox"/>	0699
h. Mulch or other types of row covers.....	<input type="checkbox"/>	0790
i. Gravity system with laser leveling.....	<input type="checkbox"/>	0791
j. Special furrowing techniques, such as wide-spaced bed furrowing, compacted furrowing, or furrow diking – Specify technique used: _____	<input type="checkbox"/>	0674

SECTION 18

IMPROVEMENTS TO IRRIGATION SYSTEMS ON THIS OPERATION SINCE 2003 THAT REDUCED ENERGY USE AND/OR CONSERVED WATER

Consider as an improvement changes in equipment or management practices. For example, retrofitting a sprinkler system for low pressure operation or adopting irrigation scheduling as a management practice.

1. Have you implemented improvements to your irrigation system on existing irrigated acres since 2003?

- ⁰⁶⁹³ 1 **Yes** – Continue 2 **No** - Go to item 3 below

2. What were the results of these improvements on a per-acre basis? Mark (X) all that apply –

- ⁰⁶⁹⁴ 1 Improved crop yield or quality
2 Reduced energy costs
3 Reduced water applied
4 Reduced labor costs
5 Reduced fertilizer or pesticide losses
6 Reduced soil erosion
7 Reduced tailwater
8 Other – Specify: _____

3. What are barriers to implementing improvements that might reduce energy and/or conserve water in your irrigation system? Mark (X) all that apply –

- ⁰⁶⁹⁵ 1 Investigating improvements is not a priority at this time
2 Risk of reduced yield or poorer quality crop yields from not meeting water needs
3 Physical field/crop conditions limit system improvements
4 Improvement(s) will reduce costs, but not enough to cover installation costs
5 Can not finance improvements
6 Landlord(s) will not share cost of improvements
7 Uncertainty about future availability of water
8 Will not be farming this operation long enough to justify new improvements
9 Other – Specify: _____

SECTION 19

SOURCES OF IRRIGATION INFORMATION

1. What are the sources of information that you rely on for guidance in reducing irrigation costs or to conserve water used for irrigation? Mark (X) all that apply.

- ⁰⁶⁹⁶ 1 Extension agents or university specialists
2 Private irrigation specialists or crop consultants hired by owner or operator
3 Irrigation equipment dealers
4 Local irrigation district employees or others hired by the water supplier
5 Government specialists from the Natural Resources Conservation Service, local conservation district, Bureau of Reclamation, or other Federal and State agencies
6 Media reports or information in the press
7 Neighboring farmers
8 Electronic information services (Internet, DTN, Internet links to private or public data sources, etc.)
9 Other – Specify: _____

SECTION 20 RECYCLED AND/OR RECLAIMED WATER USE ON THIS OPERATION IN 2008

Report recycled and reclaimed water use in 2008 separately. **Recycled water** is the reuse of surface or groundwater that has already been used to irrigate a crop on the operation during 2008 (i.e. water recycled from a tailwater reuse pit). **Reclaimed water** is wastewater that has been treated for non-potable re-use purposes. Include any reclaimed water used from livestock operations or from off-farm wastewater sources such as municipal or industrial wastewater.

RECYCLED WATER

1. Did this operation use recycled water to irrigate any crops in 2008?

⁰⁶⁰⁰ 1 **Yes** – Continue 2 **No** – Go to item 4 below

Acres

0601

2. How many acres on this operation were irrigated with recycled water during 2008?.....

3. Identify the sources of recycled water used on this operation in 2008. Mark (X) all that apply –

⁰⁶⁰² 1 On-farm irrigation
2 Off-farm irrigation
3 Other – Specify: _____

RECLAIMED WATER

4. Did this operation use reclaimed water to irrigate any crops in 2008?

⁰⁶⁰³ 1 **Yes** – Continue 2 **No** – Go to SECTION 21

Acres

a. How many acres were irrigated with reclaimed water during the 2008 crop year?.....

0604

Acre-Foot or Gallons

b. How much reclaimed water was used for irrigation during the 2008 crop year?.....

0605

0606

5. Identify the sources of reclaimed water used on this operation in 2008. Mark (X) all that apply –

⁰⁶⁰⁷ 1 Municipal
2 Industrial
3 On-farm livestock operation
4 Off-farm livestock operation
5 Other – Specify: _____

6. Was any reclaimed water used on this operation in 2008 purchased?

⁰⁶⁰⁸ 1 **Yes** – Continue 2 **No** – Go to item 7

Acre-Foot or Gallons

a. How much reclaimed water was purchased in 2008?.....

0609

0610

Dollars Per Acre Foot or Dollars Per 1,000 Gallons

b. What was the average cost paid for reclaimed water in 2008?.....

0611
\$.00

0612
\$.00

7. Did this operation receive any payment for using reclaimed water in 2008?

⁰⁶¹³ 1 **Yes** – Continue 2 **No** – Go to SECTION 21

Acre-Foot or Gallons

a. How much reclaimed water did this operation receive payment for in 2008?.....

0614

0615

Dollars Per Acre Foot or Dollars Per 1,000 Gallons

b. What was the average price received for using reclaimed water in 2008?.....

0616
\$.00

0617
\$.00

SECTION 21 IRRIGATED LAND IN 2007

Complete this section ONLY if you DID NOT irrigate any land

1. Was any land irrigated on this operation in 2007?
 0528 ₁ **Yes** – Continue ₂ **No** – Go to SECTION 22

2. Reasons for not irrigating in 2008 – Mark (X) all that apply –
 0529 ₁ Sufficient soil moisture – no irrigation needed
₂ Surplus soil moisture or flooding
₃ Shortage of surface water (water from reservoirs, lakes, streams, water supply organizations, etc.)
₄ Shortage of ground water (lowering water level of wells or depletion of ground water)
₅ Irrigation uneconomical due to high fuel and power costs and/or low commodity prices
₆ Abandoned irrigation because of land degradation (soil erosion, soil salinity, etc.)
₇ Loss of water rights (not due to voluntary transfers)
₈ Restrictions on water use
₉ Sold or leased water rights or annual water allocation
₁₀ Converted to non-agricultural use
₁₁ Converted to an agricultural enterprise not requiring irrigation
₁₂ Available surface water too salty due to drought conditions
₁₃ Other – Specify: _____

3. Do you consider your discontinuance of irrigation to be permanent? 0530 ₁ **Yes** ₂ **No**

SECTION 22 VALUE OF FARM SALES IN 2008

0980
 1 \$ 0 - \$24,999
 2 \$25,000 - \$49,999
 3 \$50,000 - \$99,999
 4 \$100,000 - \$249,999
 5 \$250,000 - \$499,999
 6 \$500,000 - \$999,999
 7 \$1,000,000 and over

1. Report the gross value of agricultural products sold from this operation in 2008. Include landlord's share. Mark (X) only one.

Percent

2. What percent of total sales were from **irrigated** crop sales? %
 3. What percent of total sales were from **non-irrigated** crop or livestock sales? %

SECTION 23 PERSON COMPLETING THIS FORM – Please print

Name: _____

9910 MM DD YY
 Date: _____

Telephone: (_____) _____ - _____

Would you like to receive a free copy of the results of this survey in the mail?

0099
₁ **YES** ₂ **NO**

(The survey results will also be available on the Internet at <http://www.usda.gov/nass> in the fall of 2009.)

Thank you for your response

OFFICE USE

Response	Respondent	Mode	Enum.	Eval.	Optional Use
1-Comp 2-R 3-Inac	9901 1-Op/Mgr 2-Sp 3-Acct/Bkpr 4-Partner 9-Oth	9902 1-Mail 2-Tel 3-Face-to-Face	9903 0098	0100	0002 0003

S/E Name _____