

2016 WATER USE SURVEY

Project Code: 997 QID: 113043
SMetaKey: 3043



USDA/NASS - North Carolina
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Please make corrections to name, address and ZIP Code, if necessary

North Carolina farmers have the opportunity to document agricultural water use. By law, The North Carolina Department of Agriculture and Consumer Services, Agricultural Statistics Division is **required to collect agricultural water use data biennially**. This survey will provide comprehensive, state-wide facts about agricultural water use so that informed policy decisions can be made and to help protect farmer's access to water in the future. The information you provide will be summarized with other responses.

Your voluntary cooperation on this survey is critical to provide accurate facts about agricultural water use. If you have any questions, please contact Karen Bryan at (800) 437-8451.

Title 7, U.S. Code Section 2276 prohibits public disclosure of personal information, including reported data. By law, every employee and agent has taken an oath and is subject to a jail term, a fine, or both if he or she willfully discloses ANY identifiable information about you or your operation. **Response is voluntary.**

1. During 2016, did you . . .

-grow crops, cut hay, grow nursery or floriculture crops?

OR

-have any whole grains, oilseeds, or hay stored on this operation?

OR

-own or raise any **livestock** or **poultry** or **aquaculture**? (**Include** raised for others.)

Code

Yes – (Continue)

No – (Please sign the bottom of page 4 and return form)

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| 109 |
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2. Did you use water (surface or ground) for agricultural commodities such as crops, horticulture, aquaculture and livestock in 2016? **Exclude** recycled water or **lagoon irrigation**.

Code

Yes – (Continue)

No – (Please sign the bottom of page 4 and return form).

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| 101 |
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3. Did you use 10,000 gallons or more of water **on any one day** for agriculture?

Examples may include --

- more than 3,700 finish type hogs, or
- more than 9,000 nursery hogs, or
- more than 4 poultry houses, or
- irrigated at least 1 acre with at least a 1/2 inch of water

Yes – (Continue)

No – (Please sign the bottom of page 4 and return this form)

Code

102

4. Record the **percentage** of water you utilized **annually** during 2016 for each of the following categories:

- a. Poultry (turkeys, broilers, layers, pullets, etc.)
- b. Hogs
- c. Catfish, Trout or other Aquaculture
- d. Other Livestock (cattle, horses, goats, sheep, etc.)
- e. Field Crops (tobacco, corn, sweet potatoes, soybeans, cotton, peanuts, wheat)
- f. Fruit/Vegetable Crops (blueberries, strawberries, apples, cucumbers, beans, tomatoes, etc.)
- g. Nursery/Greenhouse/Sod (herbs, shrubs, flowers, Christmas trees, nursery plants, ornamentals, sod)
- h. Other – Specify: _____

Percent

121

122

123

124

125

126

127

128

Total = 100%

5. What is the **daily** water withdrawal **capacity** for your farm*
(the maximum amount your pumps could output in a 24 hour period)?

- a. **Ground water** withdrawal **capacity** (pumped from wells and ponds supplied by wells)
- b. **Surface water** withdrawal **capacity** (pumped from lakes, rivers, streams, and ponds supplied by run off or streams)

Gallons

107

108

(i) If you indicated that your operation has **surface water withdrawal capacity**, please indicate the percentage that is withdrawn annually from rivers/streams and the percentage that is withdrawn from lakes/ponds.

(a) Rivers/Streams

(b) Lakes/Ponds

Percent

131

132

Total Surface=100%

*If you don't know your pumping capacity, please indicate the water source and the pumping capacity of each of your motors. Example: Well - 30 gallons per minute and Pond - 2000 gallons per hour.

MOTOR NOTES: _____

6. Please select **one** of the following options to report your monthly water usage:

- 1 Report water use in terms of gallons – (Complete **Table 1**)
- 2 Report water use in terms of inches per acre – (Complete **Table 2**)
- 3 Report water use in terms of both gallons AND inches per acre – (Complete **Table 1** and **Table 2**, but do not report the SAME water usage in more than one table)
- 4 Report water use by head of livestock/poultry or row spacing/flow rate – (Complete the **Water Use Estimation Guide**, beginning on page 5, if you are unable to complete Table 1 or Table 2)
The Water Use Estimation Guide is for operations which DO NOT keep water usage records or are unsure of how much water they've used.

Office Use

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| 900 |
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Do not report the SAME water usage in more than one table.

When reporting water used, **include** water used to feed livestock, cool livestock houses, clean barns, irrigate crops, prevent freeze damage, apply chemicals, or process crops on the farm.

Table 1: Water Use by Gallons

(If your farm withdraws water from multiple counties, please complete Table 1 for each county.
An additional copy of Table 1 can be found on page 7.)

Office Use

| |
|-----|
| 200 |
|-----|

County _____

| Month (2016) | Total Withdrawal for Month (Gallons) | Maximum Day Withdrawal for Month (Gallons) | % Ground Water | % Surface Water | # of Days Ground Water Used | # of Days Surface Water Used |
|--------------|--------------------------------------|--|----------------|-----------------|-----------------------------|------------------------------|
| January | 201 | 202 | 203 | 204 | 205 | 206 |
| February | 211 | 212 | 213 | 214 | 215 | 216 |
| March | 221 | 222 | 223 | 224 | 225 | 226 |
| April | 231 | 232 | 233 | 234 | 235 | 236 |
| May | 241 | 242 | 243 | 244 | 245 | 246 |
| June | 251 | 252 | 253 | 254 | 255 | 256 |
| July | 261 | 262 | 263 | 264 | 265 | 266 |
| August | 271 | 272 | 273 | 274 | 275 | 276 |
| September | 281 | 282 | 283 | 284 | 285 | 286 |
| October | 291 | 292 | 293 | 294 | 295 | 296 |
| November | 301 | 302 | 303 | 304 | 305 | 306 |
| December | 311 | 312 | 313 | 314 | 315 | 316 |

Did your farm withdraw water from another county?

Office Use

- 1 **Yes** 3 **No**

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| 141 |
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Do not report the SAME water usage in more than one table.

When reporting water used, **include** water used to feed livestock, cool livestock houses, clean barns, irrigate crops, prevent freeze damage, apply chemicals, or process crops on the farm.

Table 2: Water Use by Inches per Acre

(Irrigators may report water use in this table if it is more convenient.)

(If your farm withdraws water from multiple counties, please complete Table 2 for each county.
An additional copy of Table 2 can be found on page 8.)

Office Use

County: _____

| |
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| 400 |
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| Month (2016) | Avg. # Acres Irrigated per Day (Acres) | Total # Inches Applied for Month (Inches) | Max. # Inches Applied per Day (Inches) | % Ground Water | % Surface Water | # of Days Ground Water Used | # of Days Surface Water Used |
|--------------|---|--|---|----------------|-----------------|-----------------------------|------------------------------|
| January | 401 | 402 | 403 | 404 | 405 | 406 | 407 |
| February | 411 | 412 | 413 | 414 | 415 | 416 | 417 |
| March | 421 | 422 | 423 | 424 | 425 | 426 | 427 |
| April | 431 | 432 | 433 | 434 | 435 | 436 | 437 |
| May | 441 | 442 | 443 | 444 | 445 | 446 | 447 |
| June | 451 | 452 | 453 | 454 | 455 | 456 | 457 |
| July | 461 | 462 | 463 | 464 | 465 | 466 | 467 |
| August | 471 | 472 | 473 | 474 | 475 | 476 | 477 |
| September | 481 | 482 | 483 | 484 | 485 | 486 | 487 |
| October | 491 | 492 | 493 | 494 | 495 | 496 | 497 |
| November | 501 | 502 | 503 | 504 | 505 | 506 | 507 |
| December | 511 | 512 | 513 | 514 | 515 | 516 | 517 |

Did your farm withdraw water from another county?

Yes **No**

Office Use

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| 142 |
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Respondent Name: _____

| | | | | |
|----------------------------|-------------|-------|-------|-------|
| 9911 | 9910 | MM | DD | YY |
| Phone: (____) _____--_____ | Date: _____ | _____ | _____ | _____ |

This completes the survey. Thank you for your help.

| Response | Respondent | Mode | Enum. | Eval. | Change | Office Use for POID | | | | | | |
|---|------------|---|-------|---|--------|---------------------|------|------|---------------------|------|------|------|
| 1-Comp 2-R 3-Inac 4-Office Hold 5-R – Est 6-Inac – Est 7-Off Hold – Est | 9901 | 1-Op/Mgr 2-Sp 3-Acct/Bkpr 4-Partner 9-Oth | 9902 | 1-Mail 2-Tel 3-Face-to-Face 4-CATI 5-Web 6-E-mail 7-Fax 8-CAPI 19-Other | 9903 | 9998 | 9900 | 9985 | 9989 | | | |
| | | | | | | | | | Optional Use | | | |
| | | | | | | | | | 9907 | 9908 | 9906 | 9916 |
| S/E Name | | | | | | | | | | | | |

WATER USE ESTIMATION GUIDE

USE THIS GUIDE ONLY IF YOU ARE UNABLE TO COMPLETE TABLE 1 OR TABLE 2

HOGS: If you had hogs, please place an X beside the type of operation you operate AND record the maximum number of hogs and pigs you had at one time during 2016 in all of this operation's houses.

| Type of Operation | Peak Number of Hogs and Pigs |
|--------------------------|------------------------------|
| 701 ___ Nursery | 711 _____ |
| 702 ___ Finish Only | 712 _____ |
| 703 ___ Farrow to Wean | 713 _____ |
| 704 ___ Farrow to Feeder | 714 _____ |
| 705 ___ Farrow to Finish | 715 _____ |

BROLERS: If you had broilers, please tell us:

- What was the maximum number of **broilers** you had at one time during 2016 in all of this operation's houses? ⁷²⁰ _____
- How many houses did you have? ⁷²¹ _____
- On average, how many consecutive weeks are the houses full? ⁷²² _____
- On average, how many consecutive weeks are the houses empty? ⁷²³ _____
- What was the date that the majority of your houses were last empty? ⁷²⁴ / / —

LAYERS: If you had layers, please tell us:

- What was the maximum number of **layers** you had at one time during 2016 in all of this operation's houses? ⁷³⁰ _____
- How many houses did you have? ⁷³¹ _____
- On average, how many consecutive weeks are the houses full? ⁷³² _____
- On average, how many consecutive weeks are the houses empty? ⁷³³ _____
- What was the date that the majority of your houses were last empty? ⁷³⁴ / / —

TURKEYS: If you had turkeys, please tell us:

- What was the maximum number of **turkeys** you had at one time during 2016 in all of this operation's houses? ⁷⁴⁰ _____
- How many houses did you have? ⁷⁴¹ _____
- On average, how many consecutive weeks are the houses full? ⁷⁴² _____
- On average, how many consecutive weeks are the houses empty? ⁷⁴³ _____
- What was the date that the majority of your houses were last empty? ⁷⁴⁴ / / —

WATER USE ESTIMATION GUIDE - CONTINUED

USE THIS GUIDE ONLY IF YOU ARE UNABLE TO COMPLETE TABLE 1 **OR** TABLE 2

CROPS: If you used **DRIP IRRIGATION** during 2016, and don't know how many inches were applied, please tell us the following:

- How many acres ⁷⁵⁰ _____
- How long were the rows ⁷⁵¹ _____
- How many feet between rows ⁷⁵² _____
- How many inches (spacing) between emitters ⁷⁵³ _____
- Flow rate per hour per emitter ⁷⁵⁴ _____
- Number of hours per day that water was applied ⁷⁵⁵ _____
- **Complete the table below.**

TABLE 3: DRIP IRRIGATION

Office Use

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|-----|
| 800 |
|-----|

County: _____

| Month (2016) | % Ground Water | % Surface Water | # of Days Ground Water Used | # of Days Surface Water Used |
|--------------|----------------|-----------------|-----------------------------|------------------------------|
| January | 804 | 805 | 806 | 807 |
| February | 814 | 815 | 816 | 817 |
| March | 824 | 825 | 826 | 827 |
| April | 834 | 835 | 836 | 837 |
| May | 844 | 845 | 846 | 847 |
| June | 854 | 855 | 856 | 857 |
| July | 864 | 865 | 866 | 867 |
| August | 874 | 875 | 876 | 877 |
| September | 884 | 885 | 886 | 887 |
| October | 894 | 895 | 896 | 897 |
| November | 604 | 605 | 606 | 607 |
| December | 614 | 615 | 616 | 617 |

WATER USE - ADDITIONAL COUNTY

COMPLETE THIS PAGE ONLY IF YOU NEED TO REPORT WATER FOR A COUNTY OTHER THAN THE ONE REPORTED ON PAGE 3

Do not report the SAME water usage in more than one table.

When reporting water used, **include** water used to feed livestock, cool livestock houses, clean barns, irrigate crops, prevent freeze damage, apply chemicals, or process crops on the farm.

Table 1: Water Use by Gallons

(If your farm withdraws water from multiple counties, please complete Table 1 for each county.)

Office Use

| |
|-----|
| 200 |
|-----|

County _____

| Month (2016) | Total Withdrawal for Month (Gallons) | Maximum Day Withdrawal for Month (Gallons) | % Ground Water | % Surface Water | # of Days Ground Water Used | # of Days Surface Water Used |
|--------------|--------------------------------------|--|----------------|-----------------|-----------------------------|------------------------------|
| January | 201 | 202 | 203 | 204 | 205 | 206 |
| February | 211 | 212 | 213 | 214 | 215 | 216 |
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| April | 231 | 232 | 233 | 234 | 235 | 236 |
| May | 241 | 242 | 243 | 244 | 245 | 246 |
| June | 251 | 252 | 253 | 254 | 255 | 256 |
| July | 261 | 262 | 263 | 264 | 265 | 266 |
| August | 271 | 272 | 273 | 274 | 275 | 276 |
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WATER USE - ADDITIONAL COUNTY

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When reporting water used, **include** water used to feed livestock, cool livestock houses, clean barns, irrigate crops, prevent freeze damage, apply chemicals, or process crops on the farm.

Table 2: Water Use by Inches per Acre
(Irrigators may report water use in this table if it is more convenient.)

(If your farm withdraws water from multiple counties, please complete Table 2 for each county.)

Office Use

| |
|-----|
| 400 |
|-----|

County: _____

| Month (2016) | Avg. # Acres Irrigated per Day (Acres) | Total # Inches Applied for Month (Inches) | Max. # Inches Applied per Day (Inches) | % Ground Water | % Surface Water | # of Days Ground Water Used | # of Days Surface Water Used |
|--------------|---|--|---|----------------|-----------------|-----------------------------|------------------------------|
| January | 401 | 402 | 403 | 404 | 405 | 406 | 407 |
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| July | 461 | 462 | 463 | 464 | 465 | 466 | 467 |
| August | 471 | 472 | 473 | 474 | 475 | 476 | 477 |
| September | 481 | 482 | 483 | 484 | 485 | 486 | 487 |
| October | 491 | 492 | 493 | 494 | 495 | 496 | 497 |
| November | 501 | 502 | 503 | 504 | 505 | 506 | 507 |
| December | 511 | 512 | 513 | 514 | 515 | 516 | 517 |

This completes the survey. Thank you for your help.