



AgWRAP
SITE EVALUATION SHEET
WATER SUPPLY WELL
for IRRIGATION



COOPERATOR INFORMATION

First Name

Last name

County

Tract - Field

Contract Number

Program

Type of operation:

☐

Row Crop

☐

Specialty Crop (Fruits, Vegetables, Herbs)

☐

Green Industry (Greenhouse, Nursery, Floriculture, Turf Crops)

☐

Hay/Pasture

☐

Other, specify:

WELL SITE INFORMATION

Well Site Coordinates (decimal degrees):

LAT

LONG

Please check each box to acknowledge that the proposed well location meets the following conditions:

☐

The well will be located at a higher elevation than any source of contamination

☐

The proposed well location is NOT in an area generally flooded or where surface flow of any volume should be expected. (Areas to be avoided include – concave slope, alluvial or colluvial soils, gullies, depressions and drainage ways.)

☐

There are no overhead or underground utilities in close proximity to the proposed well location

☐

The proposed well location is readily accessible for maintenance and repair

☐

Surface runoff from any area used by livestock shall be diverted away from the well head.

WELL SITE INFORMATION

Please check each box to confirm that the proposed well location meets required setback distances from sources of contamination [the greater of NRCS Standard 642 or N.C. State Law]. Note: Some county regulations are more restrictive; you must use the most restrictive rule which applies to your well.

<input type="checkbox"/>	Sanitary landfill	500 Feet
<input type="checkbox"/>	Waste disposal lagoon or holding pond	300 Feet
<input type="checkbox"/>	Pit silo	150 Feet
<input type="checkbox"/>	Septic tank and disposal field	100 Feet
<input type="checkbox"/>	Permanent Livestock feeding area (concrete pads or heavy use areas, etc.)	100 Feet
<input type="checkbox"/>	Livestock barn	100 Feet
<input type="checkbox"/>	Manure pile	100 Feet
<input type="checkbox"/>	Waste irrigation sites	100 Feet
<input type="checkbox"/>	Fertilizer, pesticide or other chemical storage areas	100 Feet
<input type="checkbox"/>	Non-hazardous / Inert debris landfills (stump dumps)	100 Feet
<input type="checkbox"/>	Gravity sewer line or transfer station (non-water tight)	100 Feet
<input type="checkbox"/>	Regulated fuel or chemical storage tanks (without secondary containment)	100 Feet
<input type="checkbox"/>	Agrichemical handling and mixing facility	100 Feet
<input type="checkbox"/>	Regulated fuel or chemical storage tanks (with secondary containment)	50 Feet
<input type="checkbox"/>	Gravity sewer line or transfer station (water tight)	50 Feet
<input type="checkbox"/>	Heating fuel storage tanks – above and below ground	50 Feet
<input type="checkbox"/>	Ponds, lakes, reservoirs	50 Feet
<input type="checkbox"/>	Gravesites	50 Feet
<input type="checkbox"/>	Other possible sources of contamination (livestock watering tank, equipment wash areas, etc.)	50 Feet
<input type="checkbox"/>	Streams, creeks, rivers, etc.	25 Feet
<input type="checkbox"/>	Building foundations	25 Feet

WELL FLOW ESTIMATE

The Well Flow Rate and Peak Water Use are an ESTIMATION of the potential water supply that will be required from the proposed well to meet the irrigation need of the specified crop during the period of peak water use for that crop. The values in this table should not be used to create detailed irrigation designs. The actual water use of an irrigation system may vary based on other parameters including region, soil type, irrigation equipment and application frequency.

The Well Flow Estimates should be provided to the well driller as an ESTIMATE of the required well flow that will be needed to meet the cooperators irrigation needs. If wells in the area do not typically yield the estimated flow, multiple wells or an alternate water source will be required for irrigation OR the irrigated area will need to be reduced.

In the example below an irrigation system capable of irrigating 25 acres of tobacco, during the period of peak water use, running for 12 hours per day, requires a minimum well flow rate of 228 GPM, and will use 162,930 gallons per day.

Crop	Irrigated Area (Acres)	Peak Rate ¹ (in/day)	Well Flow Rate ^{2,3} (GPM)	Peak Water Use ⁴ (gal/day)
Tobacco	25	0.24	228	162,930

1. Value from attached Irrigation Design Parameters table.

2. Well Flow Rate = (Irrigated Area) X (Peak Rate) X $\left(\frac{453}{12 \text{ hrs/day}} \right)$

3. The Well Flow Rate calculation is based on running the irrigation system 12 hrs/day. If the system run time will be different adjust the calculation accordingly.

4. Peak Water Use = (Irrigated Area) X (Peak Rate) X 27,155 gal/ac-in

COASTAL PLAIN CAPACITY USE AREA PERMIT

Is the well site located in the Central Coastal Plain Capacity Use Area (CCPCUA)?

CCPCUA counties include: BEAUFORT, CARTERET, CRAVEN, DUPLIN, EDGEcombe, GREENE, JONES, LENOIR, MARTIN, ONSLOW, PAMLICO, PITT, WASHINGTON, WAYNE and WILSON

☐ YES ☐ NO

→ Wells located in the CCPCUA are subject to the CCPCUA Rules:

- Permits are required for ground water users of more than 100,000 gallons per day.
- Annual registration and reporting of withdrawals is required for surface and ground water users of more than 10,000 gallons per day.
- CCPCUA Website - <https://www.ncwater.org/?page=49&menu=Home>

LARGE CAPACITY WATER SUPPLY WELL PERMIT

Will the proposed well qualify as a Large Capacity Water Supply Well?

A Large Capacity Water Supply Well is any water supply well or water well system with a design capacity equal to or greater than **100,000 gallons per day**

☐ YES ☐ NO

NC DEQ Permits are required to construct any Large Capacity Water supply well

- For more information visit:

<https://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/ground-water-protection/well-program>

REQUIRED DOCUMENTATION

The following documents must be completed and included in the contract folder and/or conservation plan folder. Please check the box to acknowledge that each document has been completed.

☐ Operation and Maintenance Plan - Water Well

☐ Operation and Maintenance Plan - Pumping Plant

☐ GIS Map showing the location of the proposed Water Well. Include the 100 yr. floodplain and any potential sources of contamination

☐ Water Well - NC NRCS Practice Job Sheet 642

☐ Well System Details Diagram

☐ NRCS Cultural Resources Review

☐ Local and/or State well permits, if applicable

☐ N/A*

* Contact the appropriate local agency and NC DEQ to verify that permits are not required for this well.

TECHNICAL REPRESENTATIVE

Name

Agency

Signature

Date

AgWRAP WELL SITE EVALUATION

IRRIGATION DESIGN PARAMETERS TABLE

The values in this table should only be used to ESTIMATE Well Flow Rate and Peak Water Use for a NCACSP water supply well and pump. The values in this table should not be used to create detailed irrigation designs. The actual water use of an irrigation system may vary based on other parameters including region, soil type, irrigation equipment and application frequency. Peak water use values are derived from the NC Irrigation Guide¹. The values were calculated assuming 75% efficiency for the irrigation system.

CROP	Peak Water Use ¹ (in/day)
Alfalfa	0.32
Annual and perennial flowers	0.19
Cotton	0.27
Corn, field	0.29
Gladioli	0.19
Ladino clover and grass,	0.32
Summer perennials or Mixed Hay	0.32
Improved Pasture or mixed hay	0.29
Nursery Crops, 1st year	0.21
Nursery Crops, 2nd year	0.24
Peanuts	0.24
Peas, field	0.24
Irish Potatoes	0.27
Small Grain or Soybeans	0.24
Tobacco	0.24

CROP	Peak Water Use ¹ (in/day)
Vineyards, cultivated	0.24
Vegetables, Group 1	0.19
Vegetables, Group 2	0.19
Vegetables, Group 3	0.24
Vegetables, Group 4	0.24
Orchards (bare)	0.27
Orchards (Cover)	0.32

1. https://efotg.sc.egov.usda.gov/references/public/NC/NC_Irrigation_Guide_Apr_2010.pdf

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Group 1 - Kale, Lettuce, Mustard, Onions, Spinach, Strawberries

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Group 2 - Beans (snap), Beets, Broccoli, Cabbage, Cauliflower, Carrots,
 Collard, Peas (garden), Peppers, Turnips, Rutabagas

.....
Group 3 - Beans (lima), Cucumbers, Tomatoes

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Group 4 - Asparagus, Cantaloupes, Corn (sweet), Eggplant, Okra,
 Watermelon
