



AgWRAP
SITE ASSESSMENT FORM
NEW



Agricultural Water Supply/Reuse Pond

This site assessment does NOT constitute a formal soil or geologic investigation or a pond design, and should not be used for construction. The information on this form represents a preliminary site assessment to evaluate the feasibility of a potential pond repair/retrofit, and assist in determining the priority for engaging engineering services for a more thorough site investigation and design. This form should be completed by a Division Engineer.

COOPERATOR INFORMATION

First Name

Last name

Street Address

City

County of Pond Site

Tract - Field

Pond Site Coordinates (decimal degrees):

LAT LONG

Primary Purpose of Pond:

 Irrigation

 Livestock Watering

 Other

SITE CHARACTERISTICS

Type of Pond:

 Excavated

 Embankment

 Combination

Watershed Drainage Area (ac)

Calculate Watershed Drainage Area using GIS or <https://streamstats.usgs.gov/ss/>

Pond Surface Area (ac)

Maximum Water Depth (ft)

Pond Volume (ac-ft)

Pond volume = Pond Surface Area X Max. Water Depth X Reduction Factor*

*Excavated/Dug pond - Reduction Factor = 0.7

*Embankment/dam pond - Reduction Factor = 0.4

Embankment Height* (ft)

Embankment Length (ft)

*Measured from highest point on embankment to lowest point of downstream toe.

Volume of Excavated Material (cu yds)

Method for Filling Pond (indicate approximate % contribution from each source)

Watershed

Well

Groundwater Recharge

Pump from Stream

Other (please explain):

AgWRAP WATER BALANCE

What percent of demand will be met by this pond? AgWRAP Water Balance Tool -> Summary Sheet -> (Runoff, AF / Demand Total AF)*100

SOIL SUITABILITIES AND LIMITATIONS

List the predominant soil(s) present in and around the pond impoundment area*:

Map Unit Symbol	Map Unit Name	Pond Reservoir Area Rating	Embankments, Dikes, Levees Rating

Has a backhoe soil investigation been completed on this site?

YES

NO

Are there any geologic or soil features that may require special design or construction such as rocky soils, shallow soils, shallow bedrock, deep sands, or other local pond failures? If yes, please explain.

YES

NO

Is there an adequate borrow area with in 1/2 mile of the site?

YES

NO

NA

Is there an adequate place onsite to place spoil?

YES

NO

NA

PERMITTING & HAZARD CLASSIFICATION

What is the estimated acreage of wetlands that will be permanently inundated by the impoundment area or covered by the embankment, spillway and spoil? (ac)

How many linear feet of stream will be permanently inundated by pond water and/or filled by the embankment, spillway and spoil?

Length of Stream INUNDATED (ft)

Length of Stream FILLED (ft)

Distance of road/hazard downstream

Elevation difference from hazard to floodplain:

Culvert/Bridge Dimensions

Most recent annual average daily traffic count

<https://ncdot.maps.arcgis.com/apps/webappviewer>

Predicted Hazard Classification

TECHNICAL RECOMMENDATION

Are the physical characteristics of the site generally suitable for an embankment or excavated pond, including an emergency spillway that can address the purpose indicated above and satisfy the practice standard requirements? If NO, please indicate the concerns below.

YES

NO

- Soils have limitations for pond reservoir area
- Soils have limitations for use as embankment fill
- Topography of the site is not favorable for a pond
- Watershed drainage area is not sufficient to maintain full pool in pond (Generally; if the ratio of WS Drainage Area to Pond Surface Area is less than 20:1)

The Water Balance Tool results indicate that less than 50% of the planned water use demand will be met by this pond

Other:

Will the noted special design and construction considerations significantly increase project costs and potentially impact project implementation? If YES, please provide an explanation below.

YES

NO

NA

Please provide any additional information or observations regarding the suitability of this pond site.

TECHNICAL REPRESENTATIVE

Name

Agency

Date

JOB APPROVAL AUTHORITY

Name

Agency

Signature

Date