AgWRAP
SITE ASSESSMENT FORM
NEW
Agricultural Water Supply/Reuse Pond

AgWRAP Agricultural Water Resources Assistance Program

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 embankement 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? (This figure must be calculated using the AgWRAP Water Balance Tool)

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	Embankements, 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 Classfication

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 favorbale 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