

Wetland Creation

Ephemeral Pools

Conservation Practice Job Sheet

Code 658



PURPOSE

Ephemeral pools are small constructed waterbodies used to provide supplementary water sources for wildlife and shallow water habitat for amphibians and reptiles and foraging areas bats and birds. They are built with a shallow depth and are not intended to support fish and fish should not be stocked. Woodland amphibians such as salamanders, frogs, and toads usually cannot reproduce in waterbodies stocked with fish. Ephemeral pools also provide a drinking water source for wildlife and will increase wildlife use of an area when surface water is limited.

CONDITIONS WHERE PRACTICE APPLIES

Ephemeral pools apply to woodlands, grasslands and other lands where wildlife water and/or habitat improvements for wetland dependent species are needed. These pools should only be constructed on sites suitable for development to ensure adequate water holding capacity. Ephemeral pools should not be used for livestock water and should be placed or planned so livestock are excluded.

Pool Placement

When possible, place ephemeral pools in woodlands, woodland openings, and at woodland edges. They may also be placed in grass/shrub lands when targeting grassland specific wetland dependent species. Several ephemeral pools may be installed in close proximity to improve the overall benefits to

amphibian populations in the area.

SPECIFICATIONS

The pool may be developed as an excavated pit, small embankment, or combination of the two methods.

Ephemeral pools shall be installed according to the following information including the attached design sheet.

Drainage area should be 0-3 acres and no larger than 5 acres

Minimum pool size is 400 square feet and maximum pool size is .3 acres

Maximum water depth shall be between 1.5 and 2.5 feet.

Pool side slopes should be 6:1 or flatter. Flatter side slopes can improve amphibian habitats.

A 30' buffer of wildlife friendly vegetation shall be allowed to naturally regenerate or planted around ephemeral pools.

Place these pools according to the attached plan map and as laid out by NRCS or KDFWR.

If an embankment is utilized:

The minimum dam top width is 6 feet and side slopes are a 3:1 minimum.

A 10' wide grassed spillway is required at one end and one foot below the top of the embankment.

Core trenches are not required but should be used when soil material is not optimum.

Spoil Placement and Treatment

Material excavated from the pool that is not used for an embankment shall be either:

1. Spread uniformly to a height that does not exceed 3 feet, with the top graded to a continuous slope away from the site; or
2. Shaped to a form that blends visually with

the landscape and sloped away from the site.

Once shaped, the spoil shall be stabilized according to one of the vegetation establishment options below.



Vegetation Establishment

Soil amendments are not required due to adverse affects on amphibians. Vegetative cover must be established on the dam and other disturbed areas outside the pool area according to one of the following options:

- Broadcast and track in 25 lbs. orchard grass, 5 lbs. red top, 8 lbs. red clover, and 20 lbs. wheat per acre between 3/1 and 5/15 or between 8/1 and 10/15. Immediately after seeding and tracking in the seed, apply straw mulch at a rate of 100 lbs/1,000 ft² (3-4 bales).
- Broadcast and track in 4 lbs. PLS Indian Grass, 4 lbs. PLS Big Bluestem, 2 lbs PLS Switchgrass and 32 lbs. spring oats per acre between 4/15 and 6/30. Immediately after seeding and tracking in seed, apply straw mulch at a rate of 100 lbs/1,000 ft² (3-4 bales).
- If native grass cover will be used and construction is completed after the 4/15-6/30 seeding window, a temporary cover of 90 lbs. winter oats should be established to hold the site until the next native grass planting window. Immediately after seeding

apply straw mulch at a rate of 100 lbs/1,000 ft² (3-4 bales). In March mow the oat cover. Between 4/15 and 6/30 seed 4 lbs. PLS Indian Grass, 4 lbs. PLS and Big Bluestem and 2 lbs. PLS Switchgrass per acre. Immediately after seeding apply straw mulch at a rate of 100 lbs/1,000 ft² (3-4 bales).

Addition of Course Woody Debris

Woody debris including small trees removed during construction, logs, and large sticks should be placed within and at the edge of ephemeral pools to improve amphibian and reptile habitat of ephemeral pools. Woody debris placed in ephemeral pools located in areas that receive overbank flooding from streams should be anchored to avoid movement offsite. Rocks or similar debris may be added as basking areas for reptiles.



OPERATION AND MAINTENANCE

Maintain livestock exclusion from ephemeral pools.

Maintain vegetation so dam and spillway are not subject to erosion.

Embankments should be free from woody vegetation to maintain water holding capacity.

Specifications

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Site-specific requirements are listed on the following pages of this job sheet. Specifications are prepared in accordance with the KY NRCS Field Office Technical Guide.

Client:			Date:
Designed By:	Farm #:	Tract #:	Field(s):
Targeted Wildlife Species(s):			

Layout		
Total Number of Pools:	Type(s):	Total Area of Pools:
Dominant Soil Type:	Drainage Class:	Other Components: 1. _____ 2. _____
Target Inundation Period:		

If needed, an aerial view, map or a sketch of the practice can be shown below. Other relevant information, complementary practices and measures, and additional specifications may be included.

Additional Specifications and Notes: (i.e. herbicide application, operation and maintenance specifics, etc.)

Refer to the section of this document entitled Operation and Maintenance.

Questions regarding the establishment, operation or maintenance of this practice should be directed to:

_____ at _____

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TYPICAL PLAN VIEW

SECTION A-A

SECTION B-B

SPOIL FROM EXCAVATIONS SHALL BE SPREAD TO A HEIGHT OF 3 FT OR LESS, WITH THE TOP GRADED TO A CONSTANT SLOPE AWAY FROM POOL.

DISTURBED AREAS SHALL BE VEGETATED ACCORDING TO THE VEGETATIVE ESTABLISHMENT SECTION OF THIS JOB SHEET.

THIS STANDARD DRAWING REQUIRES SUPPORTING TECHNICAL DOCUMENTATION PRIOR TO USE AND MUST BE ADAPTED TO THE SPECIFIC SITE.

ENG JOB CLASS _____

DIMENSIONS

	Planned	As Built
TL = _____ (ft)	<input type="text"/>	<input type="text"/> (ft)
TW = _____ (ft)	<input type="text"/>	<input type="text"/> (ft)
L = _____ (ft)	<input type="text"/>	<input type="text"/> (ft)
W = _____ (ft)	<input type="text"/>	<input type="text"/> (ft)
D = _____ (ft)	<input type="text"/>	<input type="text"/> (ft)
X = _____	<input type="text"/>	<input type="text"/>
Y = _____	<input type="text"/>	<input type="text"/>
ELEV A _____	<input type="text"/>	<input type="text"/>

TBM/DESCRIPTION

DRAWING NOT TO SCALE

NOTE: Contractor and Landowner are responsible for utility locations.

TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, JUDGMENT AND BELIEF THE INSTALLED PRACTICE MEETS NRCS STANDARDS.

SIGNATURE: _____ DATE: _____

Natural Resources Conservation Service
United States Department of Agriculture

EPHEMERAL POOL
(646)
Excavated Only

Designed	Date	File No.
Drawn		Drawing No.
Checked		
Approved		Sheet 4a of 4

TYPICAL PLAN VIEW

SECTION A-A

SECTION B-B

STRIP EXISTING VEGETATION AT EMBANKMENT LOCATIONS TO A DEPTH OF 6 INCHES OR TO THE BOTTOM OF THE ROOT ZONE.

PLACE FILL FOR EMBANKMENTS IN 8 INCH LIFTS AND COMPACT WITH THREE PASSES OF BULL DOZER OR OTHER CONSTRUCTION EQUIPMENT.

SPOIL FROM EXCAVATIONS SHALL BE SPREAD TO A HEIGHT OF 3 FT OR LESS, WITH THE TOP GRADED TO A CONSTANT SLOPE AWAY FROM POOL.

DISTURBED AREAS SHALL BE VEGETATED ACCORDING TO VEGETATION ESTABLISHMENT SECTION OF THIS JOB SHEET.

THIS STANDARD DRAWING REQUIRES SUPPORTING TECHNICAL DOCUMENTATION PRIOR TO USE AND MUST BE ADAPTED TO THE SPECIFIC SITE.

ENG JOB CLASS _____

DIMENSIONS

	Planned	As Built
TL = _____ (ft)	<input type="text"/>	<input type="text"/>
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X = _____	<input type="text"/>	<input type="text"/>
Y = _____	<input type="text"/>	<input type="text"/>
Z = _____	<input type="text"/>	<input type="text"/>
ELEV A _____	<input type="text"/>	<input type="text"/>

TBM/DESCRIPTION

DRAWING NOT TO SCALE

NOTE: Contractor and Landowner are responsible for utility locations.

TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, JUDGMENT AND BELIEF THE INSTALLED PRACTICE MEETS NRCS STANDARDS.

SIGNATURE: _____
 Title: _____ Date: _____

Natural Resources Conservation Service
United States Department of Agriculture

**Ephemeral Pool
(646)
Excavated/Embankment**

Designed	<input type="text"/>	Date	<input type="text"/>	File No.
Drawn	<input type="text"/>			Drawing No.
Checked	<input type="text"/>			
Approved	<input type="text"/>			Sheet 4b of 4