

**INCIDENTAL TAKE AUTHORIZATION
APPLICATION: ILLINOIS CHORUS
FROG (*Pseudacris streckeri*)**

CITY OF WINCHESTER

Scott County, Illinois

**Water Distribution System Improvements
Water Filtration Plant and Well Site**

*#2
Revised.
Good - FINAL*

April, 2009
*** Revised May 06, 2009**

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IL DESIGN FIRM REGISTRATION NO.: 184-000852

EXECUTIVE SUMMARY

The purpose of this document is to describe the proposed improvements of the water distribution system by the City of Winchester and its potential affect on the Illinois Chorus Frog (*pseudacris streckeri*). During the City of Winchester's coordination with the Illinois Department of Natural Resources, it was determined by the Illinois Department of Natural Resources that the proposed actions may have an adverse impact on the Illinois Chorus Frog and recommended to request an Incidental Take Authorization (ITA) from the Departments Office of Resource Conservation. The information in this report came from various sources including Illinois Department of Natural Resources Department of Conservation, Missouri Department of Conservation and through conversations with the Illinois Natural History Survey.

This document shows that the possible taking of Illinois Chorus Frogs is incidental to the carrying out of the needed City of Winchester water system improvements. This document also demonstrates that the potential impact will be minimal and the alternatives considered.

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- A. QUAD MAP EXCERPT
- B. SITE PHOTOS
- C. NRCS SOILS MAP EXCERPT
- D. NATIONAL WETLAND INVENTORY MAP EXCERPT

1) DESCRIPTIONS

- A) **SITE DESCRIPTION:** The site for the proposed water filtration plant is located approximately at 39° 36' 32.5" N & 90° 31' 35.0" W. The proposed water filtration plant site will be owned & controlled by the City of Winchester. The proposed well will be located in the existing well field that is currently owned and controlled by the City of Winchester. The site is located at approximately at 39° 36' 30.70" N & 90° 31' 59.9" W. **Exhibit A** is a USGS Quad Map excerpt showing the location of the proposed water filtration plant site and the proposed well site. **Exhibit B** includes photos of the proposed water filtration plant site and the proposed well site.
- B) **BIOLOGICAL DESCRIPTION:** According the Illinois Natural History Survey website, the Illinois Chorus Frog (*Pseudacris streckeri*) is a small (up to 4.7 cm SVL) tan to gray frog with dark brown or black lines on back, belly white and skin granular rather than smooth. Habitats include sand prairies and remnants such as sandy agricultural fields and waste areas.
- C) **DESCRIPTION OF ACTIVITIES:** The activities that could possibly result in taking of the Illinois Chorus Frog are the construction of the proposed water filtration plant and the construction of the proposed well.
- D) **DESCRIPTION OF ANTICIPATED ADVERSE AFFECTS:** Due to the size of the sites (less than one (1) acre total permanent disturbance), the anticipated adverse affects is expected to be minimal. Adverse affects will also be minimized due to fact that ground that was currently used for row crop production will now be allowed to return to its native state. The amount of ground that will be returned to its native state is nearly the same if not more than the ground that will be permanently affected by the permanent disturbance.

2) MINIMIZATION AND MITIGATION MEASURES:

- A) **PLANS TO MINIMIZE THE AREA AFFECTED BY THE PROPOSED ACTION:** Only the minimum area needed will be utilized for the construction of the proposed water filtration plant and the proposed well. Site grading will be kept to minimum at both of the proposed sites. The proposed water filtration plant will occupy approximately .7 acres; the proposed well will occupy approximately .01 acres. Areas on the sites not permanently affected by the construction will be reseeded with native species of grasses in the area.
- B) **PLANS FOR MANAGEMENT OF THE AREA AFFECTED BY THE PROPOSED ACTION:** After construction, the sites will be maintained by the City of Winchester. If the initial planting of native grasses fails then a second attempt will be made to establish native grasses on the project sites in the areas not permanently disturbed by the construction.
- C) **DESCRIPTION OF IMPLEMENTED MEASURES:** As stated above, areas on the sites where there will be no permanent construction will be reseeded with native species of grasses in the area. The area of the proposed water filtration plant site that is currently used for row crop production will also be reseeded with native grasses and allowed to return to its natural condition.

D) PLANS FOR MONITORING THE EFFECTS OF MEASURES IMPLEMENTED: The City of Winchester is under the understanding that there will be long term monitoring post construction, and will allow such monitoring and facilitate as requested by IEPA.

E) ADAPTIVE MANAGEMENT PRACTICES: If the initial planting fails, the City of Winchester shall make one additional attempt to establish native grasses on the project sites.

F) VERIFICATION OF FUNDING: The funds needed to mitigate and minimize the impact on the Illinois Chorus Frog as stated in this document will be obtained along with funds that will be needed to complete the proposed City of Winchester water distribution system improvements. These funds will be mixture of local funds, IEPA SRF loan and/or USDA-RD funds.

3) DESCRIPTION OF ALTERNATIVE ACTION:

- **NO ACTION – (PROPOSED WATER TREATMENT FACILITY):** This alternative would leave the City of Winchester with an aging water plant that is past its useful life expectancy and a potential health risk to the City of Winchester’s water customers if the water treatment plant would cease operation due to failure. The existing water treatment plant was built in 1934 with additions in 1950 and 1964. This plant is operating past its current life expectancy and is a critical link in the delivery of potable water to the city’s customers. The current treatment process (lime softening/ gravity filters) is a manual process, which requires a minimum staffing schedule of 14 hours per day. This can be more during peak usage. The current water treatment plant’s lime softening requires sludge removal that has to be hauled off site and properly disposed of.
- **WATER PURCHASE FROM WHOLESALE SUPPLIER:** Currently there are no suppliers that could provide the quality and quantity of potable water that the City of Winchester would need to provide to its water customers.
- **NEW WATER FILTRATION PLANT IN THE CITY OF WINCHESTER:** This option is not viable because there is not a site in the City of Winchester that would fit the criteria needed. This option would more than likely require that the raw water transmission main be extended to the reach the new facility and the pumps at the well site would need to be upsized to reach the facility with the required pressure. This would also cause increased strain on the existing raw water transmission main which would mean either replacement, or sooner than expected replacement of the raw water transmission main. All of these factors make this alternative cost prohibitive and could force the water customers of the City of Winchester to carry an undue financial burden. In addition, any city site for the filtration plant would not serve the existing customers on the transmission main from the wells.
- **NEW WATER FILTRATION PLANT AT THE EXISTING WATER TREATMENT PLANT SITE:** Unfortunately, the existing water treatment plant will need to remain on line while the new plant is being built. The existing water treatment plant site is not large enough to accommodate two (2) functioning water treatment plants.

- **NO ACTION – (PROPOSED WELL)** The City of Winchester currently has two (2) wells that are 20 years old that currently produce water. One of the wells, at times, can have excessive Nitrates, which makes the well unusable during those times. The no action alternative would leave The City of Winchester in its current situation of possibly of having only one 20 year old well in operation at times due to excessive nitrate levels.
- **NEW WELL NOT AT THE EXISTING WELL SITE** This option would lead to higher project cost due to need for construction of utilities, roadway and raw water transmission main. This would make this needed project cost prohibitive.

4) **DATA / INFORMATION TO INDICATE NO REDUCTION OF SURVIVAL OF THE ILLINOIS CHORUS FROG:** The proposed water filtration plant is planned to be constructed at the highest elevation of the site where water does not stand and drains away to lower elevations in the area. The proposed water filtration plant site, according to the NRCS Soil Classification Map, has soil classifications of 88B and 54D. These classifications have a slope range from 1 to 15 percent, well drained and have a low available water capacity These soils are also listed “very poor” for shallow water areas. The proposed water filtration plant site is currently a mixture of row crop (25%), brush with light timber (10%) and the remainder is fallow land. All of the above soils are a sandy loam. **Exhibit C** is an N.R.C.S. Soils Map excerpt as downloaded from the following website <http://websoilsurvey.nrcs.usda.gov/app>, which shows the soils for the site. These types of soils have the potential to harbor the Illinois Chorus frog if other conditions are conducive to the Illinois Chorus frog, i.e.: wetland areas (areas that pond water) and suitable vegetation. **Exhibit D** is excerpts of the United States Department of Interior National Wetlands Inventory Map. The proposed water filtration plant site does not have wetlands nor are in the immediate vicinity of known wetlands. As for vegetation, as seen in the photos of the potential water treatment sites, the ground vegetation varies from agricultural fields to uncultivated fields to lightly wooded brushed areas, and which may contain vegetation that could favor the Illinois Chorus Frog.

The proposed well site, according the NRCS Soil Classification map in **Exhibit C**, has a soil classification of 302. This classification is an Ambraw with clay & loam in the first 16” of depth that is nearly level, poorly drained soil. This soil is listed “good” for shallow water areas. This soil is good for holding water but there is not any sand in the first 16” of depth. The aforementioned National Wetlands Inventory Map in **Exhibit D** does not show Wetlands in the immediate vicinity but there is a drainage ditch in the area.

The likelihood that the proposed water treatment facility and the proposed well will cause a reduction of survival of the Illinois Chorus Frog is minimal due to following factors. The aforementioned sites do not contain wetlands, the well site does not contain soils that are conducive to the Illinois Chorus Frog, the site area is small and the area at the proposed water filtration plant this currently is in row crop production will be allowed to return its native state.

5) IMPLEMENTING AGREEMENT:

The following parties certify their legal authority to carry out their respective obligations and responsibilities under this conservation plan (listed below) and comply with all other applicable federal state and local regulations:

NAME	TITLE	NAME (PRINT)	SIGNATURE	DATE
The City of Winchester City Hall 121 South Hill Winchester IL, 62694 1-217-742-3191	OWNER			
Benton & Associates, Inc. 1970 W. Lafayette Jacksonville IL, 62650 1-217-245-4146	ENGINEER			
TO BE DETERMINED DURING THE AWARD OF THE CONTRACT	CONTRACTOR			

PROJECT CHECK LIST			
Item	Description	Responsible Party	Complete (Sign and Date)
1	Permits	OWNER	
2	Verify Legal Access to Land	OWNER	
3	Mark Construction Limits	ENGINEER	
4	Site Grading Finished	CONTRACTOR	
5	Seeding Finished	CONTRACTOR	
6	Complete As-Built Drawings of Site	ENGINEER	
7	Reseeding (if vegetation is not established)	OWNER/ CONTRACTOR	

EXHIBIT A

EXHIBIT B

City of Winchester Water System Distribution Improvements
Project Photos



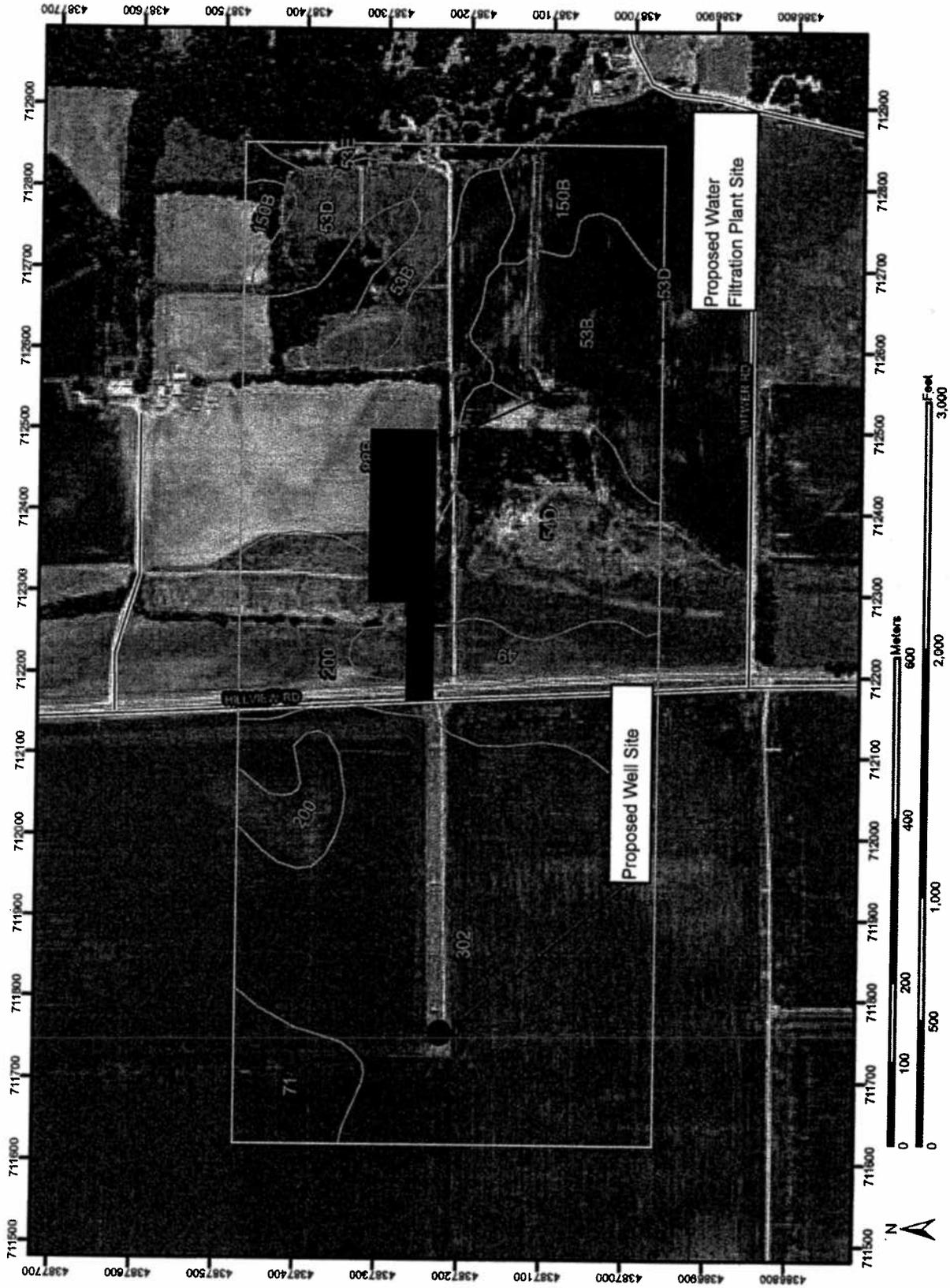
Photo of Well Site Looking From the East



Photo of Water Filtration Plant Site Looking from the Southwest

EXHIBIT C

Soil Map Excerpt - Proposed Water Filtration Plant Site and Proposed Well Site



MAP LEGEND

	Area of Interest (AOI)
	Soils
	Special Point Features
	Blowout
	Borrow Pit
	Clay Spot
	Closed Depression
	Gravel Pit
	Gravelly Spot
	Landfill
	Lava Flow
	Marsh
	Mine or Quarry
	Miscellaneous Water
	Perennial Water
	Rock Outcrop
	Saline Spot
	Sandy Spot
	Severely Eroded Spot
	Sinkhole
	Slide or Slip
	Sodic Spot
	Spoil Area
	Stony Spot

MAP INFORMATION

Original soil survey map sheets were prepared at publication scale. Viewing scale and printing scale, however, may vary from the original. Please rely on the bar scale on each map sheet for proper map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: UTM Zone 15N

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Scott County, Illinois
 Survey Area Data: Version 2, Jul 10, 2006

Date(s) aerial images were photographed: 1998

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

	Very Stony Spot
	Wet Spot
	Other
	Special Line Features
	Gully
	Short Steep Slope
	Other
	Political Features
	Municipalities
	Cities
	Urban Areas
	Water Features
	Oceans
	Streams and Canals
	Transportation
	Rails
	Roads
	Interstate Highways
	US Routes
	State Highways
	Local Roads
	Other Roads

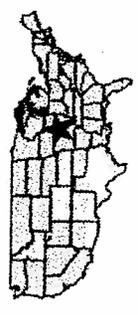
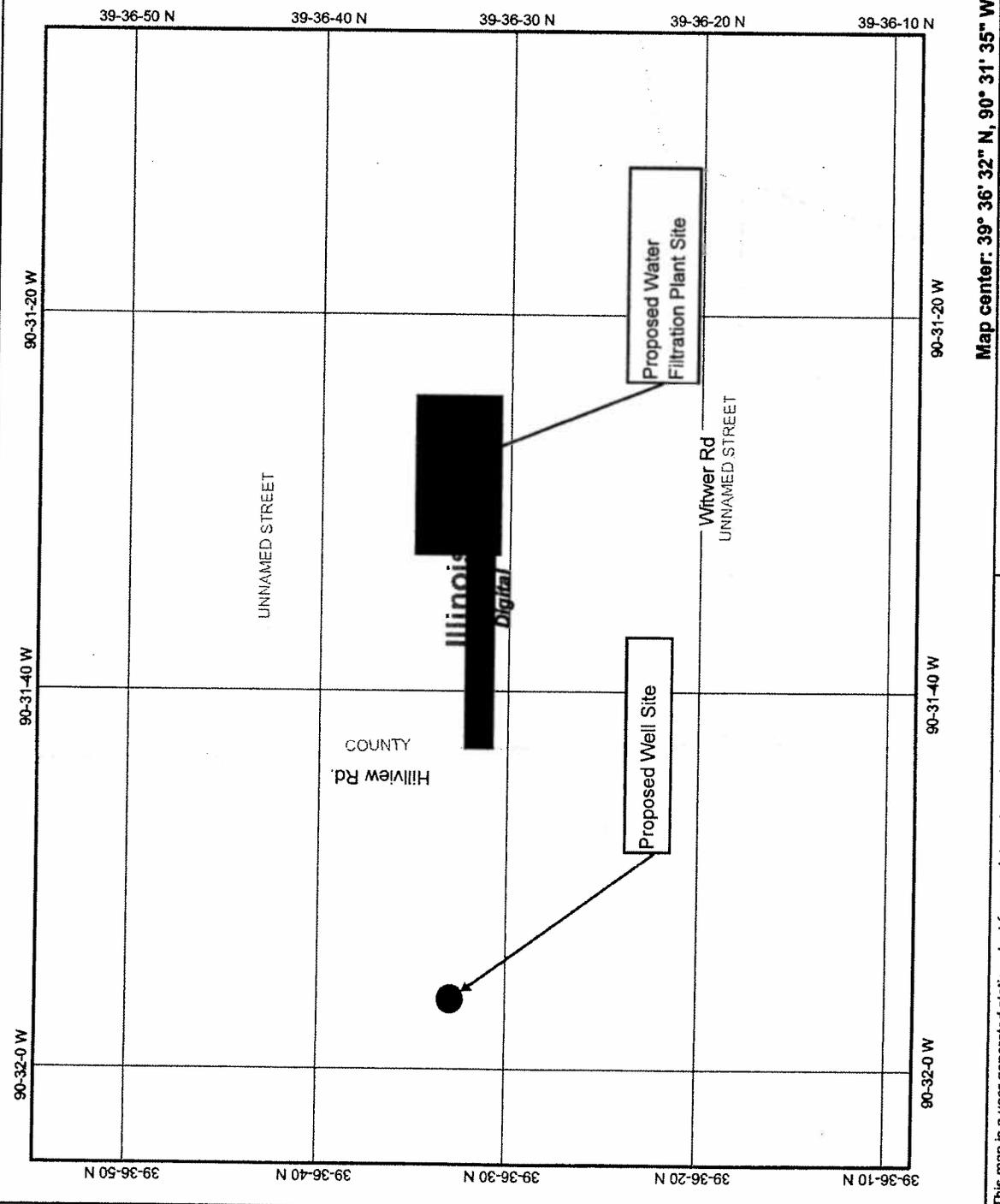


Map Unit Legend

Scott County, Illinois (IL171)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
49	Watseka loamy sand	5.7	3.7%
53B	Bloomfield loamy sand, 2 to 7 percent slopes	16.7	10.7%
53D	Bloomfield loamy sand, 7 to 18 percent slopes	5.0	3.2%
53E	Bloomfield loamy sand, 18 to 35 percent slopes	1.2	0.8%
54D	Plainfield loamy sand, 7 to 15 percent slopes	21.2	13.6%
71	Darwin silty clay	5.4	3.4%
88B	Sparta loamy sand, 1 to 6 percent slopes	23.4	15.0%
150B	Onarga fine sandy loam, 1 to 5 percent slopes	7.0	4.5%
200	Orio sandy loam	15.3	9.8%
302	Ambraw clay loam	55.1	35.3%
Totals for Area of Interest (AOI)		156.0	100.0%

EXHIBIT D

NWI Map Excerpt - Proposed Water Filtration Plant Site and Proposed Well Site



Legend

- Ohio_wet_scan
 - 0
 - 1
- Out of range
- Interstate
- Major Roads
- Other Road
- Interstate
- State highway
- US highway
- Roads
- Cities
- USGS Quad Index 24K
- Lower 48 Wetland Polygons
 - Estuarine and Marine Deepwater
 - Estuarine and Marine Wetland
 - Freshwater Emergent Wetland
 - Freshwater Forested/Shrub Wetland
 - Freshwater Pond
 - Lake
 - Other
 - Riverine
- Lower 48 Available Wetland Data
 - Non-Digital
 - Digital
 - No Data
 - Scan
- NHD Streams
- Counties 100K
- States 100K
- South America
- North America



Scale: 1:10,000

This map is a user generated static output from an internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.