

Lake of the Woods Homeowners Association

SEDIMENT BASIN REMEDIATION PRELIMINARY ENGINEERING REPORT



Prepared by:

MW

Midwest Engineering

Associates, Inc.

140 East Washington Street

East Peoria, IL 61611

Ph: 309-222-8600

www.mweainc.com

January 21, 2019
Project No. 20180163

Introduction:

Lake of the Woods Homeowner Association (HOA) contracted Midwest Engineering Associates, Inc. to develop some options, staging, and estimates for the long term repair and maintenance of the sediment basin at the upstream end of the Lake of the Woods.

1. BACKGROUND:

- a. Location: The Lake of the Woods is located between W. Wonderview Drive and N. Hickory Grove Road in Dunlap, Medina Township, IL. The sediment basin is located on the south end of the lake at 40°50'07.1"N, 89°36'22.9"W
- b. Population Trends: The Homeowners Association consists of X properties located along the north and west sides of the lake. There are X single family homes and portions of a few commercial properties that are in the watershed but are not part of the HOA. The lake watershed and surrounding lots are completely developed. No additional population growth is anticipated in the watershed.
- c. Community Engagement: The Lake Committee, a subcommittee of the HOA, initiated this report. Preliminary calculations and preliminary findings for this report were reviewed with the Lake Committee on November 14, 2018. This preliminary engineering report will be submitted to the HOA board and members of the HOA, to gather feedback, direction, and potentially secure financing.

2. EXISTING CONDITION:

- a. History: The Lake of the Woods dam was constructed in the sixties. It is assumed the sediment basin was constructed at that same time. The HOA has no drawings or records of maintenance on the existing sediment basin dam or its outlet structure. The HOA has no records of removal of accumulated sediment in the basin, nor do any of the long term residents in the neighborhood have any recollection of sediment removal in the past.
- b. Condition of Existing Facilities: The existing sediment dam is in poor condition. Woody shrubs (primarily invasive honeysuckle, *lonicera, spp*) have over grown the face and top of the dam. The water side face of dam is severely eroded. Some portions of the dam have been breached allowing sediment to flow into the lake. The low flow outlet structure does have flow moving through it; however, the upstream end is buried in sediment, only visible because water is leaving the basin in that location. The downstream end of the low flow outlet pipe appears to be in good condition; however a concrete collar on the pipe is completely exposed. That collar was most likely buried at one time and erosion of the face of the dam has exposed the collar. There is a drainage way cutting through the sediment dam on the north end. A sediment plume at this drainage outlet has formed into the lake. There is a breached section in the center of the dam that has large slabs of

concrete near it. This may have been an overflow weir that collapsed, or the broken concrete was placed in this area in a failed attempt to prevent its collapse. Sediment behind the dam has filled to the top of the dam on the upstream side. Photos of the existing condition are included in the Appendix.

- c. Approximate dimensions and elevations for the existing sediment dam were developed from Aerial photography and a 2008 Digital Elevation Model for Peoria County provided by the Illinois State Geological Survey. (No field topographical or boundary surveys were performed on the existing condition for this preliminary report.) The existing sediment dam is approximately 180 feet long and 8 feet tall. The sediment basin has an approximate surface area of +/- 0.6 acres. Because the depth of the sediment has reached the top of the dam, we will assume the sediment is approximately 8' deep at the dam, then gradually gets shallower towards the upstream end of the basin. We would estimate the volume of sediment stored in the existing basin is approximately +/- 3,870 cubic yards.
- d. Description of Watershed: The Lake of the Woods has a water surface area of approximately +/- 12 acres. The tributary watershed of the total lake is approximately +/- 281 acres. The tributary watershed to the sediment basin is approximately +/- 205 acres. The watershed is primarily residential land use, with a minor amount of commercial/non-residential. The watershed is completely developed, with little areas that are not in lawns, streets, pavement, or houses. Based upon aerial survey, approximately 63 acres of the tributary watershed to the basin is steep wooded ravine, the remaining 142 acres is streets, houses, lawns, buildings, etc.

3. PROJECT NEED:

- a. Currently the depth of trapped sediment has reached the top of the sediment dam, and the sediment dam has been breached in a couple locations, allowing sediment to flow into the lake. In order to prevent sediment from continuing to accumulate in the lake, the sediment dam and outlet structure need to be repaired and some sediment needs to be removed from the basin. If the sediment is allowed to continue to flow into the lake, the lake will slowly fill with sediment, and the depth of water in the lake will continue to become shallower over time.
- b. The docks at the south end of the lake are not usable because of sediment that has accumulated in that portion of the lake.

4. DESIGN CRITERIA:

- a. Water Runoff: Sediment basin outlet structures are typically designed for a 2 year storm event, with the basin being able to withstand overtopping from a 100 year event. Peak Runoff values for various storm events to the sediment basin were calculated using SCS TR 55 methodology in HEC-HMS. Results are summarized in the following table:

DESIGN FLOW – PEAK RUNOFF RATES INTO LAKE OF THE WOODS SEDIMENT BASIN		
Recurrence interval	Chance of occurring in any given year	Flow (CFS)
2 year	50%	48
25 year	4%	216
100 year	1%	361

b. Sediment Estimates:

- i. Sediment transport calculations were completed to determine approximately how much sediment is coming into the basin from the watershed annually. This information can then be used to determine how much storage volume should be provided in the basin for a particular duration. The sediment transport calculations were computed using the Revised Uniform Soil Loss Equation developed by the USDA – Agricultural Research Service. Sediment delivery and transport ratios were factored into the soil loss calculations to approximate the sediment yield to the basin. Annual sediment yield to the basin, under the current conditions, is estimated to be approximately 1,800 tons per year, (1,400 cubic yards). The estimate is based upon a ground cover average between bare soil and 20% vegetated cover as shown on the soil yield table included in the attachments.
- ii. The amount of sediment transported to the basin is a function of the size of the drainage area, the annual rainfall, the type of soil, the slope, and cover (pavement, houses, grass, trees, bare soil, etc.). The majority of the watershed, 142 acres, is covered with lawns, streets, and buildings. These areas are not considered significant contributors of sediment to the basin. 63 acres of the sediment basin’s watershed is sloped, wooded ravines. Because of the steepness of the slope, the soil types, and the vegetated condition of these slopes, the wooded ravines contribute the vast majority of sediment to the basin.
- iii. Another source of sediment load to the basin is roadway culvert outlets. Roadway drainage that is concentrated into a culvert that is discharged into a ravine is also a source of soil erosion that eventually ends up in the sediment basin. Culvert outfall erosion was not quantified into the sediment calculations presented here.

5. ALTERNATIVES CONSIDERED:

- a. Description: A few alternatives were considered for improvements to the sediment dam. The first alternate is to reconstruct the existing dam and the outlet structure entirely in the same location. The second alternate is to make repairs to the existing dam and outlet structure. A third alternate would be to leave the existing sediment dam as-is and construct a new dam behind the existing one. Some brief calculations were done to estimate how long it would take for the lake to be filled with sediment, if nothing were done and the sediment were allowed to continue to flow into the lake. We also compiled some information about controlling erosion in the watershed, which can significantly reduce the annual sediment yield, subsequently reducing the amount of sediment removal required in the future. We also include removing a certain amount of the accumulated sediment in each alternative.
- b. Preliminary sketches for each alternative are included in the attachments. The preliminary sketches roughly describe a scope of work to establish quantities for a cost estimate for each alternative.
- c. Permit Requirements: The Lake of the Woods and its sediment basin show up on the National Wetlands Inventory as freshwater ponds, (copy National Wetland Inventory included in the Appendix). There are no regulated flood zones in the sediment basin area, (copy of Flood Insurance Rate Firmette included in the Appendix). It is anticipated that the removal of sediment from the sediment basin and reconstructing or repairing the sediment dam would be permitted under the Army Corps of Engineer's Nationwide Permit Program under Nationwide Permit Number 35 Maintenance Dredging of Existing Basins. Illinois Department of Natural Resources, Office of Water Resources offers a statewide permit No. 11 that authorizes minor maintenance dredging activities. Before any construction work begins a joint permit application should be filed with the Army Corps of Engineers and the Illinois Department of Natural Resources Division of Water Resources to request written confirmation that the nationwide and state wide permits are applicable for this project. Copies of the permit requirements for the nationwide permit 35 and state wide permit 11 are included in the Appendix.
- d. Land Requirements: No property boundary surveys were completed for this report. Based upon Peoria County GIS maps, the sediment basin and its access road are located primarily in parcel, 0920252031, a 1.5 acre parcel owned by the Lake of the Woods Homeowners Association. Portions of the sediment dam and basin are also located on adjacent parcel 0920279021, a 2.64 acre parcel also owned by the Homeowners Association. It is recommended that the south line of the 79021 parcel and the east line of the 52031 be located in the field, to be sure that the extents of the reconstruction work will be on HOA property, or to identify if easements may be necessary from some adjacent parcels. The approximate location of property lines as indicated from Peoria County GIS are shown on the exhibits.
- e. Woodland Management:

- i. As noted in the sediment estimate calculations, ground cover is a key component when estimating amount of soil loss and sediment yield in a watershed. The current ground cover in the steep wooded area varies between bare soil and 20% vegetated cover. By implementing woodland management on the steep slopes in the watershed, it should be possible to increase the vegetated ground cover to 80% and subsequently reduce the amount of sediment moving into the basin by a substantial amount. From approximately 1,800 tons per year to 80 tons per year.
 - ii. Typical woodland management in the Peoria Lakes regions includes selectively cutting down or girdling aggressive small trees (such as sugar maples under 6" diameter) to thin the canopy, and cutting and treating with herbicide invasive shrubs (honeysuckle, lonicera, spp). Reducing the aggressive species in the woodland opens the canopy and promotes the growth of desirable understory vegetation to flourish with deep fibrous roots that minimize soil erosion. The cost estimated for woodland management in this report does not include removing cut woody material or planting any vegetation. Downed or girdled trees are left on the ground to decompose in place. It is anticipated the native seed bank will regrow after the canopy thinned, so no seeding is included in the estimate. Additional information on woodland management is included in the references. Similar work was completed in the nearby Deerbrook subdivision, the HOA may want to reach out to property owners there to learn about their experience.
 - iii. Not every property with wooded slopes in the sediment basin watershed is part of the HOA. There would be some benefit to reach out to property owners outside of the HOA to encourage them to participate in woodland management.
- f. Roadway Culvert Outlets:
 - i. Roadway culvert outlets can be a significant source of erosion. Each outlet needs to be evaluated individually. Some of them may be corrected simply by hard armoring the outfall with rip rap. Depending upon the severity of the situation, the outlets may need energy dissipation, drop structures, or pipe extension to the bottom of the slope where a stable point of discharge can be achieved. These need to be evaluated individually, any work in the right of way needs to be coordinated with the township road commissioner.
- g. Potential Construction Problems:
 - i. Geotechnical analysis will be needed to analyze the soil composition of the existing dam and the sediment basin. The geotechnical analysis would determine the suitability of any in-situ soils that can be used for repairing the basin and it would also determine the depth of sediment over the in-situ soils. These will be key considerations during the final design process. The suitability for use of the in-situ soils, or re-use of the existing dam soils will be a significant factor in the final construction cost.

- ii. The proximity of a suitable location to place removed sediment from the basin will also have a significant impact on cost. The bulk of the cost of sediment removal will be in hauling cost. The sediment is not likely to be suitable for use as structural fill, though it could be good topsoil, or non-structural fill.
- h. Cost Estimates: Preliminary Opinion of costs are provided for each alternative and itemized in the attachments. These estimates are developed for budgeting and decision making purposes and summarized below:

ALTERNATIVE COST SUMMARY	
Alternate 1 (Reconstruct in Place)	\$175,000
Alternate 2 (Repair)	\$135,000
Alternate 3 (Rebuild behind)	\$183,000
Alternate 4 (Woodland Management)	\$52,000*
Stabilize Roadway Culvert Outlets	Need individual evaluation

**63 Acres x \$800/acre = \$52,000*

6. CONCLUSIONS:

- a. Based upon the information provided herein, it is recommend that the HOA implement repairs to the sediment dam (Alternate 2) in combination with a woodland management program.
- b. It is recommend that woodland management in the ravines be implemented in the watershed as it has the potential to reduce the frequency at which the sediment basin would need to be cleaned of sediment in future. It is significantly more cost effective to prevent soil erosion with vegetation management, than it is to remove sediment from the sediment basin.
- c. It is recommended that the sediment dam and basin be inspected by a qualified person annually. It is also recommended that the sediment basin be visually checked after large rainfall events. It is recommended that the HOA budget for on-going repairs, maintenance, and sediment removal, as may be identified in future inspections.
- d. It is recommended that the HOA work with the township road district to stabilize and repair any roadway culvert outlets that are significantly eroding.

**Respectfully Submitted,
Midwest Engineering Associates, Inc.**

**Debra A. Roe, PE
Sr. Project Manager**

ATTACHMENTS:

Figure 1: Watershed Exhibit

Figure 2: Existing Condition

Figure 3, 4 & 5 Alternate Exhibits

Cost Estimates for Each Alternate

Soil Yield Calculation Summary

Photographs

National Wetlands Inventory

Flood Insurance Rate Firmette

Nationwide and Statewide Permit Requirements

REFERENCES:

United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), Rapid Assessment Point Method, Inventory and Evaluation of Erosion and Sedimentation for Illinois, R. D. Windhorn August 2002

United States Department of Agriculture (USDA) Agricultural Research Service, Revised Universal Soil Loss Equation, User's Guide, George R. Foster, January 2003

United State Department of Agriculture (USDA), Soil Conservation Service (SCS) Urban Hydrology for Small Watersheds, Technical Release 55, June 1986

Mossville Bluffs Water Restoration Master Plan, Peoria County, City of Peoria, Tri-county Regional Planning Commission, October 2002
<http://ilrdss.isws.illinois.edu/pubs/govconf2007/session3a/MelissaEaton.pdf>

Mossville Bluffs Home Owners Guide to Stormwater Best Management Practices, Heartland Water Resources Council, Tri-County Regional Planning Commission, March 2008
<http://www.epa.state.il.us/water/tmdl/implementation/illinois-river/mossville-bluff-bmp-guide.pdf>

Specifications for Forest Management, Implementing Best Management Practices in the Mossville Bluffs Watershed, May 20, 2007
http://tricityrpc.org/wp-content/uploads/307_forest_management_design_specifications.doc

EXISTING CONDITIONS

LAKE OF THE WOODS
HOMEOWNERS ASSOCIATION
SEDIMENT BASIN IMPROVEMENTS
DUNLAP, ILLINOIS

Issued

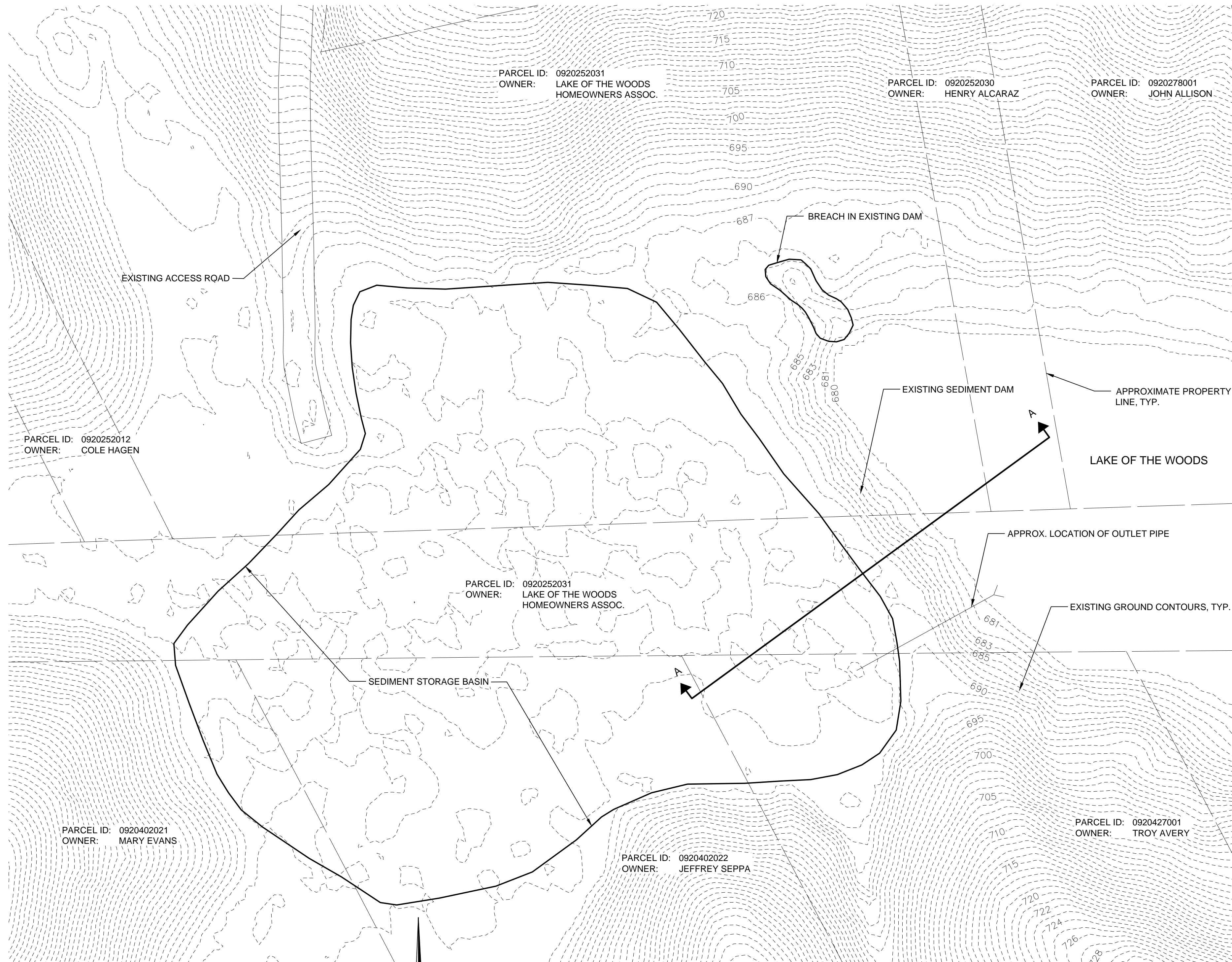
Rev	Date	Description

Designed: DAR
Drawn: BAB
Checked:
Approved:

PROJECT NUMBER
20180163

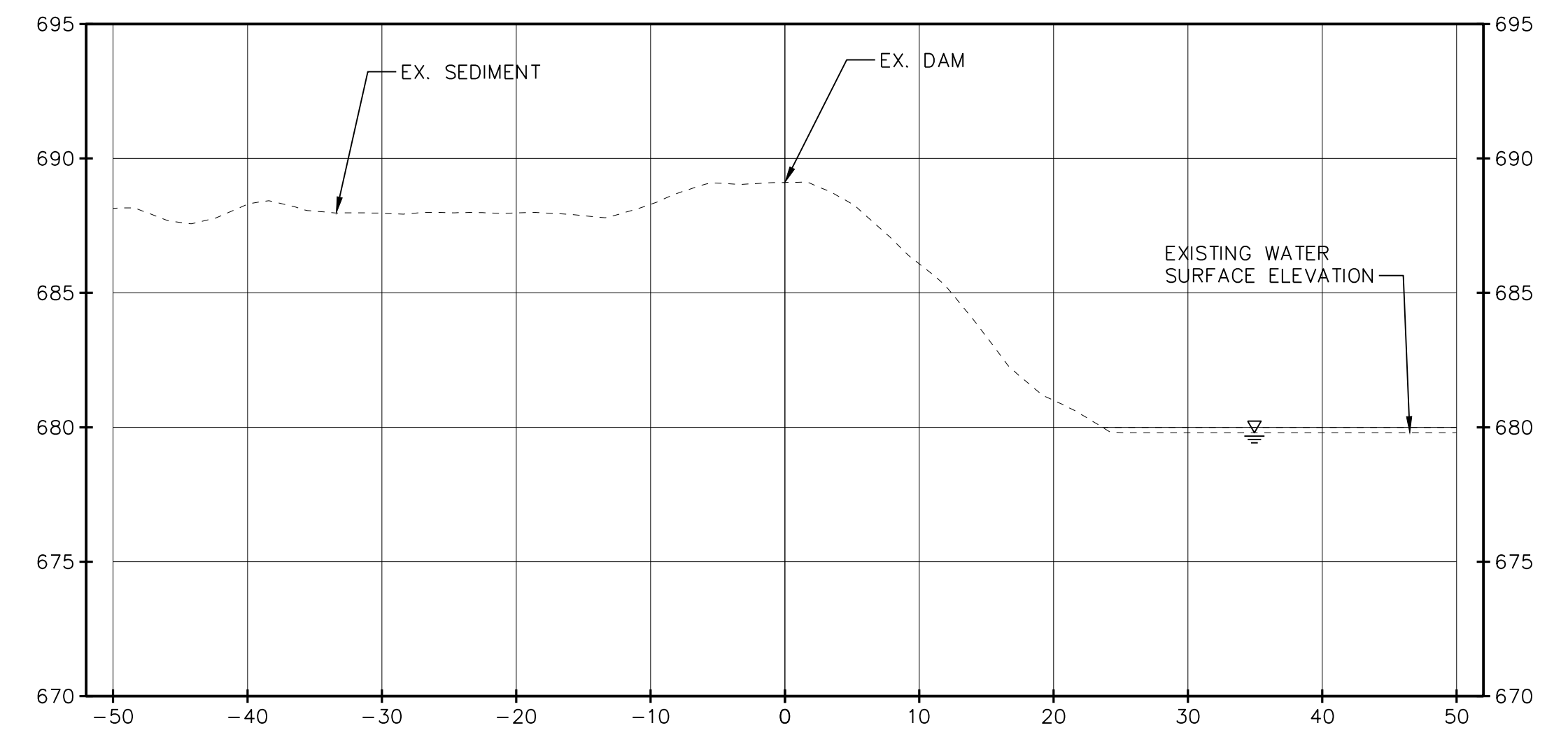
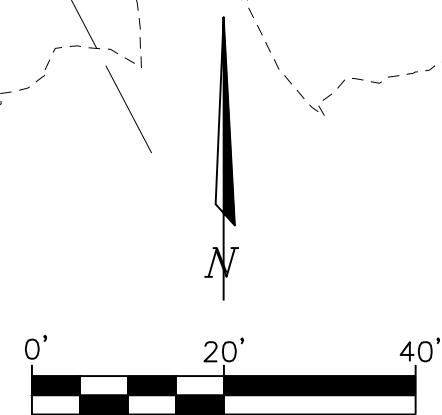
SHEET REFERENCE NUMBER

FIG 2



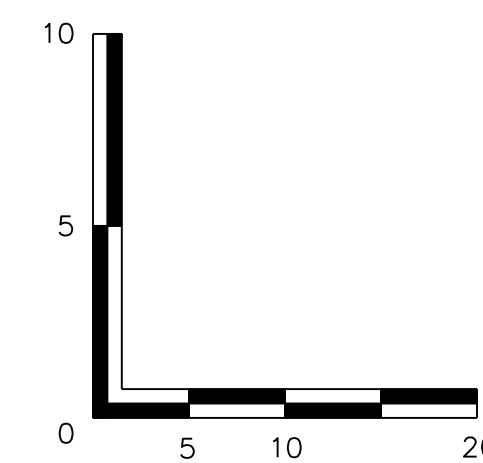
EXISTING CONDITIONS

SCALE: 1" = 20'



SECTION A-A

SCALE: 1" = 10' HORIZ. 1" = 5' VERT.



S:\ENGINEERING\PROJECTS\LAKE OF THE WOODS HOMEOWNER ASSOCIATION\20180163 SEDIMENT POND REMED & MAINT PLAN\400 CAD\404 EXHIBITS\WATERSHED.DWG 1/21/2019 11:57 AM



LAKE OF THE WOODS

PRELIMINARY REVIEW

BASE LAKE DATA
 LAKE SURFACE AREA = 12 ACRES
 LAKE WATER SURFACE ELEVATION = 680 FEET
 LAKE WATERSHED AREA = 281 ACRES
 APPROX. LAKE VOLUME = 241,936 CU YDS
 SEDIMENT BASIN SURFACE AREA = 26,124 SQ FT
 SEDIMENT BASIN WATERSHED AREA = 205 ACRES

SEDIMENT DAM:
 Length: 181 feet
 Height: 8 feet

DESIGN FLOWS: (FROM USGS STREAM STATS)
 2 year overflow rate: 48 cfs
 100 year stabilized overflow rate: 361 cfs

ASSUME WE RECONSTRUCT THE SEDIMENT DAM:
 8' tall, with a 10' width at top, and 4:1 side slopes
 cross sectional area, XA = 400 square feet
 XA * L = volume = 72,400 cubic feet = 2,681 cubic yards



Rev	Date	Issued	Description

Designed: DAR
 Drawn: BAB
 Checked:
 Approved:

PROJECT NUMBER
 20180163
 SHEET REFERENCE NUMBER

ALTERNATE NO. 1
RECONSTRUCT ENTIRE
SEDIMENT DAM

LAKE OF THE WOODS
HOMEOWNERS ASSOCIATION
SEDIMENT BASIN IMPROVEMENTS
DUNLAP, ILLINOIS

Issued

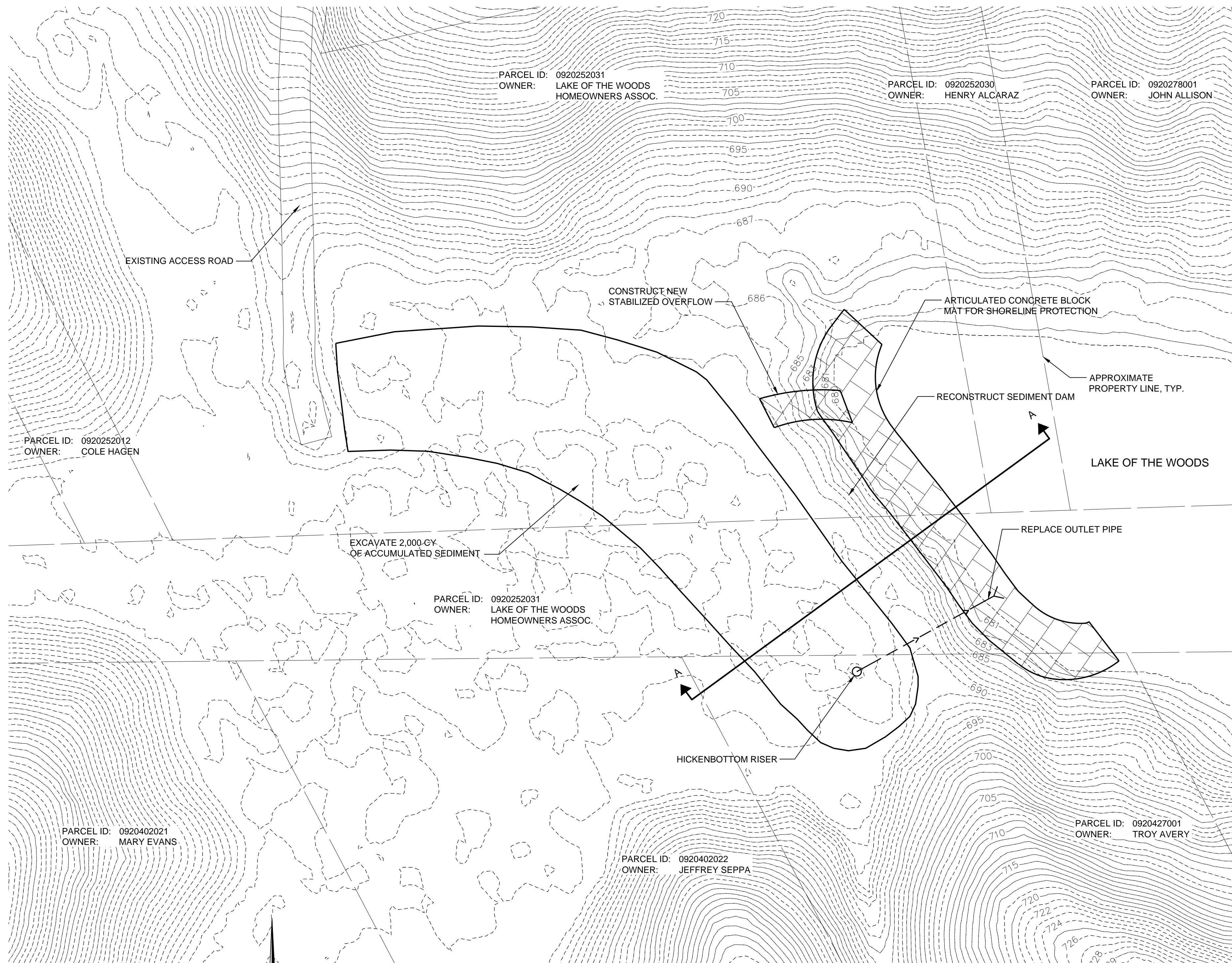
Rev	Date	Description

Designed: DAR
Drawn: BAB
Checked:
Approved:

PROJECT NUMBER
20180163

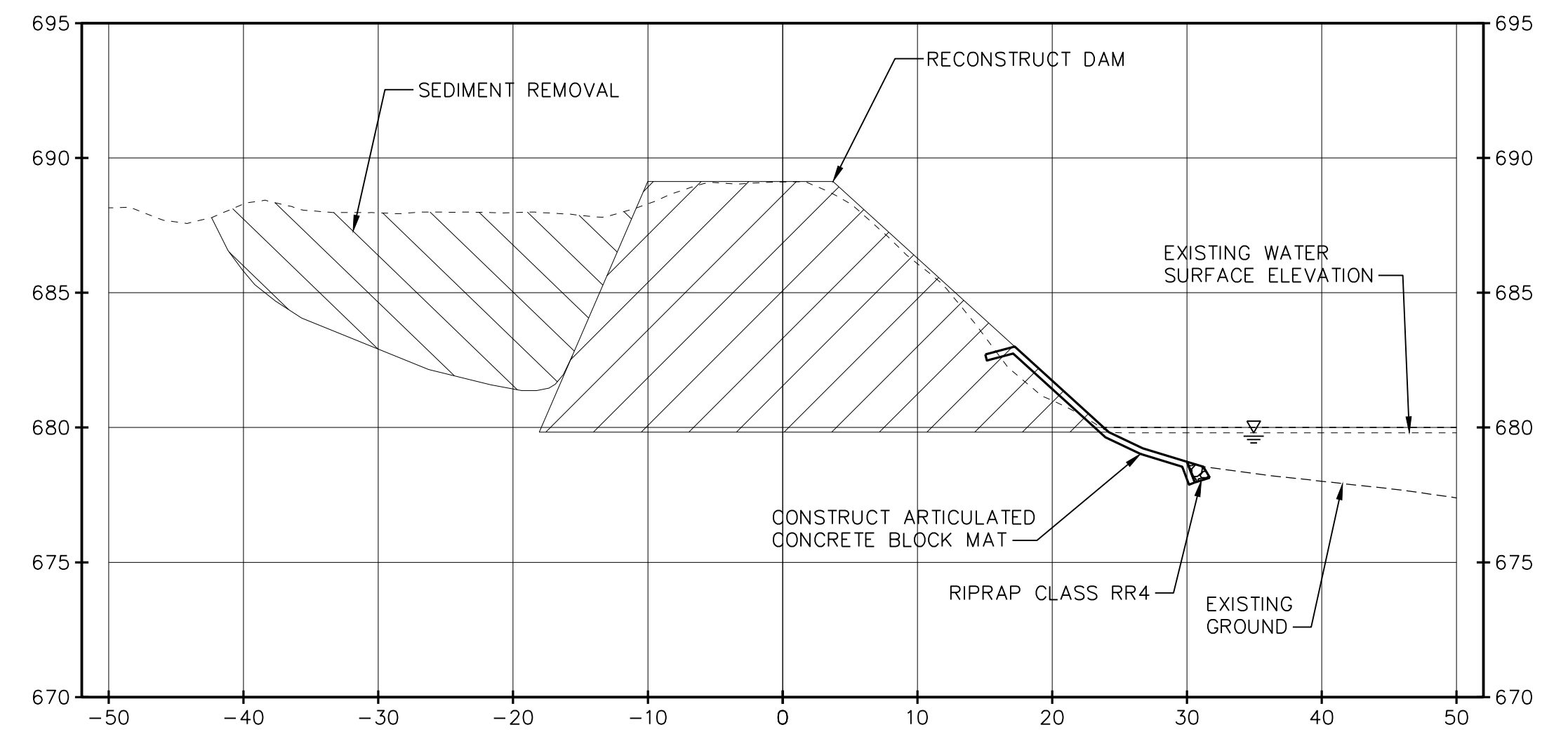
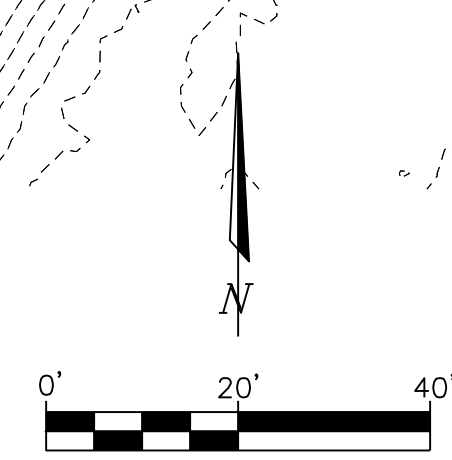
SHEET REFERENCE NUMBER

FIG 3



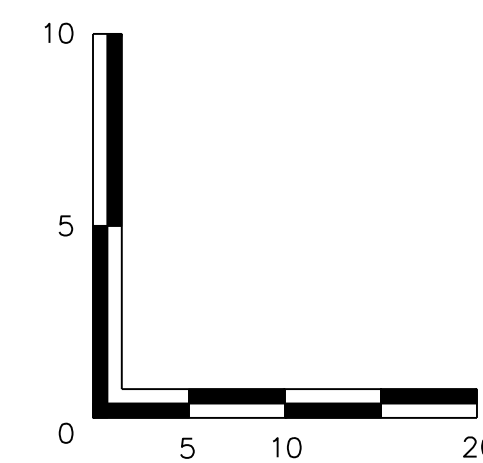
ALTERNATE NO. 1 - RECONSTRUCT ENTIRE SEDIMENT DAM

SCALE: 1" = 20'



SECTION A-A

SCALE: 1" = 10' HORZ. 1" = 5' VERT.



S:\ENGINEERING\PROJECTS\LAKE OF THE WOODS HOMEOWNER ASSOCIATION\20180163 SEDIMENT POND REMED & MAINT PLAN\400 CAD\404 EXHIBITS\ALTERNATE NO. 1.DWG 1/21/2019 10:21 AM

ALTERNATE NO. 2
REPAIR EXISTING
SEDIMENT DAM

LAKE OF THE WOODS
HOMEOWNERS ASSOCIATION
SEDIMENT BASIN IMPROVEMENTS
DUNLAP, ILLINOIS

Issued

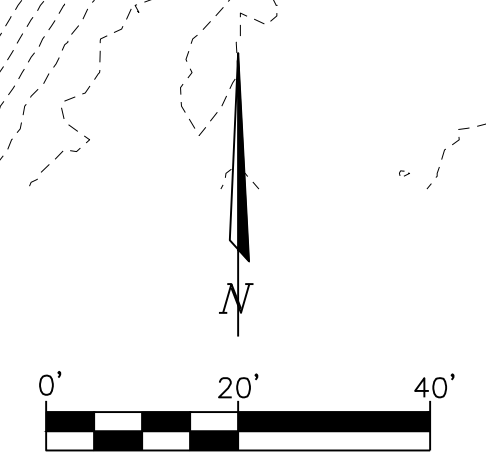
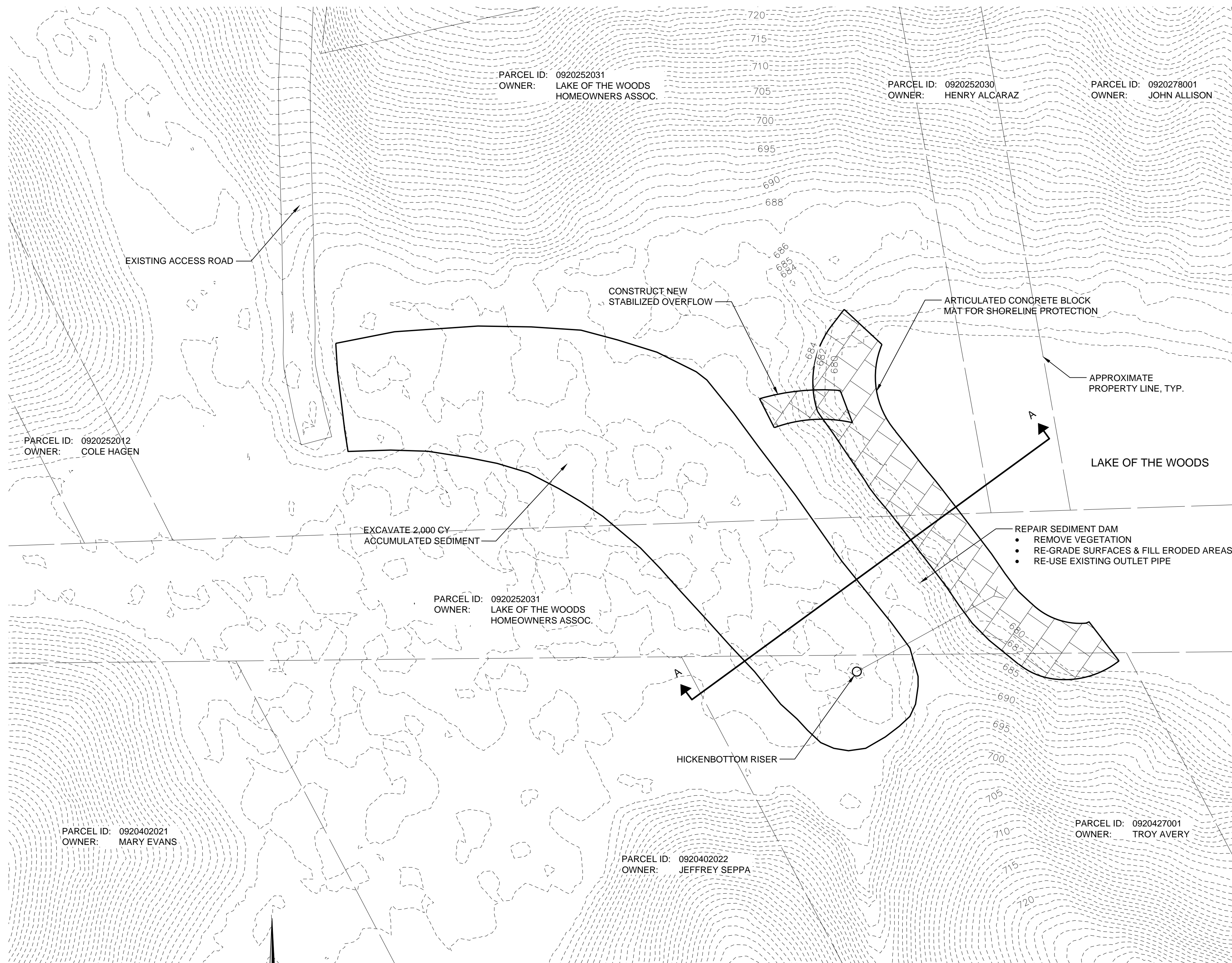
Rev. Date
Description

Designed: DAR
Drawn: BAB
Checked:
Approved:

PROJECT NUMBER
20180163

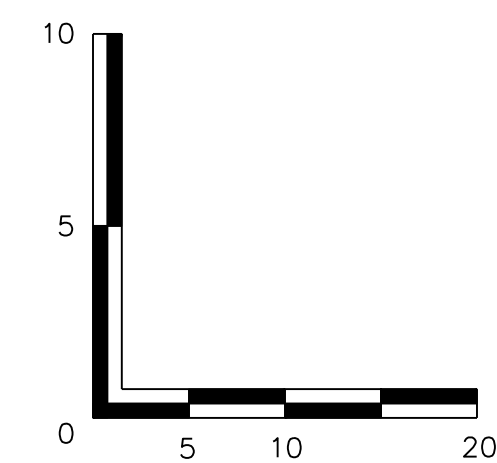
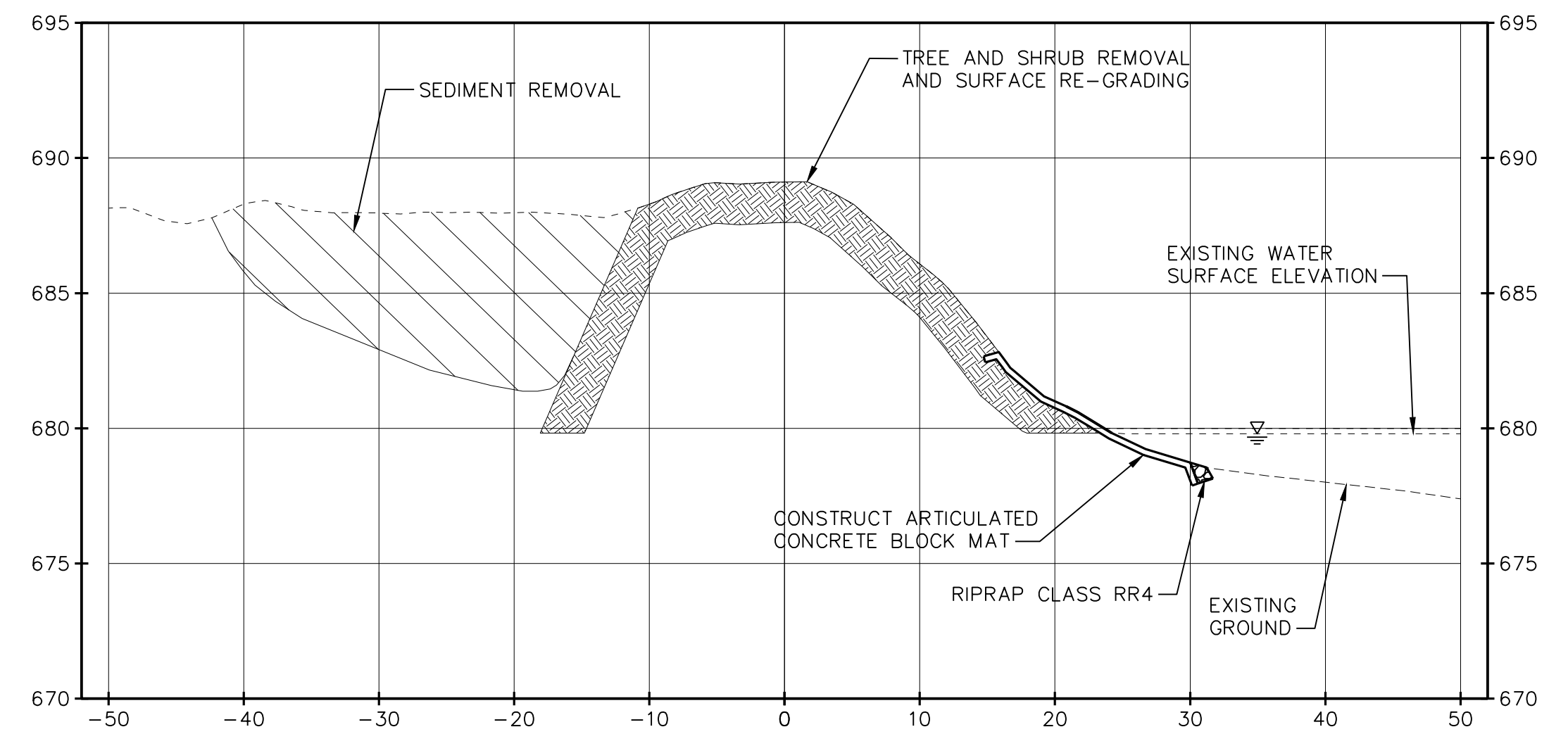
SHEET REFERENCE NUMBER

FIG 4



ALTERNATE NO. 2 - REPAIR EXISTING SEDIMENT DAM

SCALE: 1" = 20'



SECTION A-A

SCALE: 1" = 10' HORZ. 1" = 5' VERT.

ALTERNATE NO. 3
ABANDON EXISTING SEDIMENT
DAM AND CONSTRUCT NEW ONE

LAKE OF THE WOODS
HOMEOWNERS ASSOCIATION
SEDIMENT BASIN IMPROVEMENTS
DUNLAP, ILLINOIS

Issued

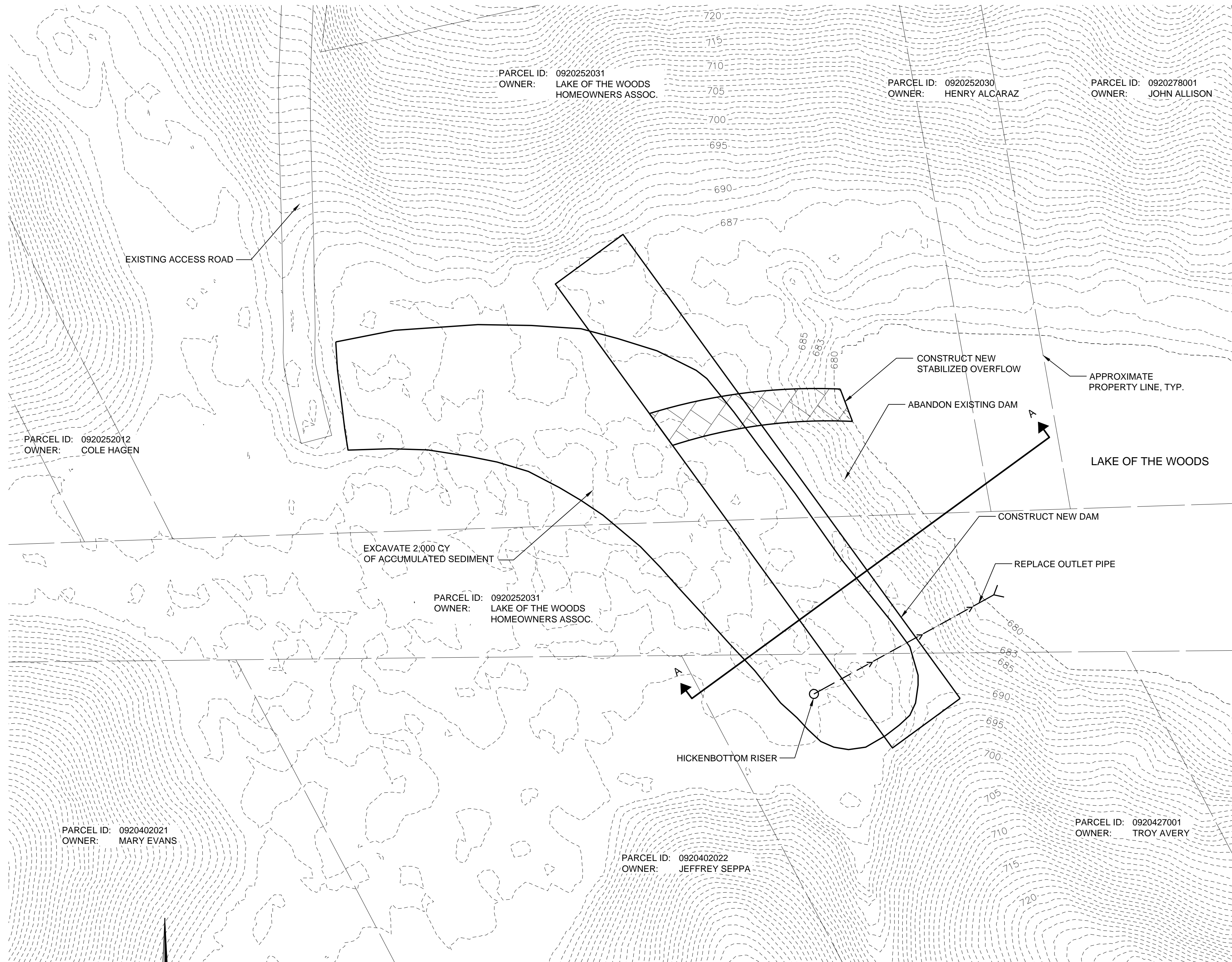
Rev	Date	Description

Designed: DAR
Drawn: BAB
Checked:
Approved:

PROJECT NUMBER
20180163

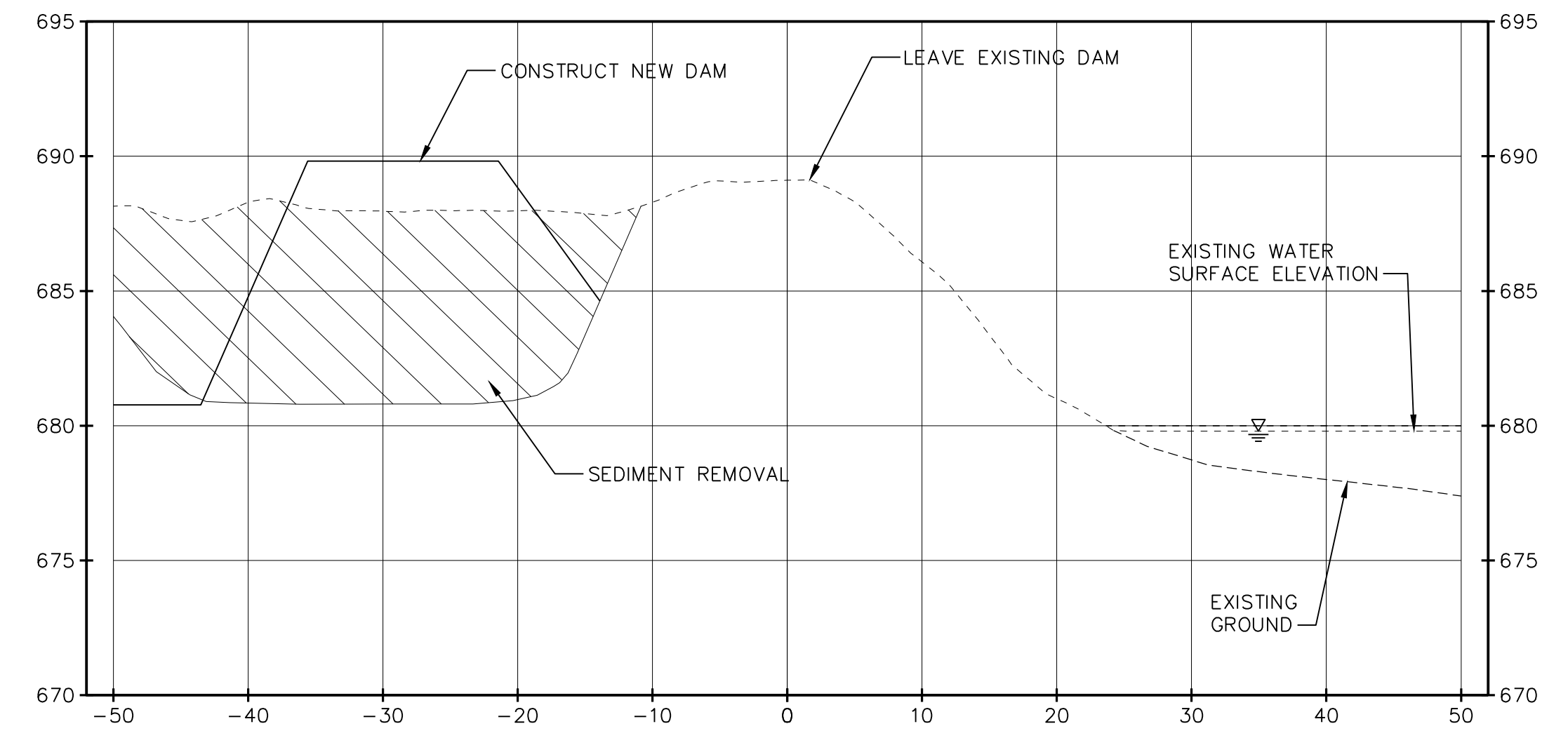
SHEET REFERENCE NUMBER

FIG 5



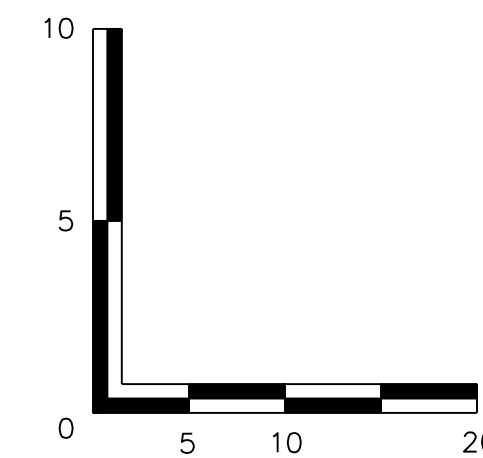
ALTERNATE NO. 3 - ABANDON EXISTING SEDIMENT DAM AND CONSTRUCT NEW ONE

SCALE: 1" = 20'



SECTION A-A

SCALE: 1" = 10' HORZ. 1" = 5' VERT.



Alternate No. 1

RECONSTRUCT EXISTING SEDIMENT DAM

	QUANTITY	UNIT	UNIT PRICE	EXTENSION
Remove Accumulated Sediment	2000	CY	\$ 18.00	\$ 36,000.00
Tree And Shrub Removal	1	LUMP SUM	\$ 1,500.00	\$ 1,500.00
Earthwork to Reconstruct silt dam	2,681	CY	\$ 12.00	\$ 32,172.00
Hickenbottom riser for low flow outlet	1	EACH	\$ 800.00	\$ 800.00
Stabilized overflow for high flow events	30	SQ YDS	\$ 115.00	\$ 3,450.00
Articulated concrete block mat	285	SQ YDS	\$ 115.00	\$ 32,775.00
Rip Rap, RR4 (40 pound stone)	40	TON	\$ 40.00	\$ 1,600.00
Replace outlet pipe	50	LF	\$ 50.00	\$ 2,500.00
Seeding and Hydromulch	0.5	ACRE	\$ 5,000.00	\$ 2,500.00
Silt Fence	250	LF	\$ 2.00	\$ 500.00
			subtotal	\$ 113,797.00
			20% contigency	\$ 22,759.40
			soil borings - geotechnical analysis	\$ 6,800.00
			Survey & Design Engineering	\$ 20,483.46
			Engineering Services during construction	\$ 10,924.51
				\$ 174,764.37

IMPORTANT NOTE ON THIS ESTIMATE: THE LOCAL AVAILABILITY OF STRUCTURAL FILL FOR THE DAM AND LOCATION TO DEPOSIT ACCUMULATED SEDIMENT GREATLY IMPACTS THIS ESTIMATE

Alternate No. 2
REPAIR EXISTING SEDIMENT DAM

	QUANTITY	UNIT	UNIT PRICE	EXTENSION
Remove Accumulated Sediment	2000	CY	\$ 18.00	\$ 36,000.00
Tree And Shrub Removal	1	LUMP SUM	\$ 1,500.00	\$ 1,500.00
REGRADE AND RESHAPE SUFACE OF EXISTING DAM	500	SQ YDS	\$ 15.00	\$ 7,500.00
Hickenbottom riser for low flow outlet	1	EACH	\$ 800.00	\$ 800.00
Stabilized overflow for high flow events	30	SQ YDS	\$ 115.00	\$ 3,450.00
Articulated concrete block mat	285	SQ YDS	\$ 115.00	\$ 32,775.00
Rip Rap, RR4 (40 pound stone)	40	TON	\$ 40.00	\$ 1,600.00
Seeding and Hydromulch	0.5	ACRE	\$ 5,000.00	\$ 2,500.00
Silt Fence	250	LF	\$ 2.00	\$ 500.00
			subtotal	\$ 86,625.00
			20% contingency	\$ 17,325.00
			soil borings - geotechnical analysis	\$ 6,800.00
			Survey & Design Engineering	\$ 15,592.50
			Engineering Services during construction	\$ 8,316.00
				\$ 134,658.50

IMPORTANT NOTE ON THIS ESTIMATE: THE LOCAL AVAILABILITY OF STRUCTURAL FILL FOR THE DAM AND LOCATION TO DEPOSIT ACCUMULATED SEDIMENT GREATLY IMPACTS THIS ESTIMATE

Alternate No. 3

Abandon Existing Sediment Dam - Construct new one behind existing

	QUANTITY	UNIT	UNIT PRICE	EXTENSION
Remove Accumulated Sediment	2000	CY	\$ 18.00	\$ 36,000.00
Tree And Shrub Removal	1	LUMP SUM	\$ 1,500.00	\$ 1,500.00
Earthwork new silt dam	2,681	CY	\$ 12.00	\$ 32,172.00
Hickenbottom riser for low flow outlet	1	EACH	\$ 800.00	\$ 800.00
Stabilized overflow for high flow events	75	SQ YDS	\$ 115.00	\$ 8,625.00
Articulated concrete block mat	285	SQ YDS	\$ 115.00	\$ 32,775.00
Rip Rap, RR4 (40 pound stone)	40	TON	\$ 40.00	\$ 1,600.00
Replace outlet pipe	50	LF	\$ 50.00	\$ 2,500.00
Seeding and Hydromulch	0.5	ACRE	\$ 5,000.00	\$ 2,500.00
Silt Fence	250	LF	\$ 2.00	\$ 500.00
			subtotal	\$ 118,972.00
			20% contingency	\$ 23,794.40
			soil borings - geotechnical analysis	\$ 6,800.00
			Survey & Design Engineering	\$ 21,414.96
			Engineering Services during construction	\$ 11,421.31
				\$ 182,402.67

IMPORTANT NOTE ON THIS ESTIMATE: THE LOCAL AVAILABILITY OF STRUCTURAL FILL FOR THE DAM AND LOCATION TO DEPOSIT ACCUMULATED SEDIMENT GREATLY IMPACTS THIS ESTIMATE

PRELIMINARY WATERSHED SOIL YIELDS - LAKE OF THE WOODS HOMEOWNERS ASSOCIATION

Subbasin	Area acres	R (Central IL)	K	Slope percent (typical)	Slope length feet (typical)	LS	C	P	Soil Loss tons/acre-yr	Sediment Delivery Ratio	Sediment Transport Factor	Sediment Yield tons/year	cubic yards per year	EARTH REMOVAL COST \$/year (estimated at \$12/cubic yard)
Wooded Ravine	63	180	0.37	33	145	4.5	0.36	1	107.892	0.55	0.64	2393	1866	\$ 22,387.02
Developed Lots/ Lawns/Streets	142	180	0.37	1	215	0.17	0.003	1	0.033966	0.25	0.64	1	0.6	\$ 7.22
Wooded Ravine	63	180	0.37	33	145	4.5	0.17	1	50.949	0.55	0.64	1130	881	\$ 10,571.65
Developed Lots/ Lawns/Streets	142	180	0.37	1	215	0.17	0.003	1	0.033966	0.25	0.64	1	0.6	\$ 7.22
Wooded Ravine	63	180	0.37	33	145	4.5	0.012	1	3.5964	0.55	0.64	80	62	\$ 746.23
Developed Lots/ Lawns/Streets	142	180	0.37	1	215	0.17	0.003	1	0.033966	0.25	0.64	1	0.6	\$ 7.22

Bare soil in wooded ravines

20% vegetated Ground cover in wooded ravines

80% vegetate Ground cover in wooded ravines

Approximate Volume of Lake 241,936 cubic yards

Do nothing option:

The lake will lose half of its volume in 65 years

Lake will be completely filled with sediment in 130 years

Approximate Area of Sediment Basin 26,124 sq feet
 Depth to excavate one year of sediment 1.93 feet

NOTE: THE AVAILABILITY OF A LOCAL PLACE TO DEPOSIT REMOVED SEDIMENT GREATLY IMPACTS COSTS



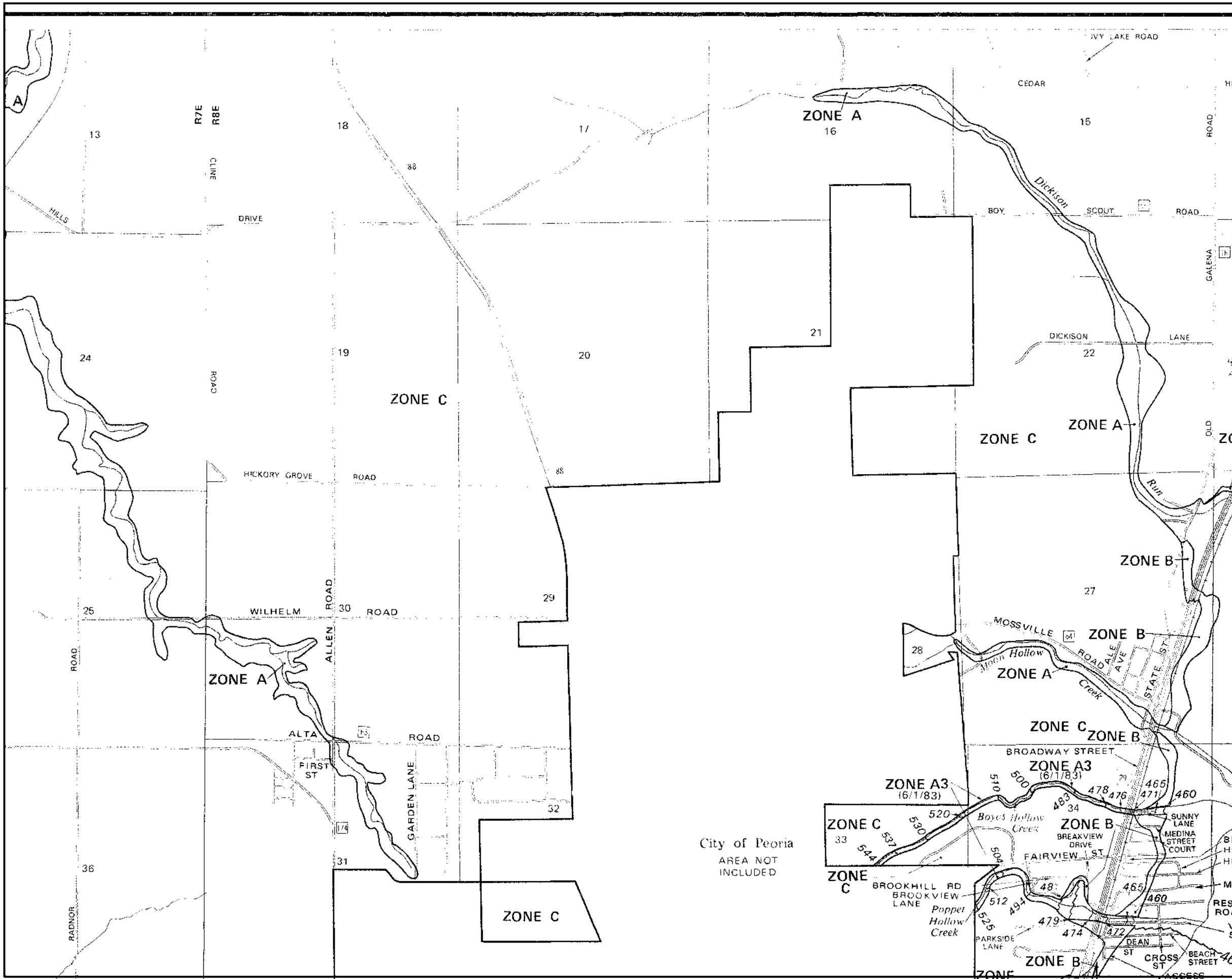
October 30, 2018

Wetlands

- | | | | | | |
|---|--------------------------------|---|-----------------------------------|---|----------|
|  | Estuarine and Marine Deepwater |  | Freshwater Emergent Wetland |  | Lake |
|  | Estuarine and Marine Wetland |  | Freshwater Forested/Shrub Wetland |  | Other |
| | |  | Freshwater Pond |  | Riverine |

U.S. Fish and Wildlife Service, National Standards and Support Team,
wetlands_team@fws.gov

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



APPROXIMATE SCALE
 2000 0 2000 FE

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
 FLOOD INSURANCE RATE MAP

COUNTY OF
 PEORIA,
 ILLINOIS
 (UNINCORPORATED AREAS)

PANEL 125 OF 200

COMMUNITY-PANEL NUMBER
 170533 0125 B
 MAP REVISED:
 JUNE 1, 1983



Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

ILLINOIS DEPARTMENT OF NATURAL RESOURCES
OFFICE OF WATER RESOURCES
ONE NATURAL RESOURCES WAY
SPRINGFIELD, ILLINOIS 62702-1271

STATEWIDE PERMIT NO. 11

AUTHORIZING MINOR MAINTENANCE DREDGING ACTIVITIES

PURPOSE

The purpose of this Statewide Permit is to authorize minor maintenance dredging activities which have insignificant impact on those factors under the jurisdiction of the Illinois Department of Natural Resources, Office of Water Resources (IDNR/OWR). It is no longer necessary to submit applications to, or obtain individual permits from, IDNR/OWR for activities meeting the terms and conditions of this permit. If a project would not meet all of the terms and conditions of this permit, a formal permit application must be submitted.

APPLICABILITY

This permit applies to minor maintenance dredging activities (see special conditions) on all Illinois streams under the Department's jurisdiction except those in Lake, McHenry, Cook, DuPage, Kane and Will Counties for which regulatory floodways have been designated pursuant to 17 Illinois Administrative Code 3708. The permit also applies to maintenance dredging activities of active harbors, marinas, and docking and water intake facilities on all Illinois rivers and lakes under the Department's jurisdiction except those in Lake, McHenry, Cook, DuPage, Kane and Will Counties for which regulatory floodways have been designated pursuant to 17 Illinois Administrative Code 3708. The permit does not authorize any other type of in stream work such as paving or enclosing a channel. Nor does the permit apply to any project which would conflict with any federal, state, or local project or improvement or with any other rule of the Department.

COORDINATION WITH OTHER AGENCIES

This permit does not supersede nor relieve any permittee's responsibility to obtain other federal, state or local permits. The local (county or municipal) regulatory official and the U. S. Army Corps of Engineers' regulatory functions office should be contacted to obtain any required permits. In addition, if any historical or archeological materials are revealed by any activity performed under this permit, the activity shall be suspended and the permittee shall notify the staff archeologist, Historic Preservation Agency, One Old State Capitol Plaza, Springfield, Illinois 62701.

SPECIAL CONDITIONS

In order to be authorized by this permit, a project must meet the following special conditions:

1. In the case of minor maintenance dredging of a stream channel:
 - a. The affected length of the stream shall not, either singularly or cumulatively, exceed one thousand (1000) feet;
 - b. The project shall not include the construction of any new channel; all work must be confined to the existing channel or to reestablishing flows in the natural stream channel; and
 - c. The cross-sectional area of the dredged channel shall conform to that of the natural channel upstream and downstream of the site.
2. Dredged or spoil material shall not be disposed of in a wetland and shall be either:
 - a. Removed from the floodway;
 - b. Used to stabilize an existing bank provided no materials would be placed higher than the existing top of bank and provided the cross-sectional area of the natural channel would not be reduced by more than ten percent (10%) nor the volume of material placed exceed two (2)cubic yards per lineal foot of streambank;
 - c. Used to fill in an existing washed out or scoured floodplain area such that the average natural floodplain elevation is not increased;
 - d. Used to stabilize an existing levee provided the height of the levee would not be increased nor its alignment changed;
 - e. Placed in a disposal site previously approved by the Department in accordance with the conditions of the approval; or
 - f. Used for beach nourishment, provided the material meets all applicable water quality standards.

3. Disturbance of streamside vegetation shall be kept to a minimum during construction to prevent erosion and sedimentation. All disturbed floodway areas, including the stream banks, shall be seeded or otherwise stabilized upon completion of construction.

GENERAL CONDITIONS

1. This permit is granted in accordance with the Rivers, Lakes and Streams Act, 615 ILCS 5 (1996 State Bar Edition).
2. This permit does not convey title to any permittee or recognize title of any permittee to any submerged or other lands, and furthermore, does not convey, lease or provide any right or rights of occupancy or use of the public or private property on which the project or any part thereof will be located, or otherwise grant to any permittee any right or interest in or to the property, whether the property is owned or possessed by the State of Illinois or by any private or public party or parties.
3. This permit does not release any permittee from liability for damage to persons or property resulting from any activity covered by this permit and does not authorize any injury to private property or invasion of private rights.
4. This permit does not relieve any permittee of the responsibility to obtain other federal, state or local authorizations required for the construction of the permitted activity; and if any permittee is required by law to obtain approval from any federal or other state agency to do the work, authorization granted by this permit is not effective until the federal and state approvals are obtained.
5. If the activity authorized by this permit is located in or along a meandered lake, the permittee and the permittee's successors shall make no claim whatsoever to any interest in any accretions caused by the activity.

6. This Statewide Permit shall remain in effect until such time as it is modified, suspended, or revoked by the Department of Natural Resources.

This Statewide Permit was issued on December 1, 1988 and last modified or corrected June 15, 1998.

APPROVED:

Brent Manning, Director
Department of Natural Resources

EXAMINED AND RECOMMENDED:

Martin J. Stralow, Manager
Division of Water Resource Management

APPROVAL RECOMMENDED:

Donald R. Vonnahme, Director
Office of Water Resources

NATIONWIDE PERMIT 35
Maintenance Dredging of Existing
Basins

Effective Date: March 19, 2017
(NWP Final Notice, 82 FR 4)

35. Maintenance Dredging of Existing Basins. The removal of accumulated sediment for maintenance of existing marina basins, access channels to marinas or boat slips, and boat slips to previously authorized depths or controlling depths for ingress/egress, whichever is less. All dredged material must be deposited and retained in an area that has no waters of the United States unless otherwise specifically approved by the district engineer under separate authorization. Proper sediment controls must be used for the disposal site. (Authority: Section 10)

Nationwide Permit General Conditions

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

1. Navigation. (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed and constructed to minimize adverse effects to aquatic life movements.

3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through

excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWP 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).

7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.

13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. Wild and Scenic Rivers. (a) No NWP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.

(b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for that river. The permittee shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.

(c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: <http://www.rivers.gov/>.

17. Tribal Rights. No NWP activity may cause more than minimal adverse effects on tribal rights (including treaty rights), protected tribal resources, or tribal lands.

18. Endangered Species. (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which “may affect” a listed species or critical habitat, unless ESA section 7 consultation addressing the effects of the proposed activity has been completed. Direct effects are the immediate effects on listed species and critical habitat caused by the NWP activity. Indirect effects are those effects on listed species and critical habitat that are caused by the NWP activity and are later in time, but still are reasonably certain to occur.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. If pre-construction notification is required for the proposed activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been

satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that might be affected by the proposed activity or that utilize the designated critical habitat that might be affected by the proposed activity. The district engineer will determine whether the proposed activity “may affect” or will have “no effect” to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps’ determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have “no effect” on listed species or critical habitat, or until ESA section 7 consultation has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific permit conditions to the NWPs.

(e) Authorization of an activity by an NWP does not authorize the “take” of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with “incidental take” provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word “harm” in the definition of “take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal applicant should provide a copy of that ESA section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district engineer will coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete pre-construction notification whether the ESA section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA section 7 consultation is required.

(g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their world wide web pages at <http://www.fws.gov/> or <http://www.fws.gov/ipac> and <http://www.nmfs.noaa.gov/pr/species/esa/> respectively.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for ensuring their action complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting appropriate local office of the U.S. Fish and Wildlife Service to determine applicable measures to reduce impacts to migratory birds or eagles,

including whether “incidental take” permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

20. Historic Properties. (a) In cases where the district engineer determines that the activity may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the National Historic Preservation Act. If pre-construction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with section 106.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on the historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect determinations for the purposes of section 106 of the NHPA: no historic properties affected, no adverse effect, or adverse effect. Where the non-Federal applicant has identified historic properties on which the activity might have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects to historic properties or that NHPA section 106 consultation has been completed.

(d) For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA section 106 consultation is required. If NHPA section 106 consultation is required, the district engineer will notify the non-Federal applicant that he or she cannot begin the activity until section 106

consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts. If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters. Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with general condition 32, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation to ensure that the activity results in no more than minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, since streams are difficult-to-replace resources (see 33 CFR 332.3(e)(3)).

(e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. Restored riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to restore or maintain/protect a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or maintaining/protecting a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of minimization or compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWPs, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-responsible mitigation.

(2) The amount of compensatory mitigation required by the district engineer must be sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f)).

(3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation.

(4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)).

(5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan only needs to address the baseline conditions at the impact site and the number of credits to be provided.

(6) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).

(g) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any NWP activity resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs.

(h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(i) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill material into waters of the United States that will convert a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.

24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been

independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

“When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.”

(Transferee)

(Date)

30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity

and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

(a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(1)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and

(c) The signature of the permittee certifying the completion of the activity and mitigation.

The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

31. Activities Affecting Structures or Works Built by the United States. If an NWP activity also requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a “USACE project”), the prospective permittee must submit a pre-construction notification. See paragraph (b)(10) of general condition 32. An activity that requires section 408 permission is not authorized by NWP until the appropriate Corps office issues the section 408 permission to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

32. Pre-Construction Notification. (a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer’s receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or are in the vicinity of the activity, or to notify the Corps pursuant to general condition 20 that the activity might have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification

from the Corps that there is “no effect” on listed species or “no potential to cause effects” on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)) has been completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee’s right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

- (1) Name, address and telephone numbers of the prospective permittee;
- (2) Location of the proposed activity;
- (3) Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;
- (4) A description of the proposed activity; the activity’s purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or other mitigation measures. For single and complete linear projects, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete crossing of those wetlands, other special aquatic sites, and other waters. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);
- (5) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

(6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(7) For non-Federal permittees, if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed activity or utilize the designated critical habitat that might be affected by the proposed activity. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act;

(8) For non-Federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with section 106 of the National Historic Preservation Act;

(9) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the “study river” (see general condition 16); and

(10) For an activity that requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the pre-construction notification must include a statement confirming that the project proponent has submitted a written request for section 408 permission from the Corps office having jurisdiction over that USACE project.

(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is an NWP PCN and must include all of the applicable information required in paragraphs (b)(1) through (10) of this general condition. A letter containing the required information may also be used. Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.

(d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity’s compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity’s adverse environmental effects so that they are no more than minimal.

(2) Agency coordination is required for: (i) all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States; (ii) NWP 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 activities that require pre-construction notification and will result in the loss of greater than 300 linear feet of stream bed; (iii) NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites; and (iv) NWP 54 activities in excess of 500 linear

feet, or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes.

(3) When agency coordination is required, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (FWS, state natural resource or water quality agency, EPA, and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer via telephone, facsimile transmission, or e-mail that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse environmental effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(4) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(5) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

D. District Engineer's Decision

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If a project proponent requests authorization by a specific NWP, the district engineer should issue the NWP verification for that activity if it meets the terms and conditions of that NWP, unless he or she determines, after considering mitigation, that the proposed activity will result in more than minimal individual and cumulative adverse effects on the aquatic environment and other aspects of the public interest and exercises discretionary authority to require an individual permit for the proposed activity. For a linear project, this determination will include an evaluation of the individual crossings of waters of the United States to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings authorized by NWP. If an applicant requests a waiver of the 300 linear foot limit on impacts to streams or of an otherwise applicable limit, as provided for in NWPs 13, 21, 29, 36, 39, 40, 42, 43, 44, 50, 51, 52, or 54, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in only minimal individual and cumulative adverse environmental effects. For those NWPs that have a waivable 300 linear foot limit for losses of intermittent and ephemeral stream bed and a 1/2-acre limit (i.e., NWPs 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52),

the loss of intermittent and ephemeral stream bed, plus any other losses of jurisdictional waters and wetlands, cannot exceed 1/2-acre.

2. When making minimal adverse environmental effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. He or she will also consider the cumulative adverse environmental effects caused by activities authorized by NWP and whether those cumulative adverse environmental effects are no more than minimal. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional or condition assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse environmental effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

3. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for NWP activities with smaller impacts, or for impacts to other types of waters (e.g., streams). The district engineer will consider any proposed compensatory mitigation or other mitigation measures the applicant has included in the proposal in determining whether the net adverse environmental effects of the proposed activity are no more than minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse environmental effects are no more than minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure the NWP activity results in no more than minimal adverse environmental effects. If the net adverse environmental effects of the NWP activity (after consideration of the mitigation proposal) are determined by the district engineer to be no more than minimal, the district engineer will provide a timely written response to the applicant. The response will state that the NWP activity can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

4. If the district engineer determines that the adverse environmental effects of the proposed activity are more than minimal, then the district engineer will notify the applicant either: (a) that the activity does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the activity is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal; or (c) that the activity is

authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse environmental effects, the activity will be authorized within the 45-day PCN period (unless additional time is required to comply with general conditions 18, 20, and/or 31, or to evaluate PCNs for activities authorized by NWPs 21, 49, and 50), with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation plan or a requirement that the applicant submit a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal. When compensatory mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

E. Further Information

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project (see general condition 31).

F. Definitions

Best management practices (BMPs): Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural.

Compensatory mitigation: The restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Currently serviceable: Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Direct effects: Effects that are caused by the activity and occur at the same time and place.

Discharge: The term “discharge” means any discharge of dredged or fill material into waters of the United States.

Ecological reference: A model used to plan and design an aquatic habitat and riparian area restoration, enhancement, or establishment activity under NWP 27. An ecological reference may be based on the structure, functions, and dynamics of an aquatic habitat type or a riparian area type that currently exists in the region where the proposed NWP 27 activity is located. Alternatively, an ecological reference may be based on a conceptual model for the aquatic habitat type or riparian area type to be restored, enhanced, or established as a result of the proposed NWP 27 activity. An

ecological reference takes into account the range of variation of the aquatic habitat type or riparian area type in the region.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Ephemeral stream: An ephemeral stream has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area.

High Tide Line: The line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

Historic Property: Any prehistoric or historic district, site (including archaeological site), building, structure, or other object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR part 60).

Independent utility: A test to determine what constitutes a single and complete non-linear project in the Corps Regulatory Program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Indirect effects: Effects that are caused by the activity and are later in time or farther removed in distance, but are still reasonably foreseeable.

Intermittent stream: An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

Loss of waters of the United States: Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the United States is a threshold measurement of the impact to jurisdictional waters for determining whether a project may qualify for an NWP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. The loss of stream bed includes the acres or linear feet of stream bed that are filled or excavated as a result of the regulated activity. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the United States. Impacts resulting from activities that do not require Department of the Army authorization, such as activities eligible for exemptions under section 404(f) of the Clean Water Act, are not considered when calculating the loss of waters of the United States.

Navigable waters: Waters subject to section 10 of the Rivers and Harbors Act of 1899. These waters are defined at 33 CFR part 329.

Non-tidal wetland: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. Non-tidal wetlands contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).

Open water: For purposes of the NWPs, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an ordinary high water mark can be determined. Aquatic vegetation within the area of flowing or standing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of “open waters” include rivers, streams, lakes, and ponds.

Ordinary High Water Mark: An ordinary high water mark is a line on the shore established by the fluctuations of water and indicated by physical characteristics, or by other appropriate means that consider the characteristics of the surrounding areas.

Perennial stream: A perennial stream has flowing water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.

Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Pre-construction notification: A request submitted by the project proponent to the Corps for confirmation that a particular activity is authorized by nationwide permit. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Pre-construction notification may be required by the terms and conditions of a nationwide permit, or by regional conditions. A pre-construction notification may be voluntarily submitted in cases where pre-construction notification is not required and the project proponent wants confirmation that the activity is authorized by nationwide permit.

Preservation: The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated

with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Protected tribal resources: Those natural resources and properties of traditional or customary religious or cultural importance, either on or off Indian lands, retained by, or reserved by or for, Indian tribes through treaties, statutes, judicial decisions, or executive orders, including tribal trust resources.

Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

Riffle and pool complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a coarse substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Riparian areas: Riparian areas are lands next to streams, lakes, and estuarine-marine shorelines. Riparian areas are transitional between terrestrial and aquatic ecosystems, through which surface and subsurface hydrology connects riverine, lacustrine, estuarine, and marine waters with their adjacent wetlands, non-wetland waters, or uplands. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. (See general condition 23.)

Shellfish seeding: The placement of shellfish seed and/or suitable substrate to increase shellfish production. Shellfish seed consists of immature individual shellfish or individual shellfish attached to shells or shell fragments (i.e., spat on shell). Suitable substrate may consist of shellfish shells, shell fragments, or other appropriate materials placed into waters for shellfish habitat.

Single and complete linear project: A linear project is a project constructed for the purpose of getting people, goods, or services from a point of origin to a terminal point, which often involves multiple crossings of one or more waterbodies at separate and distant locations. The term "single and complete project" is defined as that portion of the total linear project proposed or accomplished by one owner/developer or partnership or other association of owners/developers that includes all crossings of a single water of the United States (i.e., a single waterbody) at a specific location. For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP

authorization. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.

Single and complete non-linear project: For non-linear projects, the term “single and complete project” is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete non-linear project must have independent utility (see definition of “independent utility”). Single and complete non-linear projects may not be “piecemealed” to avoid the limits in an NWP authorization.

Stormwater management: Stormwater management is the mechanism for controlling stormwater runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

Stormwater management facilities: Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and best management practices, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

Stream bed: The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed.

Stream channelization: The manipulation of a stream’s course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized stream remains a water of the United States.

Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.

Tidal wetland: A tidal wetland is a jurisdictional wetland that is inundated by tidal waters. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line.

Tribal lands: Any lands title to which is either: 1) held in trust by the United States for the benefit of any Indian tribe or individual; or 2) held by any Indian tribe or individual subject to restrictions by the United States against alienation.

Tribal rights: Those rights legally accruing to a tribe or tribes by virtue of inherent sovereign authority, unextinguished aboriginal title, treaty, statute, judicial decisions, executive order or agreement, and that give rise to legally enforceable remedies.

Vegetated shallows: Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

Waterbody: For purposes of the NWPs, a waterbody is a jurisdictional water of the United States. If a wetland is adjacent to a waterbody determined to be a water of the United States, that waterbody and any adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)). Examples of “waterbodies” include streams, rivers, lakes, ponds, and wetlands.

ADDITIONAL INFORMATION

This nationwide permit is effective March 19, 2017, and expires on March 18, 2022.

Information about the U.S. Army Corps of Engineers regulatory program, including nationwide permits, may also be found at <http://www.swf.usace.army.mil/Missions/Regulatory.aspx> and <http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits.aspx>

**2017 NATIONWIDE PERMIT (NWP) REGIONAL CONDITIONS
FOR THE STATE OF TEXAS**

The following regional conditions apply within the entire State of Texas:

1. For all discharges proposed for authorization under Nationwide Permits (NWP) 3, 6, 7, 12, 14, 18, 19, 21, 23, 25, 27, 29, 39, 40, 41, 42, 43, 44, 49, 51, and 52, into the following habitat types or specific areas, the applicant shall notify the appropriate District Engineer in accordance with the NWP General Condition 32, Pre-Construction Notification (PCN). The Corps of Engineers (Corps) will coordinate with the resource agencies as specified in NWP General Condition 32(d) (PCN). The habitat types or areas are:

- a. Pitcher Plant Bogs: Wetlands typically characterized by an organic surface soil layer and include vegetation such as pitcher plants (*Sarracenia* spp.) and/or sundews (*Drosera* spp.).
- b. Bald Cypress-Tupelo Swamps: Wetlands dominated by bald cypress (*Taxodium distichum*) and/or water tupelo (*Nyssa aquatic*).

2. For all activities proposed for authorization under any Nationwide Permit (NWP) at sites approved as compensatory mitigation sites (either permittee-responsible, mitigation bank and/or in-lieu fee) under Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act of 1899, the applicant shall notify the appropriate District Engineer in accordance with the NWP General Condition 32 - Pre-Construction Notification prior to commencing the activity.

3. For all activities proposed for authorization under NWP 16, the applicant shall notify the appropriate District Engineer in accordance with the NWP General Condition 32 (Pre-Construction Notification) and must obtain an individual water quality certification (WQC) from the TCEQ. Work cannot begin under NWP 16 until the applicant has received written approval from the Corps and WQC.

NOTE: For all activities proposing to use equipment that has operated or been stored in a water body on the Texas list of zebra mussel (*Dreissena polymorpha*) infected water bodies, equipment should be decontaminated prior to relocation in accordance with Texas Administrative Code, Title 31, Part 2, Chapter 57, Subchapter A. The following decontamination Best Management Practices (BMPs), as a minimum, are indicated:

- a. Clean: Clean both the inside and outside of equipment and gear, by removing all plants, animals, and mud and thoroughly washing the equipment using a high pressure spray nozzle.
- b. Drain: Drain all water from receptacles before leaving the area, including livewells, bilges, ballast, and engine cooling water on boats.
- c. Dry: Allow time for your equipment to dry completely before relocating in other waters. Equipment should be dried prior to relocation. High temperature pressure washing (greater than or equal to 140F) or professional cleaning may be substituted for drying time.

The following regional condition only applies within the Albuquerque, Fort Worth, and Galveston Districts:

4. For all activities proposed for authorization under Nationwide Permit (NWP) 12 that involve a discharge of fill material associated with mechanized land clearing of wetlands dominated by native woody shrubs, the applicant shall notify the appropriate District Engineer in accordance with the NWP General Condition 32 – Pre-Construction Notification prior to commencing the activity. For the purpose of this regional condition, a shrub dominated wetland is characterized by woody vegetation less than 3.0 inches in diameter at breast height but greater than 3.2 feet in height, which covers 20% or more of the area. Woody vines are not included.

The following regional conditions apply within the Albuquerque District.

5. Nationwide Permit (NWP) 23 – Approved Categorical Exclusions. A pre-construction notification (PCN) to the District Engineer in accordance with General Condition 32 - PCN is required for all proposed activities under NWP 23.

6. Nationwide Permit (NWP) 27 – Aquatic Habitat Restoration, Establishment, and Enhancement Activities. For all proposed activities under NWP 27 that require pre-construction notification, a monitoring plan commensurate with the scale of the proposed restoration project and the potential for risk to the aquatic environment must be submitted to the Corps. (See “NWP 27 Guidelines” at <http://www.spa.usace.army.mil/Missions/RegulatoryProgramandPermits/NWP.aspx>).

7. Channelization. Nationwide Permit (NWP) General Condition 9 for Management of Water Flows is amended to add the following: Projects that would result in permanent channelization to previously un-channelized streams require pre-construction notification to the Albuquerque District Engineer in accordance with NWP General Condition 32 – Pre-Construction Notification.

8. Dredge and Fill Activities in Intermittent and Perennial Streams, and Special Aquatic Sites: For all activities subject to regulation under the Clean Water Act Section 404 in intermittent and perennial streams, and special aquatic sites (including wetlands, riffle and pool complexes, and sanctuaries and refuges), pre-construction notification (PCN) to the Albuquerque District Engineer is required in accordance with Nationwide Permit General Condition 32 - PCN.

9. Springs. For all discharges of dredged or fill material within 100 feet of the point of groundwater discharge of natural springs located in an aquatic resource, a pre-construction notification (PCN) is required to the Albuquerque District Engineer in accordance with Nationwide Permit General Condition 32 - PCN. A natural spring is defined as any location where ground water emanates from a point in the ground and has a defined surface water connection to another waters of the United States. For purposes of this regional condition, springs do not include seeps or other groundwater discharges which lack a defined surface water connection.

10. Suitable Fill. Use of broken concrete as fill or bank stabilization material is prohibited unless the applicant demonstrates that its use is the only practicable material (with respect to cost, existing technology, and logistics). Any applicant who wishes to use broken concrete as bank stabilization must provide notification to the Albuquerque District Engineer in accordance with Nationwide Permit General Condition 32 - Pre-Construction Notification along with justification for such use. Use of broken concrete with rebar or used tires (loose or formed into bales) is prohibited in all waters of the United States.

The following regional conditions apply only within the Fort Worth District.

11. For all discharges proposed for authorization under all Nationwide Permits (NWP) into the area of Caddo Lake within Texas that is designated as a "Wetland of International Importance" under the Ramsar Convention, the applicant shall notify the Fort Worth District Engineer in accordance with the NWP General Condition 32 – Pre-Construction Notification (PCN). The Fort Worth District will coordinate with the resource agencies as specified in NWP General Condition 32(d) - PCN.

12. Compensatory mitigation is generally required for losses of waters of the United States that exceed 1/10 acre and/or for all losses to streams that exceed 300 linear feet. Loss is defined in Section F of the Nationwide Permits (NWP). Mitigation thresholds are cumulative irrespective of aquatic resource type at each single and complete crossing. Compensatory mitigation requirements will be determined in accordance with the appropriate district standard operating procedures and processes. The applicant shall notify the Fort Worth District Engineer in accordance with the NWP General Condition 32 - Pre-Construction Notification prior to commencing the activity.

13. For all activities proposed for authorization under Nationwide Permits (NWP) 12, 14 and/or 33 that involve a temporary discharge of fill material into 1/2 acre or more of emergent wetland OR 1/10 acre of scrub-shrub/forested wetland, the applicant shall notify the Fort Worth District Engineer in accordance with the NWP General Condition 32 - Pre-Construction Notification prior to commencing the activity.

14. For all discharges proposed for authorization under Nationwide Permits (NWP) 51 and 52, the Fort Worth District will provide the pre-construction notification (PCN) to the U.S. Fish and Wildlife Service as specified in NWP General Condition 32(d)(2) - PCN for its review and comments.

The following regional conditions apply only within the Galveston District.

15. No Nationwide Permits (NWP), except NWP 3, shall be used to authorize discharges into the habitat types or specific areas listed in paragraphs a through c, below. The applicant shall notify the Galveston District Engineer in accordance with the NWP General Condition 32 - Pre-Construction Notification prior to commencing the activity under NWP 3.

- a. Mangrove Marshes. For the purpose of this regional condition, Mangrove marshes are those waters of the United States that are dominated by mangroves (*Avicennia* spp., *Laguncularia* spp., *Conocarpus* spp., and *Rhizophora* spp.).
- b. Coastal Dune Swales. For the purpose of this regional condition, coastal dune swales are wetlands and/or other waters of the United States located within the backshore and dune areas in the coastal zone of Texas. They are formed as depressions within and among multiple beach ridge barriers, dune complexes, or dune areas adjacent to beaches fronting tidal waters of the United States.
- c. Columbia Bottomlands. For the purpose of this regional condition, Columbia bottomlands are defined as waters of the United States that are dominated by bottomland hardwoods in the Lower Brazos and San Bernard River basins identified in the 1997 Memorandum of Agreement between the U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, Natural Resource Conservation Service, and Texas Parks and Wildlife Department for bottomland hardwoods in Brazoria County. (For further information, see <http://www.swg.usace.army.mil/Business-With-Us/Regulatory/Permits/Nationwide-General-Permits/>)

16. A Compensatory Mitigation Plan is required for all special aquatic site losses, as defined in Section F of the Nationwide Permits (NWP), that exceed 1/10 acre and/or for all losses to streams that exceed 200 linear feet. Compensatory mitigation requirements will be determined in accordance with the appropriate district standard operating procedures and processes. The applicant shall notify the Galveston District Engineer in accordance with the NWP General Condition 32 - Pre-Construction Notification prior to commencing the activity.

17. For all seismic testing activities proposed for authorization under Nationwide Permit (NWP) 6, the applicant shall notify the Galveston District Engineer in accordance with the NWP General Condition 32 - Pre-Construction Notification (PCN). The PCN must state the time period for which the temporary fill is proposed, and must include a restoration plan for the special aquatic sites. For seismic testing under NWP 6 within the Cowardin Marine System, Subtidal Subsystem; as defined by the U.S. Fish and Wildlife Service, Classification of Wetlands and Deepwater Habitats of the United States, December 1979/Reprinted 1992, the Corps will coordinate with the resource agencies in accordance with NWP General Condition 32(d) - PCN.

18. For all activities proposed under Nationwide Permits (NWP) 10 and 11 located in vegetated shallows and coral reefs; as defined by 40 CFR 230.43 and 230.44 respectively, the applicant shall notify the Galveston District Engineer in accordance with the NWP General Condition 32 - Pre-Construction Notification. Examples include, but are not limited to: seagrass beds, oyster reefs, and coral reefs.

19. Nationwide Permit 12 shall not be used to authorize discharges within 500 feet of vegetated shallows and coral reefs; as defined by 40 CFR 230.43 and 230.44 respectively. Examples include, but are not limited to: seagrass beds, oyster reefs, and coral reefs.

20. For all activities proposed for authorization under Nationwide Permit 12 that involve underground placement below a non-navigable river bed and/or perennial stream bed there shall a minimum cover of 48 inches (1,219 millimeters) of soil below the river and/or perennial stream thalweg.

21. For all discharges and work proposed below the high tide line under Nationwide Permits (NWP) 14 and 18, the applicant shall notify the Galveston District Engineer in accordance with the NWP General Condition 32 - Pre-Construction Notification (PCN). The Galveston District will coordinate with the resource agencies in accordance with NWP General Condition 32(d) - PCN.

22. For all activities proposed for authorization under Nationwide Permit (NWP) 33 the applicant shall notify the Galveston District Engineer in accordance with the NWP General Condition 32 – Pre-Construction Notification (PCN). The PCN must include a restoration plan showing how all temporary fills and structures will be removed and the area restored to pre-project conditions. Activities causing the temporary loss, as defined in Section F of the NWPs, of more than 0.5 acres of tidal waters and/or 200 linear feet of stream will be coordinated with the agencies in accordance with NWP General Condition 32(d) - PCN.

23. No Nationwide Permits (NWP), except NWPs 3, 16, 20, 22, 37, shall be used to authorize discharges, structures, and/or fill within the standard setback and high hazard zones of the Sabine-Neches Waterway as defined in the Standard Operating Procedure - Permit Setbacks along the Sabine-Neches Waterway. The applicant shall notify the Galveston District Engineer in accordance with NWP General Condition 32 - Pre-Construction Notification for all discharge, structures and/or work in medium hazard zones and all NWP 3 applications within the standard setback and high hazard zones of the Sabine-Neches Waterway.

24. No Nationwide Permits (NWP), except 20, 22, and 37, shall be used to authorize discharges, structures, and/or fill within the standard setback exemptions of the Gulf Intracoastal Waterway as defined in the Standard Operating Procedure- Department of the Army Permit Evaluation Setbacks along the Gulf Intracoastal Waterway. The applicant shall notify the Galveston District Engineer in accordance with NWP General Condition 32 (Pre-Construction Notification) for all discharges, structures and/or work within the standard setback, shoreward of the standard setback, and/or standard setback exemption zones.

25. The use of Nationwide Permits in the San Jacinto River Waste Pits Area of Concern are revoked. (For further information, see <http://www.swg.usace.army.mil/Business-With-Us/Regulatory/Permits/Nationwide-General-Permits/>)

26. The use of Nationwide Permits 51 and 52 are revoked within the Galveston District boundaries.

27. Nationwide Permit (NWP) 53 pre-construction notifications will be coordinated with resource agencies as specified in NWP General Condition 32(d) – Pre-construction Notification.

28. For all activities proposed under Nationwide Permits (NWP) 21, 29, 39, 40, 42, 43, 44, and 50 that result in greater than 300 feet of loss in intermittent and/or ephemeral streams, as defined in Section F of the NWPs, require evaluation under an Individual Permit.

The following regional conditions apply only within the Tulsa District.

29. Upland Disposal: Except where authorized by Nationwide Permit 16, material disposed of in uplands shall be placed in a location and manner that prevents discharge of the material and/or return water into waters or wetlands unless otherwise authorized by the Tulsa District Engineer.

30. Major Rivers: The prospective permittee shall notify the Tulsa District Engineer for all Nationwide Permit 14 verifications which cross major rivers within Tulsa District. For the purposes of this condition, major rivers include the following: Canadian River, Prairie Dog Town Fork of the Red River, and Red River.