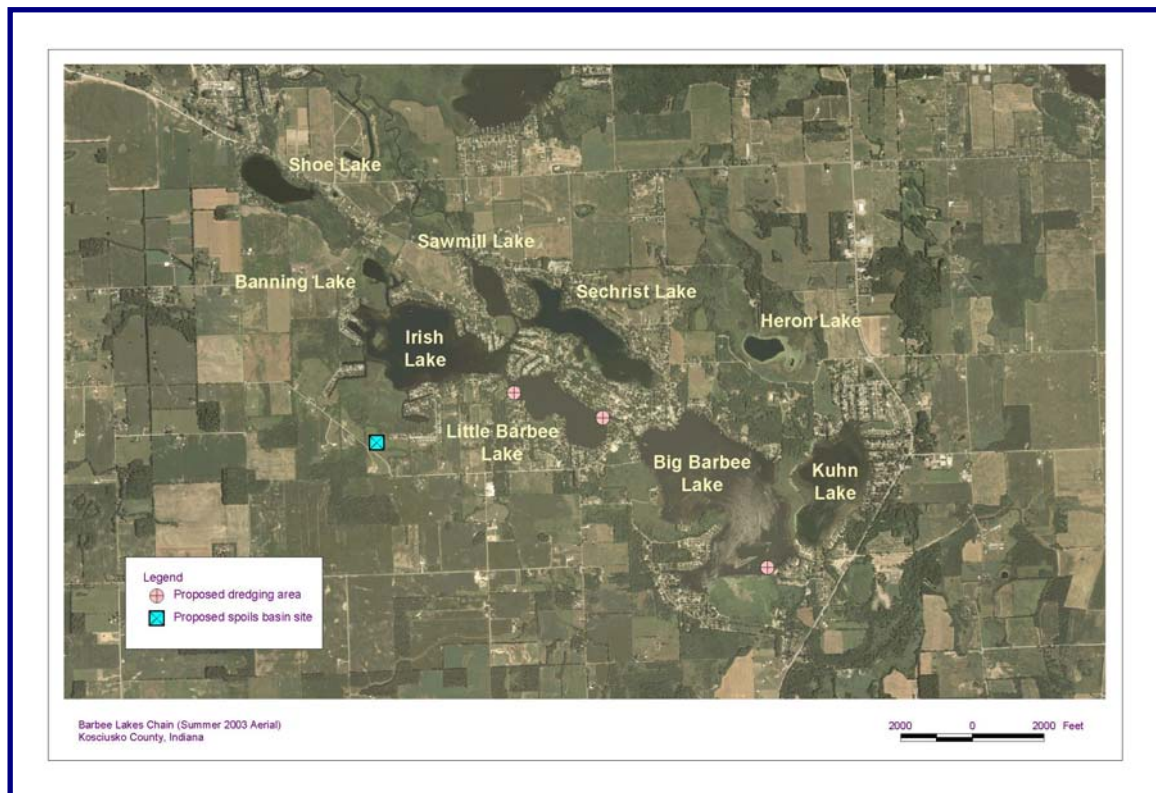


Barbee Lakes Sediment Removal Plan

Kosciusko County, Indiana

April 30, 2006



Barbee Lakes Property Owners Association

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**Barbee Lakes Sediment Removal Plan
Kosciusko County, Indiana**

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- Appendix B. Sediment Sample Analysis Results
- Appendix C. Land Owner Agreement
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BARBEE LAKES SEDIMENT REMOVAL PLAN KOSCIUSKO COUNTY, INDIANA

1.0 PROJECT DESCRIPTION AND PURPOSE

The Barbee Lake Sediment Removal Plan was completed at the request of the Barbee Lake Property Owners Association (Association). The objective of the plan was to design reasonable methods of removing accumulated sediment within the Barbee Lake chain, located in the southwest corner of Tippecanoe Township, in Kosciusko County, Indiana (Figure 1). The purpose of sediment removal is to remove a nutrient source from the lakes, as well as improve the aesthetics and accessibility of public areas within the lakes.



Figure 1. General project location map.

1.1 Methods

JFNew made two trips to the lake to survey potential dredge sites in October 2005. Eight areas were sampled at the request of the lake residents (Figure 2). One additional area was added during the spring of 2006. Sampling consisted of probing the lake on a 25 to 50-foot grid with a graduated one and one-half inch diameter PVC pipe. The depth of water was recorded to the first layer of resistance. The pipe was then pushed into the substrate until either a hard bottom was encountered or the soft bottom was greater than eight feet and the depth recorded again. The location of the probe, and depth measurements, were entered into a handheld GPS with a stated accuracy of 1-meter. This method is not accurate for identifying the depth of sediment plumes that consist of primarily sand. Sand plume depth and lateral dimensions were estimated by checking depths of adjacent shorelines at specified distances from the shore and comparing them

to depths in the primary sampling area (mouths of streams). The results of sampling at each area are contained in Appendix A.

In concert with field measurements of sediment depth, sediment samples were collected for laboratory analysis of heavy metals and ammonia from two sites. The same sampling probe was inserted into the accumulated sediment and then capped. The vacuum created by capping off the sampling tube allowed the removal of enough core material to fill a pint sized jar provided by the laboratory. In addition, a one-gallon plastic container was used to collect water from the vicinity of the sediment sample. The two sample containers were then labeled by site and placed in a cooler for delivery to EIS laboratories in South Bend, Indiana. The results of the metals analysis are contained in Appendix B.



Figure 2. Sampling areas within the Barbee Lake Chain

2.0 SAMPLE RESULTS AND DISCUSSION

2.1 Banning Lake

Samples were taken at the northwest corner of the lake from approximately 20-60 feet lakeward of the existing shoreline. Thirty-four probes of the sediment in approximately 0.6 acres resulted in an average depth of sediment at 2.8 feet. The sediment was primarily peat over marl and appeared to be historic accumulation, such that it was dominated by spatterdock (*Nuphar luteum*), except around existing piers. The areas around the piers had been disturbed, and had

sediment depths to a sandy marl substrate ranging from 0.4 feet to 2.5 feet. At the outside edge of the spatterdock sediment depth to marl was 4.0 on average; however, the water depth was also 3 to 4 feet. This area is recommended for limited dredging.

Hydraulic dredging is the only practical way to address the sediment removal from this area due to the wetland fringe along the shoreline. Mechanical excavation by any means would result in permanent damage to the wetland fringe. Approximately 0.25 acre is recommended for dredging at the outlet of the drainage from Shoe Lake. The total volume of sediment from the 0.25 acres would be approximately 1,100 cubic yards. A basin that could hold up to 1,500 cubic yards would be required to dewater the sediment on land. A typical basin size for this volume of sediment would be 75 x 75 feet and 8 feet in depth. A suggested basin location is on the property of Clark and Kay Stump to the east or Roger Hauptert to the southwest. Although a suitable basin could be constructed in a residential lot, material could be hauled away or leveled and seeded after drying for three to six months after dredging.

2.2 Little Barbee Lake

JFNew examined three areas in Little Barbee Lake as identified at the public meetings. The areas included the outlet of Putney Ditch, a privatized cove on the north end of the lake, and the entire west end of the channel between Barbee and Little Barbee Lakes. A suitable disposal basin location for all three of these areas was located on the south side of Little Barbee Lake on property owned by Terrance and Lilly Hartup. Agreements for the use of the basin site are included in Appendix C.

Sampling at the outlet of Putney Ditch included an area of approximately 0.75 acres with 47 sampling points. The sediment was primarily sand with a clearly demarcated plume at the mouth of the channel. The channel entering the lake itself was less than three inches deep from the nearest road crossing to the lake. The 40-foot wide channel was clearly defined by two-foot high banks; however, only a small portion (approximately 5-feet) actually had water flow while the remainder consisted of vegetated sandbars. The plume extended into the lake about 60 feet before water depth dropped from one to six feet within a 10-foot distance. The plume extended both north and south from the mouth of the ditch with finer material (silt) dominating the substrate more than 75 feet from the mouth. The accumulated sediment was estimated at 2.5 feet thick over the original bottom based on adjacent depths and neighbor's verbal descriptions of the historic channel. The recommended area of dredging is approximately 0.75-acres. The estimated amount of material to be removed from this area is 3,000 cubic yards. This area could be hydraulically excavated or excavated with a conventional backhoe. Costs would be about the same for either method.

Sampling within and adjacent to the private (concrete walled) cove at the north end of Little Barbee Lake included approximately 0.4 acres and involved 29 sample points. Much of the nearby shore areas could not be sampled because the depth of water was less than an inch while the substrate consisted of fine silt (muck) to a depth of six to seven feet. The sediment extends both west and south of this private cove into the lake. It is suggested that the sediment from this area results from the natural movement of suspended sediment in the lake (counter clockwise) and from its location on the windward side of the lake. The suspended sediments in the lake and floating organic matter, such as cut aquatic plants probably end up in this corner of the lake. A

minimum of 0.4 acres should be dredged in this location in order to return the area to its natural bottom contours. An estimated 2,800 cubic yards could be removed in this area. If additional adjacent shoreline is dredged this amount could double very easily, although the depth of sediment is reduced significantly more than 100 feet from the cove. Dredging this area with any method other than hydraulic dredging would be very difficult due to the existing seawalls and fine-grained nature of the sediment. Any dredged material would have to be dried before it could be leveled or hauled away.

At the east end of Little Barbee Lake is a channel leading to Barbee Lake. There is a small wetland island on the west end of this same channel. Historically the 40-foot wide channel was open on the north side of this island. Mechanical dredging by the property owners on the south side opened up that channel, eventually causing siltation on the north side. The north side now is dominated by spatterdock with silt (muck) up to five feet deep. A sandbar has developed in front of two residents at the west end of the channel forming a peninsula in the lake that is up to a foot above the water line and measures approximately ¼ acre. Sixty samples were taken in a one-acre area at the west end of the channel including the sandbar. Additional samples were taken parallel to the shoreline for another 600 feet to the west of the sandbar. Sediments averaged 2.6 feet deep in the identified 0.7-acre area recommended for dredging. Dredging this 0.7-acre area would result in approximately 2,900 cubic yards of dredge spoils. This area could be dredged hydraulically, or more efficiently, with a combination of land based removal of the sand bar while the muck areas are hydraulically dredged. Mechanical excavation of the sandbar was permitted and completed by February 2006.

2.3 Barbee Lake

Four areas were sampled within Barbee Lake as requested during the public meetings. A channel at the east end of the lake (off the channel between Little Barbee and Barbee Lake), the outlet of a channel at the northeast corner of the lake and (at the base of the peninsula between Barbee and Kuhn Lake), the outlet of Grassy Creek, and the channel between Barbee Lake and Kuhn Lake. A basin site has not been identified for any of these potential dredge sites because only one site is recommended for dredging and it is a private channel that will not be funded by the LARE program under existing guidelines.

The private 0.5-acre channel near the mouth of the main channel between the lakes was sampled at 24 locations. The substrate within the channel ranged from fine silt near the south end to a sand bar at the mouth. The depth of accumulated material ranged from 2.5 feet at the mouth to 4.0 feet near the center of the channel. The channel is approximately 300 feet long and up to 100 feet wide. It is recommended that the entire ½ acre be dredged to the depth of the original channel that is estimated at eight feet in the center and sloping gradually up to the existing banks. No more than two-foot of depth should be sought near the channel edges to protect the banks. Approximately 4,000 cubic yards could be removed from this channel either hydraulically or by mechanical excavation. However, if mechanical excavation is used, a geotube, aqua dam (water filled rubber bags), or other device should be used to dam off the channel, pump it out, and then excavate it while it is dry in order to limit the disturbance from fine-grained sediment and provide better access in to the channel for excavation.

Approximately one acre at the mouth of Grassy Creek was sampled with 49 probes. The sampling did not show a significant amount of accumulated sediment (average depth was 1.2 feet). Since Grassy Creek is known to carry heavy sediment suspended loads at times, it may be that suspended sediment is carried out further into the lake by the strong currents and disbursed. Regardless of the reason, there was not enough accumulated sediment in this area to justify dredging.

The area at the mouth of the private channel in the northeast corner of the lake was sampled at 42 points over approximately one acre. Accumulated sediments averaged 0.9 feet with a maximum depth of 2.5 feet. The depth of water over these accumulated sediments averaged 1.8 feet. While this area warranted concern, there was not a significant depth of accumulated sediment nor was there an identified source of sediment. Therefore, this area was not included in the final dredge plan calculations.

The channel between Barbee Lake and Kuhn Lake was sampled at the request of the association members. While this channel is shallow, averaging two feet of water, the substrate is sand. More than a dozen sample points through this channel were taken without penetrating more than a few inches into the sand during the sampling conducted for this report. However; previous sampling efforts found that the sand is approximately one-foot thick over a marl substrate. The shallow nature of this channel is a hazard to navigation and consistently warrants concerns from the lake users. The channel would be most efficiently dredged by a long-reach excavator based on the adjacent private property. Since the material is sand it could be loaded immediately into a truck parked on the private resident's concrete boat ramp. Only one-two feet of material should be removed from the center of the channel at a maximum or erosion of the peninsula and or the adjacent seawall may occur.

During the spring of 2006 JFNew was contacted concerning a channel off Big Barbee Lake. The channel is located on the southwest side of Barbee Lake off South Barbee Drive between B25 and B26 Lane. The channel was silted to within a foot or two of the surface for most of its length. Preliminary probing indicated that it had from three to seven foot of accumulated sediments. The three foot areas had been mechanically dredged by permit within the previous year; however, adjacent material had sloughed back into the excavated channel. What differentiated this channel from others like it is that there is a 36" drainage culvert under South Barbee Drive that drains into it. Upon further questioning it was learned that an agricultural field used to be cropped on top of the 30 foot rise in elevation south of South Barbee Drive and that every rain event would bring copious amounts of sediment washing into this channel. Upon permission from the landowner, we walked the property just south of South Barbee Drive and documented a large gully (approximately 50-feet wide at the top and 20 feet deep at one point) that had eroded into the slope over the years. The gully has somewhat healed indicating the erosion has been reduced. The field to the south is now a pasture instead of cropland. The same landowner of this gully is offering the use of his land for a spoils basin as he has an access easement onto the same channel.

2.4 Kuhn Lake

An area was sampled from the outlet of all the channels in the northeastern corner of the lake eastward including several side channels for a total of approximately three acres. Approximately 40 samples were taken along the length of the channels. The average sediment depth in the channels was 2.7 feet with a maximum of 6.7 feet. These channels are recommended for dredging and may be considered, in part, fundable by the LARE program due to the public access site on the main channel. The proposed area of dredging is 2400 feet by 40 foot and would result in approximately 9,600 cubic yards of material. Hydraulic excavation is the only practical method of cleaning these channels due to access. A standard eight-foot deep dredge spoils basin would need to be approximately 205 by 205 feet or 42,000 square feet, including a 30 percent safety factor.

An additional channel between B-8 and B-9 Lane was sampled due to the fact it has a drain flowing into its east end from an agricultural watershed. The watershed is predominantly tile-drained wetland. The channel is approximately 800 feet long and averages about 70 feet wide. Accumulated sediment was measured at 3.8 feet deep at the upper east end of the channel and less than 0.5 feet at the mouth of the channel. The average depth of sediment in 13 samples was 0.8 feet. Approximately 1660 cubic yards of material could be dredged from this channel and pumped to the same basin constructed for the public access channel. This would add another 7,000 square feet to the required basin size at an eight-foot depth.

2.5 Irish Lake

No sampling was requested in Irish Lake during the public meetings.

2.6 Sawmill Lake

No sampling was requested in Sawmill Lake during the public meetings, therefore no sites were investigated. However, the channel leading from Irish Lake to Sechrist and Sawmill Lakes has always been shallow, with many concerns addressed over the years. There is one well-marked tree on the bottom of the channel between Irish and Sechrist lakes that does warrant a concern for navigation. Dredging projects in the future may want to address this area.

2.7 Sechrist Lake

Sampling was requested by one resident in an area of Sechrist Lake adjacent to a peninsula along the south shore. This area was not investigated due to the fact that it is isolated from the other areas and did not have an inlet anywhere in the vicinity as a potential source of sediment. This area may be included in revisions to this report if further investigations result in a recommendation for dredging in this lake.

2.8 Sediment Characterization

Banning Lake dredge spoils will be peaty muck with some marl partially vegetated with spatterdock. Dredging at the mouth of Putney Ditch in Little Barbee Lake will yield 90 percent sand with some vegetative matter (plants growing on exposed sand) and some silt. The northeast corner of Little Barbee Lake is 100 percent fine silt (muck) with no vegetation. The area at the mouth of the channel from Big Barbee to Little Barbee Lake is approximately 50 percent sand and 50 percent muck with dense macrophyte (spatterdock) beds. The bay at the west end of Barbee Lake is 50 percent sand and 50 percent muck. The channels proposed for dredging in

Kuhn Lake are all peaty muck. Samples taken to the laboratory for analysis did not show any levels of contamination for metals, nor were the levels of ammonia higher than state water quality standards (Appendix B).

3.0 PROPOSED SEDIMENT REMOVAL METHODOLOGY

Several methods were considered for removing sediment from each of these areas. The methods included dragline excavation, isolation of the areas with temporary dams with concurrent drawdown and excavation, and hydraulic dredging. Each of these methods is discussed below.

A dragline or crane excavator uses a large (approximately 1-cubic yard) perforated bucket attached to two cables, which in turn are attached to a pulley system via a 40-60 foot stationary boom (Figure 3). One cable is attached to the back of the bucket and one cable is attached to the front of the bucket. The operator pulls the bucket toward the end of the boom using the back cable and drops or swings the bucket into the open water. The operator then retrieves the bucket with the front cable and the sediment is pulled or drug through the water column until the bucket is lifted from the water with both the front and back cables. The slurry of sediment and water is placed on or near shore in front of the machine (the boom can not swing off to the side) and then the process is repeated. The advantage to this method is that the distance that can be dredged from shore is often significantly greater than that of a normal excavator and the operation can be completed without dewatering. The disadvantage is that the operation is messy, creating significant turbidity and leaving a saturated pile of spoils adjacent to the shoreline for drying.



Figure 3. Dragline (crane) excavator in operation.

A standard or long reach excavator can be used to complete the excavation of areas that are reachable from the shoreline (Figure 4). The maximum reach of these excavators is 60-feet, however, the ability to move significant volumes of earth decreases with the length of the boom. Since the bucket is not perforated water tends to wash out any fine material (muck) as it is brought up from the bottom. Dewatering is used to make a standard excavator more efficient in fine-grained sediments. Dewatering can add significant costs to the process. The advantage to this method is that the equipment is comparably simple to mobilize (compared to hydraulic dredging) and if a site is dewatered, the bottom can be sculpted to exact specifications. The

disadvantage is that the operation is limited to a distance 40-50 feet from the lakeshore and that if the area is not dewatered, the operation can create significant turbidity.



Figure 4. Typical long reach excavator with 60-foot boom.

Hydraulic dredging works by vacuum suction of the sediment (Figure 5 and 6). Generally a cutter head loosens the substrate and a pump draws the material into a pipe that leads to a dewatering basin. Approximately 80 percent of the pumped material is water with about 20 percent being sediment. The further the sediment is pumped, the larger or more numerous the pumps have to be on the line. Essentially, there is no limit on how far dredge spoils can be pumped, but on average, and 8-inch dredge can pump sand up to 1,500 feet and fine material up to 3,000 feet. A sediment basin is constructed large enough to handle all the sediment with a 30 percent safety margin. The majority of the water pumped to a basin must return to the lake or stream from which it is dredged using pipes to guide the flow. The return water is filtered through rock trenches, silt curtains installed in the water or both to remove suspended sediment.



Figure 5 and 6. Photographs of hydraulic dredges showing two types of cutter heads.

4.0 SUMMARY OF RECOMMENDED DREDGING

The results of the sampling located significant levels of accumulated sediment in three areas of little Barbee Lake. Additional areas warranting dredging include the north end of Banning Lake, a channel at the west end of Barbee Lake, and the channels leading to the public access site on the east side of Kuhn Lake. Dredging these six areas within the Barbee chain of lakes would result in a total spoils volume of 26,100 cubic yards. During the first year, it is recommended that approximately 9,800 cubic yards of accumulated sediment should be removed from 3.0 acres of Little Barbee Lake at the outlet of Putney Ditch, the west end of the channel between Little Barbee and Barbee Lake, the northeast corner of the lake, and a 0.25-acre area on Banning Lake. During the second year it is recommended that the channel from the public landing be dredged on Kuhn Lake and any dredging of private channels be completed at the same time.

Priority Area	Area of Proposed Dredging (acres)	Dredging Volume (cubic yards)	Method of Proposed Dredging
1	Little Barbee –Putney 0.75	3,000	Hydraulic or Mechanical
2	Little Barbee –NE 0.4	2,800	Hydraulic
3	Little Barbee –channel 0.7	2,900	Hydraulic and Mechanical
4	Banning 0.25 acres	1,100	Hydraulic
5	Kuhn Public Access 3.0	9,600	Hydraulic
6	Kuhn between B8&B9 1.3	1,660	Hydraulic
7	Barbee channel between B-25 and B26 1.0 acre	10,600	Hydraulic

Table 1. Recommended area, volume, and method of sediment removal from Barbee Lakes.

5.0 LOGISTICS

5.1 Land Owner Agreements

A board member of the Barbee Lakes Property Owners Association agreed to allow his land that was adjacent to Irish Lake to be used for the dredging project. That property was located to far from the proposed dredging sites for economical use. The Hartup’s were contacted in regards to using their farm ground adjacent to McKenna Road on the south side of Little Barbee Lake. An agreement was signed in March 2006 (Appendix C). Agreements will need to be reached on two additional parcels to complete the recommended dredging.

The recommended dredging at the Kuhn Lake public access and many of the adjacent channels could be pumped to one spoils basin in a field on the north side of 400 North Road or into a number of fields between 400 North and 350 North on the East side of State Road 13. Using the East side of State Road 13 requires passing under the road in existing culverts. There are existing culverts near the flowing well, near B-7 and near 400 North Road.

The channel between B-25 and B-26 already has an owner willing to allow a spoils basin on their property. The potential site is former sand and gravel borrow area. Additionally there is a large gully on this same property that should be stabilized at the same time as the dredging project. The spoils could also be put into this gully as long as adequate stabilization measures (check dams) were put in place prior to dredging.

5.2 Dredging process

Sediment removal is proposed from the Barbee Lakes in six different locations. Dredging will be completed by hydraulic methods. A dewatering/sediment disposal basin will be constructed on the Hartup property for the first three priority sites, on property within 3000 feet of the public landing at Kuhn Lake for the areas near the public landing, and on the south side of South Barbee Drive across from B-25 lane for the channels in that vicinity.

During the first year of dredging, work will concentrate on the first three priority areas. The Hartup dewatering basin will be constructed by excavating an earthen basin within a depressional area on the property identified in Appendix C and D. The basin shall have a minimum depth of six feet. Earthen berms will be seeded with a temporary seed mix to control erosion. Additionally, silt fences or an erosion control equivalent will be installed down slope of the dewatering basins to capture any construction site runoff. The area within the dewatering basin will measure approximately 60,000 square feet. The earthen berm will have a minimum slope of 2(H):1(V) on both faces with an 8-foot top width. The dewatering basin will be able to hold approximately 13,000 cubic yards of material. Appendix D contains design details for the sediment dewatering basin. Once the basin(s) is/are constructed the hydraulic dredger will install return water pipes and a turbidity curtain.

The hydraulic dredge contractor and excavation contractor will mobilize their respective equipment on Little Barbee Lake beginning at the outlet of Putney Ditch. The contractor(s) will work from the lakeward extent of the sediment plume in toward the shoreline and up through Putney Ditch to the first bridge crossing. All grades shall be to original bottom or to a maximum depth of 8-feet and sloped gently toward the shoreline. No excavation will take place within 15 feet of seawalls or soft embankments unless specific legal agreements are made between the contractor and the owner. Piers will have to be removed prior to dredging operations. All material will be pumped or excavated mechanically from the channel and hauled to the sediment dewatering basin. Once the sediment has been dewatered within the basin, the spoils will be graded to match the surrounding landscape. If the area of the basin will be farmed, the contractor shall grade the surface to match the surrounding grades, and install drainage tile if necessary. If the area was grass prior to construction and will not be farmed after construction then the area shall be seeded with permanent grasses similar to original conditions, and mulched with straw. Silt fences and any other temporary erosion control measures installed prior to dewatering basin construction will be removed after final seeding and mulching.

5.3 Permitting

A Lake Preservation Permit is required from the IDNR since work will occur “lakeward of the lake’s legal or average shoreline”. Clean Water Act Section 401 Water Quality Certification from IDEM and a Section 404 permit from the U.S. Army Corps of Engineers (Corps) are required because water from the dredged material will be returned from the sediment dewatering basin to the lake. The IDNR, IDEM, and Corps permits were submitted in December 2005 and acquired by April 2006. Permits authorizing the sediment removal are included in Appendix E. The contractor constructing the sediment-dewatering basin will be responsible for obtaining a Rule 5 Erosion Control Permit from IDEM prior to beginning work, if necessary.

6.0 BIDDING INFORMATION

The association may contract with an engineering firm to administer the bidding process, monitor project progress, and ensure timely completion of dredging. The dredging work will be divided into two parts and each part will be bid separately. Part 1 includes silt fence (or equivalent) installation, dewatering basin construction, and basin removal. Part 2 includes dewatering and sediment pumping pipe installation and removal, turbidity curtain installation and removal, and hydraulic dredging. An invitation to a minimum of three bidders will be issued via a letter similar to the example included in Appendix F. The invitation will include specifics regarding the dredging location and volume, sediment disposal basin location and construction details, project specifications, and bid return deadlines (to be determined at the time of bid solicitation). Design specifics, access to the project site, and any proposed design modification or potential construction issues will be discussed prior to bid submittal. Bid forms are not required; however, all bidders must agree to complete work in a timely manner as agreed upon prior to bid submittal, agree to follow all instructions as provided with bid solicitation, and complete the work for the agreed upon price in a suitable manner. All of the above, in addition to any other stipulations as determined by the engineering firm with project oversight, will be documented in a written and signed contract.

7.0 CONSTRUCTION SCHEDULE

The grant allocation and contractor scheduling will determine the project timing. Theoretically, the project could be scheduled to begin implementation in late summer or early-fall following grant allocation. Construction of the dewatering basin must be completed prior to piping any dredge spoils to the basin. Dredging will begin after the completion of the dewatering basin. The construction of the dewatering basin and dredging should be completed by December 31. Final grading of the dewatering basin should occur approximately 6-12 months after dredging is complete, depending on the dryness of the dredge spoils.

8.0 COST ESTIMATES

Sediment removal for the first year of dredging for three sites in Little Barbee Lake is expected to cost approximately \$110,000 plus any administrative fees. It is estimated that hydraulic dredging will be approximately \$92,000 of the total and that sediment dewatering basin construction will be the remaining \$18,000. The second year of sediment removal in the Barbee Lake chain including the Kuhn Ditch Public launch area and the Big Barbee channel between B-25 and B-26 estimated to cost \$110,000 for dredging, \$35,000 for two dewatering basins. Plan on an additional 15 percent if an engineering firm is required to administer the project. These cost estimates only include areas that are eligible for LARE funding.

Priority Area	Area of Proposed Dredging (acres)	Dredging Volume (cubic yards)	Estimated Cost of Proposed Dredging*
1	Little Barbee –Putney 0.75	3,000	\$54,500*
2	Little Barbee –NE 0.4	2,800	\$14,000
3	Little Barbee –channel 0.7	2,900	\$24,500
4	Banning 0.25 acres	1,100	\$17,000*
5	Kuhn Public Access 3.0	9,600	\$80,000*
6	Kuhn between B8&B9 1.3	1,660	\$20,000
7	Barbee between B26 & B27 1	10,666	\$45,000*
Total	7.4 acres	21,060	\$255,000

Table 1. Recommended Areas, Volume and Estimated Costs of Dredging in the Barbee Lakes

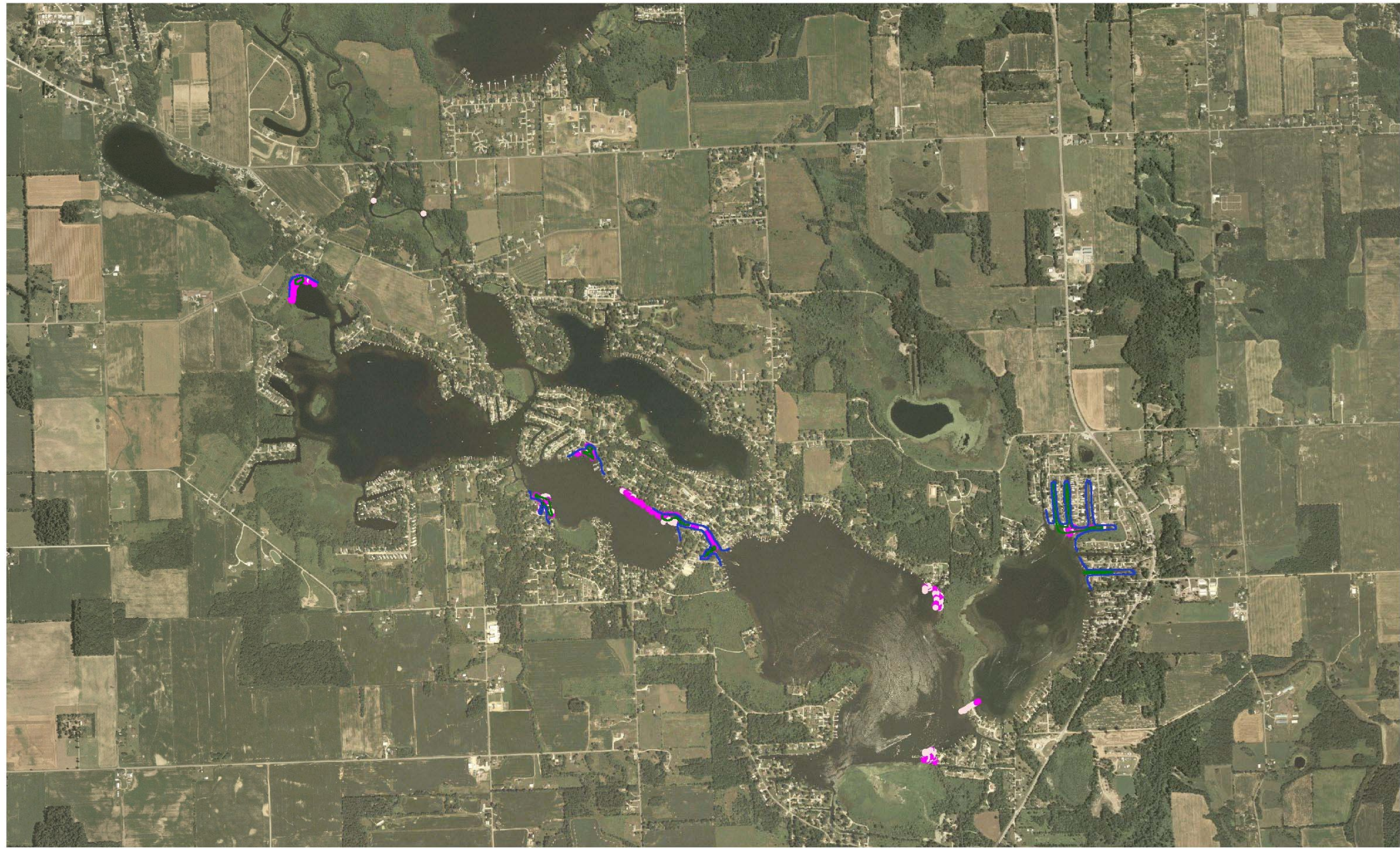
*Notes:

1 -The Estimated cost of sites 1, 4, 5 and 7 include the cost of the associated sediment dewatering basin (varies) and mobilization (approximately \$12,000).

2 -These estimated costs do not include project administration or supervision by an outside engineer (typically 15 percent of project cost).

APPENDIX A:

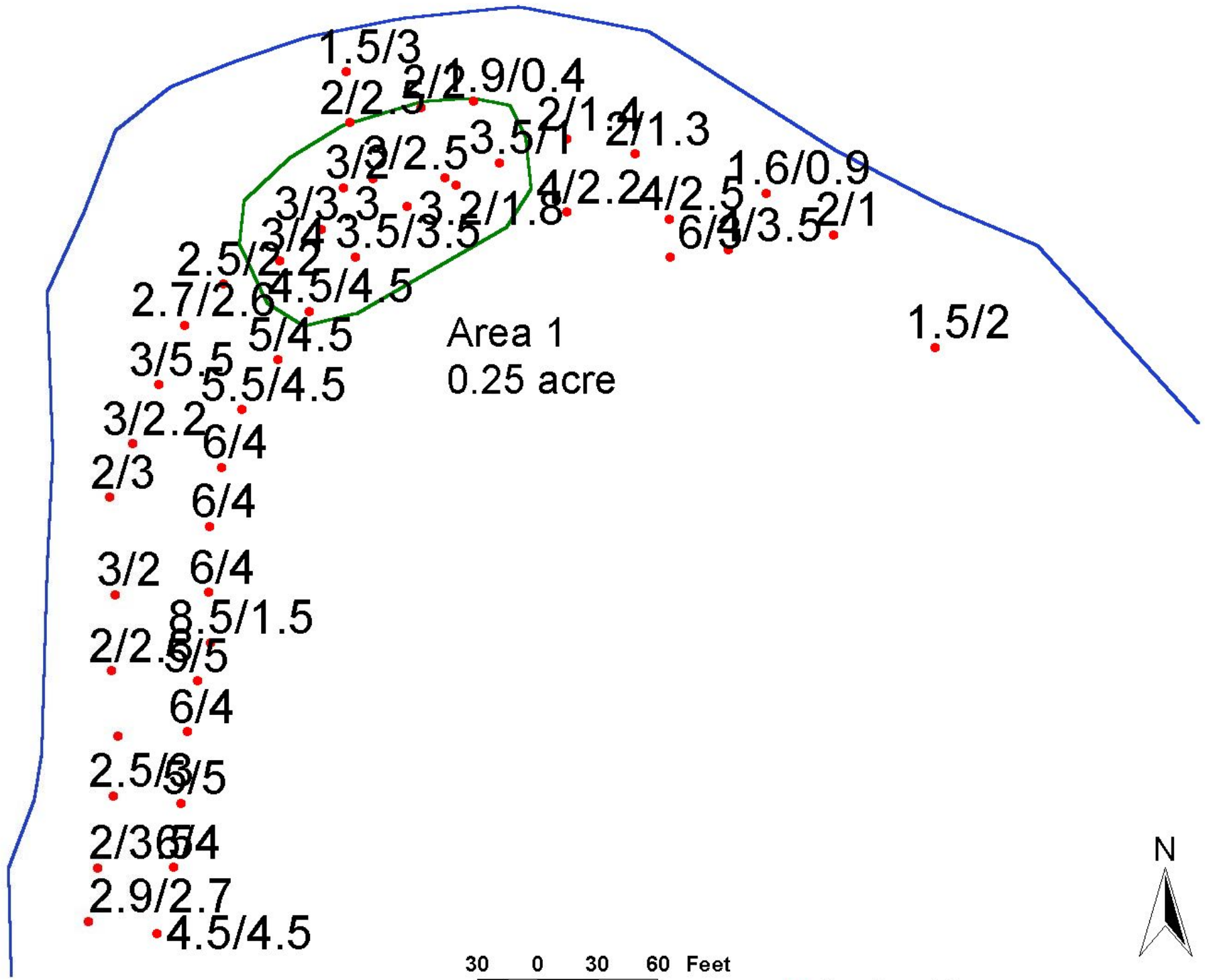
SEDIMENT DEPTH AND AREA MEASUREMENTS



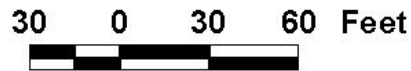
Sediment Depth Survey
Barbee Lakes, Kosciusko County, Indiana




1500 0 1500 Feet

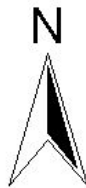



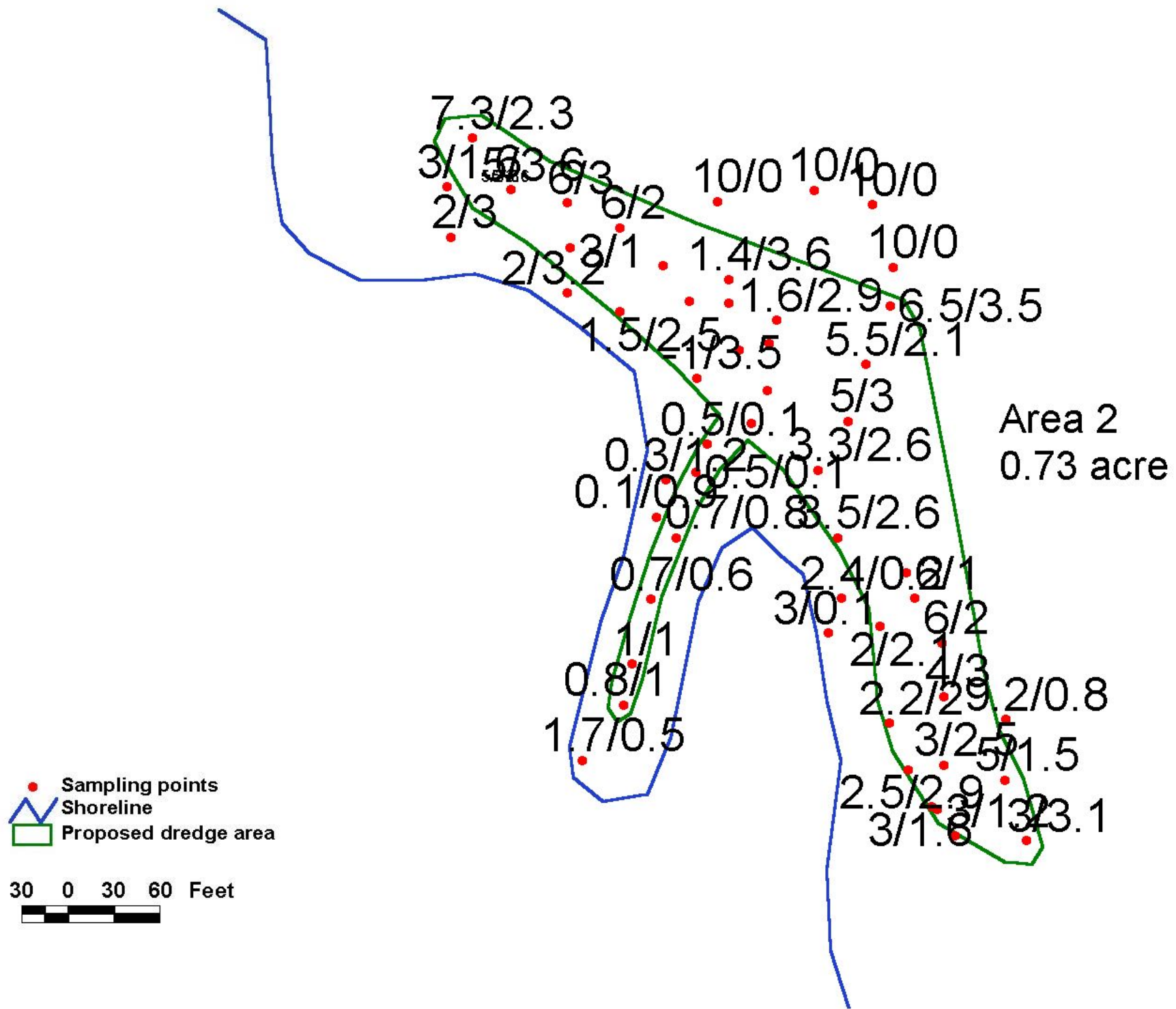


Banning Lake Area 1
Barbee Lakes Chain, Kosciusko County, Indiana

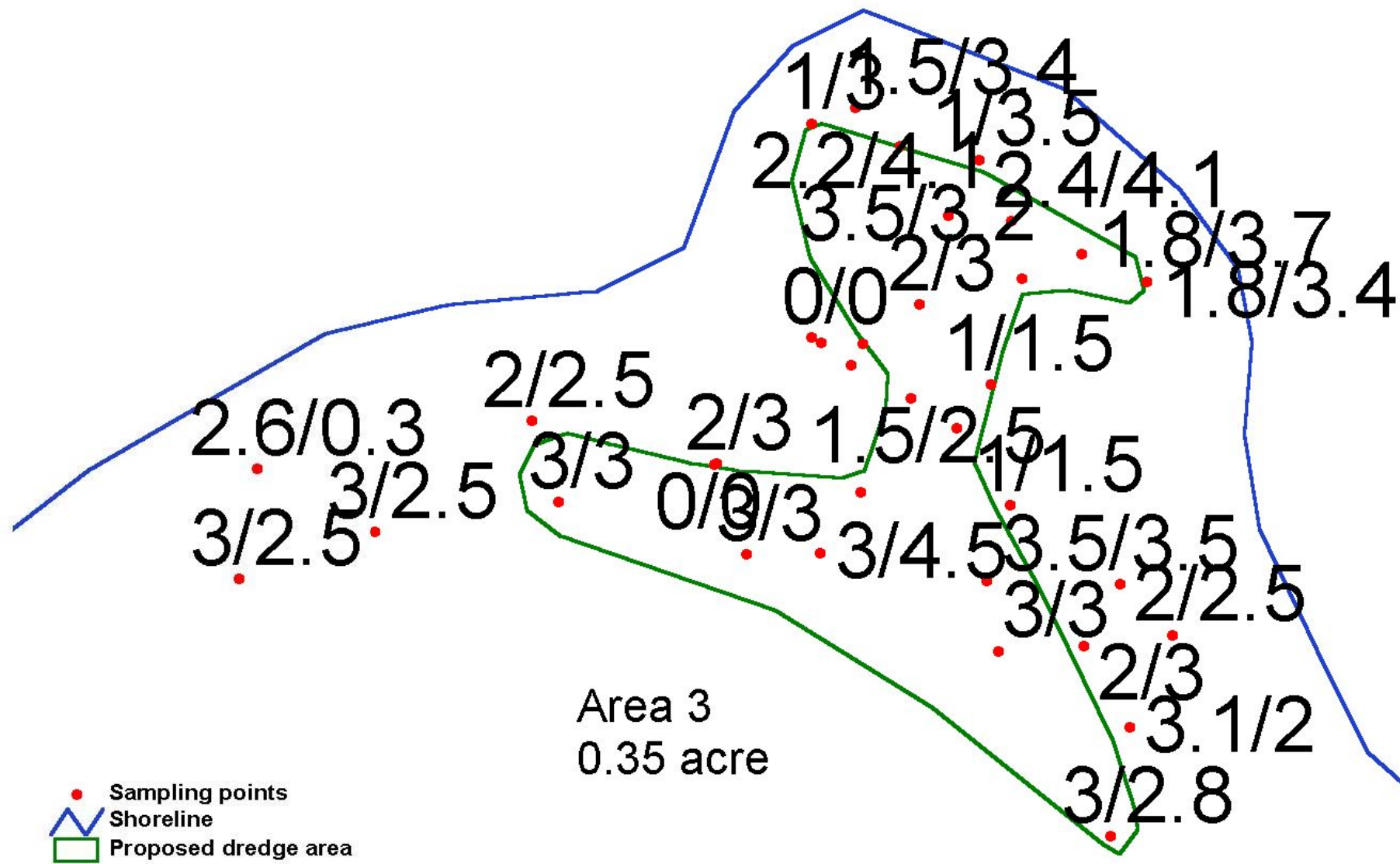


 Sampling points
 Shoreline
 Proposed dredge area

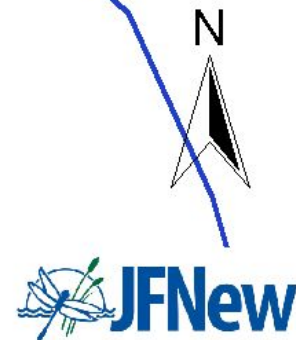





Little Barbee Lake Area 2
 Barbee Lakes Chain, Kosciusko County, Indiana



Little Barbee Lake Area 3
 Barbee Lakes Chain, Kosciusko County, Indiana



5

3.1/2.9/1.5

2/2.3
 3/1.6
 3/1.5
 2.4/1.9
 2/2
 2/2
 2/2
 3/1.5
 3.2/1.4
 0/0
 2.7/0.2
 3/0.4
 1.2/5.1
 0.3/2.5
 1.5/2.5
 2/0.9
 2.5/1.0
 0.8/0.3
 2/3.1
 3/0.8
 3.5/0.0
 4/1.4
 2/2.4
 3.8/3.2
 2.5/1.9
 1/2.5
 5/2.5
 8/4.4
 2/5
 2/4.5
 3/1.8
 2.5/2.2
 2/5
 2/2
 2/0.2
 5/4.5

Area 4
0.7 acres

2.9/0.2

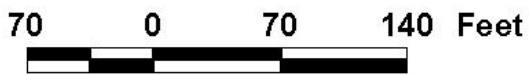
2.9/2.5

3.4/1.1

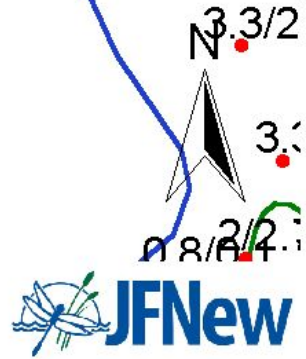
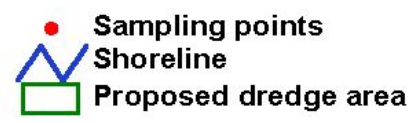
3.3/2

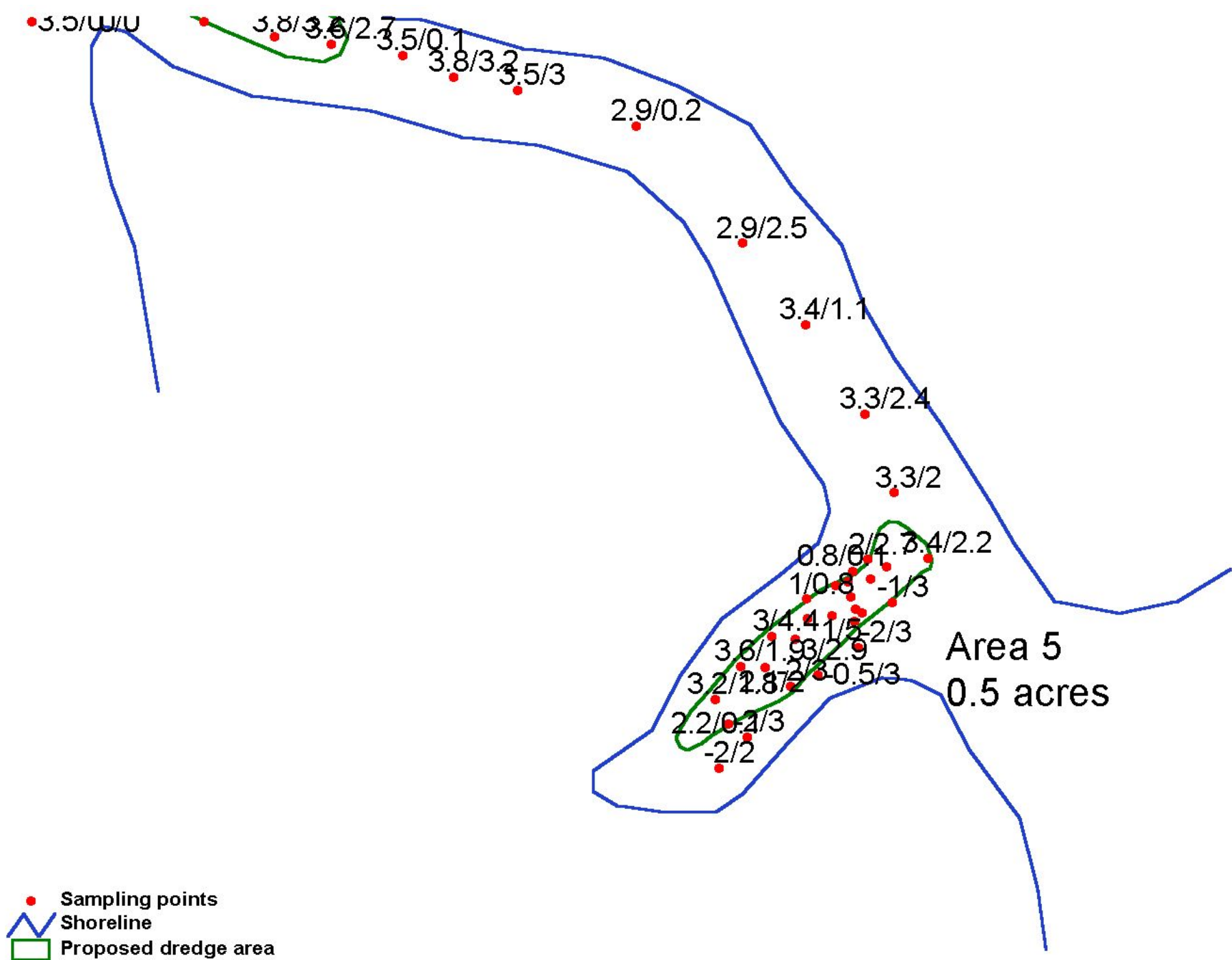
3.0

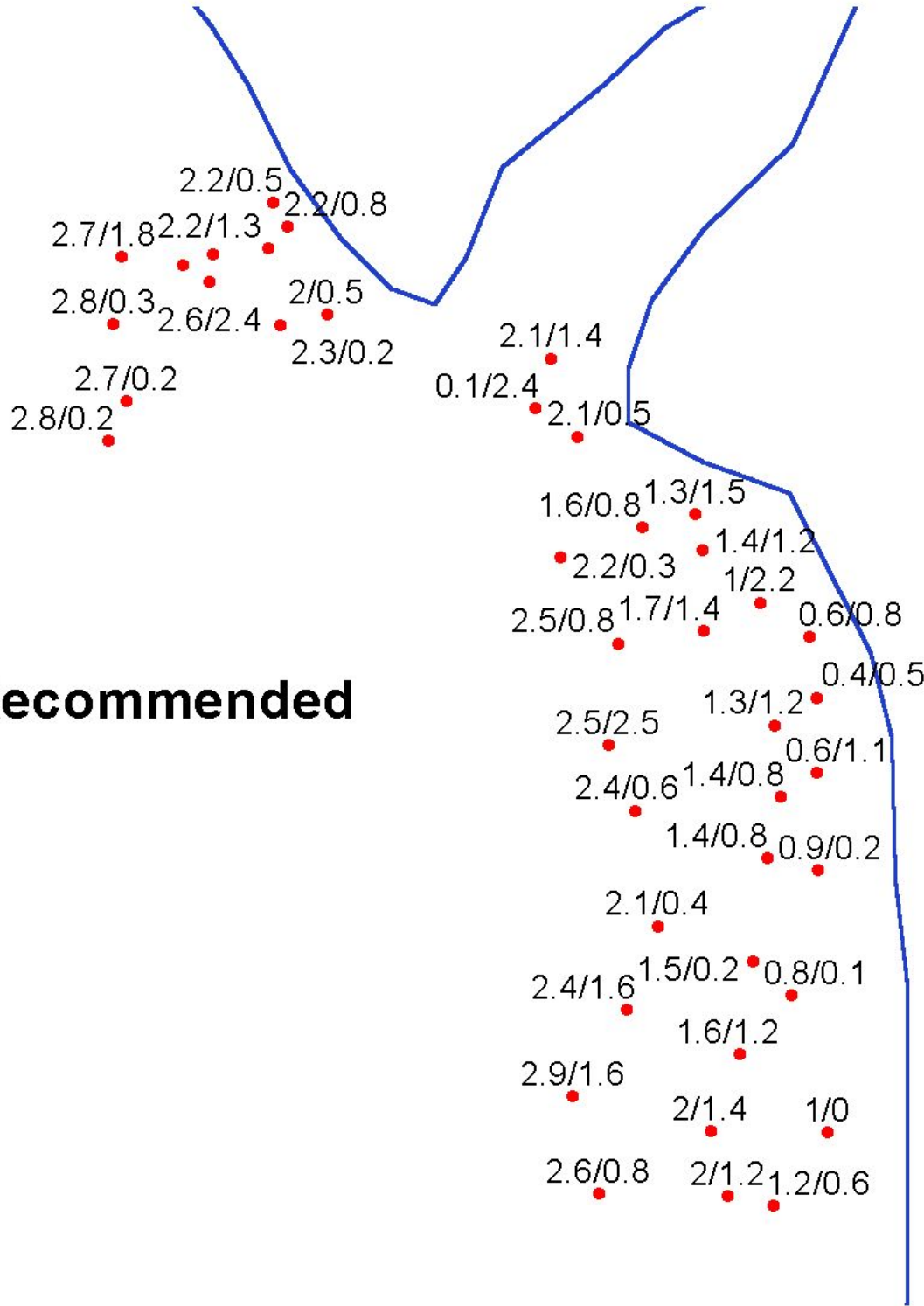
0.8/2.4



Little Barbee Lake Area 4
 Barbee Lakes Chain, Kosciusko County, Indiana





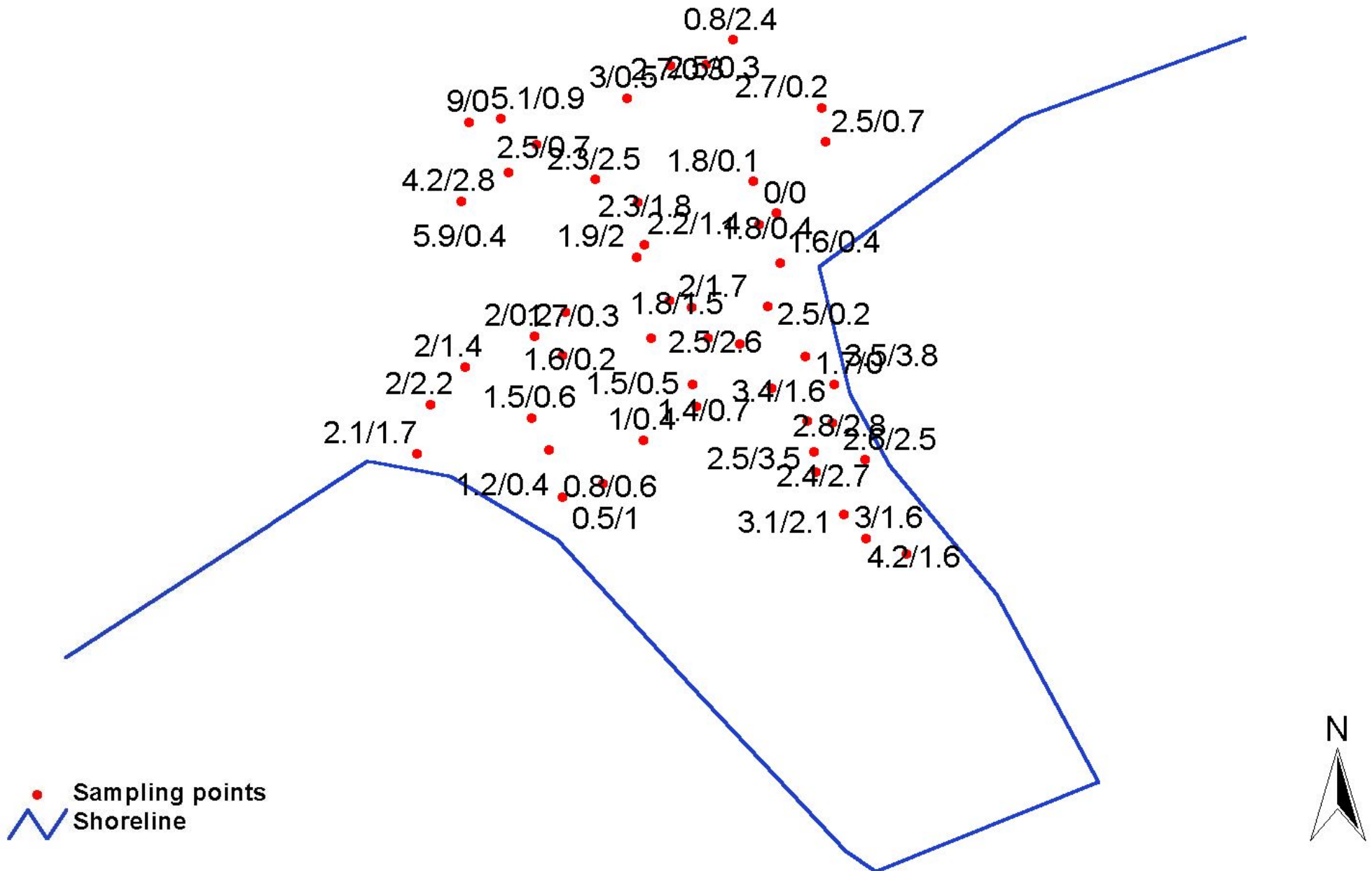


No Dredging Recommended

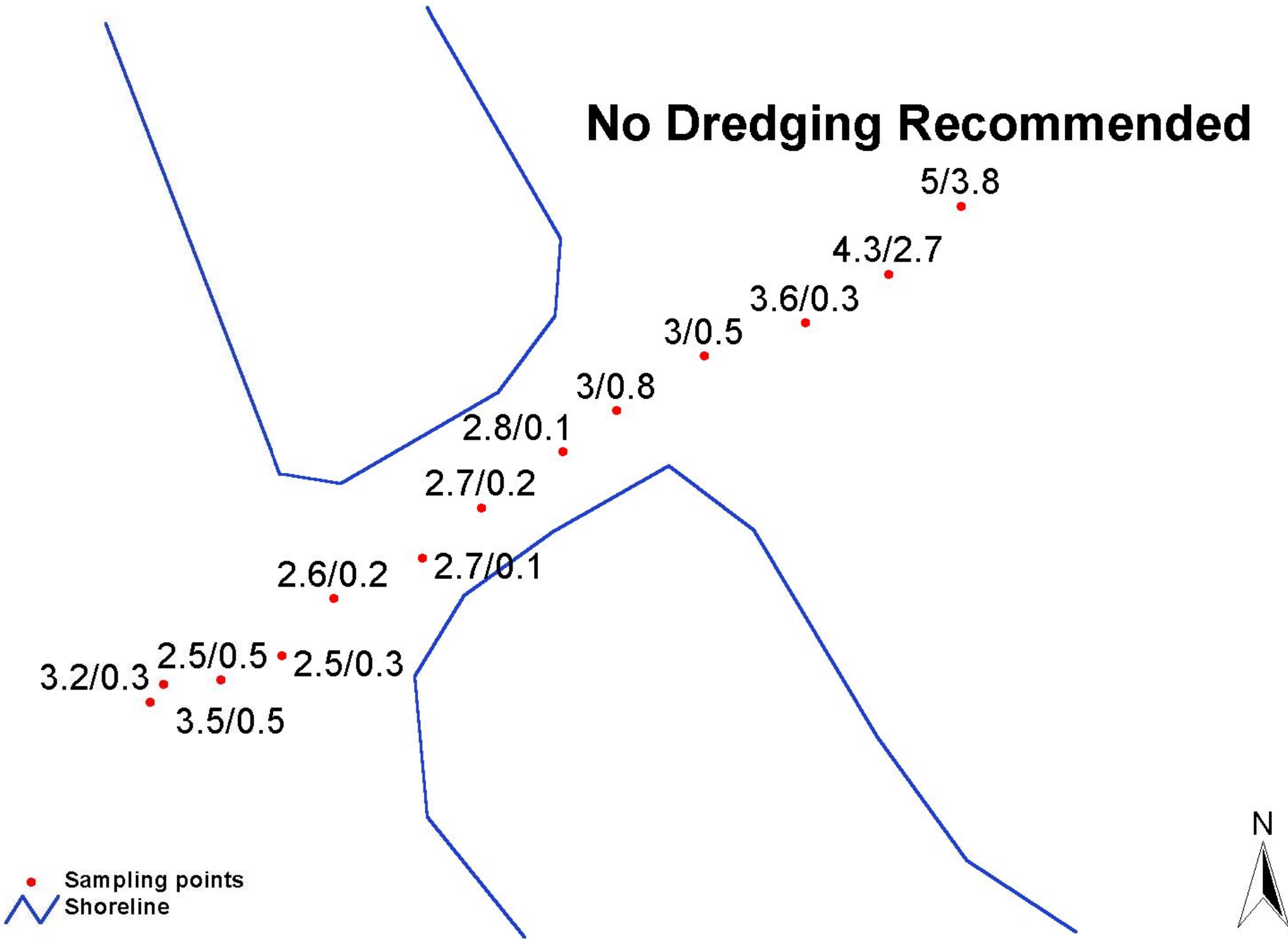
 Sampling points
 Shoreline



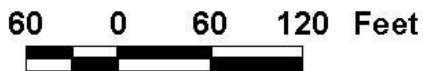
No Dredging Recommended



No Dredging Recommended



Area 9 3.0 acres



- Sampling points
- Shoreline
- ▭ Proposed dredge area

Kuhn Lake Area 9
Barbee Lakes Chain, Kosciusko County, Indiana



APPENDIX B:
SEDIMENT SAMPLING ANALYSIS RESULTS



REPORT OF ANALYSIS

Mr. Mark Pranckus
J.F. New & Associates
708 Roosevelt Road
Walkerton, IN 46574

Tel No: 574-586-3400

Fax No: 574-586-3446

PO No: 98-03-27 03

Project Name: Barbee Lakes

Report Date: 9/19/05

EIS Order No: 050800308

EIS Sample No: 105244

EIS Project No: 2325-1000-05

Client Sample ID: Area 2 - Pitney Ditch

Date Collected: 8/26/05

Date Received: 8/31/05

Collected By: M. Pranckus

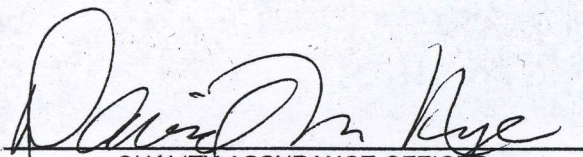
This report presents results of analysis for your sample(s) received under our Order No above. This Number is to be used in all inquiries concerning this report. The EIS Sample No above, as well as your Sample ID, refer to the first sample in a multi-sample submission

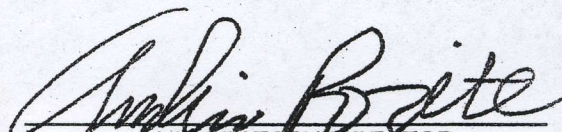
DEFINITIONS:

- MDL = Method Detection Limit normally achieved in the absence of interferences or other matrix difficulties.
- RDL = Reporting Detection Limit achieved in your sample. If numerically greater than the MDL, dilutions were required in order to perform the analysis. If numerically less than the MDL, alternate techniques were employed.
- nd = Not Detected at the RDL value. If present, result is less than this value.
- < = Not Detected at the numerical value shown. If present, result is less than this value.
- [] = Result is Estimated due to matrix interferences or calibration curve exceedence.

CHAIN-OF-CUSTODY is enclosed if received with your sample submission.

DRINKING WATER CERTIFICATIONS: Chemistry = C-71-02 Bacteriology = M-76-5


QUALITY ASSURANCE OFFICER


LABORATORY DIRECTOR

The data in this report has been reviewed and complies with EIS Quality Control unless specifically addressed above.

SAMPLE RESULTS

CLIENT SAMPLE ID: Area 2 - Pitney Ditch
 CLIENT PROJECT: Barbee Lakes
 SAMPLE TYPE: Soil/Sludge/Solid
 Date Collected: 8/26/05

Report Date: 9/19/05
 EIS Sample No: 105244
 EIS Order No: 050800308
 Date Received: 8/31/05

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Digest Mercury	Complete				9/1/05	E09	7471
Digest ICP Metals	Complete				9/7/05	E09	3050 B
Elutriate Preparation	Complete				9/1/05	E09	EPA/Corps
Nitrogen(Ammonia)	12	mg/L	0.05	0.05	9/13/05	E03	350.1
Solids,Total	52.1	%	0.1	0.1	9/7/05	E21	160.3
METALS							
Arsenic,Total	<10	mg/kg(wet)	10	10	9/13/05	E09	6010
Barium,Total	38.5	mg/kg(wet)	1	1	9/13/05	E09	6010
Cadmium,Total	<1	mg/kg(wet)	1	1	9/13/05	E09	6010
Chromium,Total	4.1	mg/kg(wet)	2	2	9/13/05	E09	6010
Copper,Total	6.4	mg/kg(wet)	1	1	9/13/05	E09	6010
Lead,Total	<5	mg/kg(wet)	5	5	9/13/05	E09	6010
Mercury,Total	<0.1	mg/kg(wet)	0.1	0.2	9/2/05	E09	7471
Nickel,Total	<4	mg/kg(wet)	4	4	9/13/05	E09	6010
Selenium,Total	<10	mg/kg(wet)	10	10	9/13/05	E09	6010
Silver,Total	<1	mg/kg(wet)	1	1	9/13/05	E09	6010
Zinc,Total	18.4	mg/kg(wet)	1	1	9/13/05	E09	6010

SAMPLE RESULTS

CLIENT SAMPLE ID: Area 4 - Little Barbee Channel
CLIENT PROJECT: Barbee Lakes
SAMPLE TYPE: Soil/Sludge/Solid
Date Collected: 8/26/05

Report Date: 9/19/05
EIS Sample No: 105245
EIS Order No: 050800308
Date Received: 8/31/05

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Digest Mercury	Complete				9/1/05	E09	7471
Digest ICP Metals	Complete				9/7/05	E09	3050 B
Elutriate Preparation	Complete				9/1/05	E09	EPA/Corps
Nitrogen(Ammonia)	24	mg/L	0.05	0.05	9/13/05	E03	350.1
Solids, Total	29.5	%	0.1	0.1	9/7/05	E21	160.3
METALS							
Arsenic, Total	<10	mg/kg(wet)	10	10	9/13/05	E09	6010
Barium, Total	99.4	mg/kg(wet)	1	1	9/13/05	E09	6010
Cadmium, Total	<1	mg/kg(wet)	1	1	9/13/05	E09	6010
Chromium, Total	3.1	mg/kg(wet)	2	2	9/13/05	E09	6010
Copper, Total	7.6	mg/kg(wet)	1	1	9/13/05	E09	6010
Lead, Total	25.3	mg/kg(wet)	5	5	9/13/05	E09	6010
Mercury, Total	<0.1	mg/kg(wet)	0.1	0.2	9/2/05	E09	7471
Nickel, Total	<4	mg/kg(wet)	4	4	9/13/05	E09	6010
Selenium, Total	<10	mg/kg(wet)	10	10	9/13/05	E09	6010
Silver, Total	<1	mg/kg(wet)	1	1	9/13/05	E09	6010
Zinc, Total	65.3	mg/kg(wet)	1	1	9/13/05	E09	6010

Parameter	Ceiling Concentration Limit
Total Arsenic	75 mg/kg
Total Barium	--
Total Cadmium	85 mg/kg
Total Chromium	--
Total Copper	4,300 mg/kg
Total Lead	840 mg/kg
Total Mercury	57 mg/kg
Total Nickel	420 mg/kg
Total Selenium	100 mg/kg
Total Silver	--
Total Zinc	7,500 mg/kg
Total Solids	--
Ammonia-Nitrogen	--

*Method Detection Level

APPENDIX C:
LANDOWNER AGREEMENTS

**AGREEMENT FOR THE PURPOSE OF TEMPORARY ACCESS
FOR CONSTRUCTION AND DEMOLITION OF A
SEDIMENT SPOILS BASIN**

This Agreement, made and entered into on this 24 day of Feb. 2006, by and between Terence and Lillie Hartup (THE OWNER) and the Barbee Lakes Property Owners Association (THE ASSOCIATION), a not-for-profit corporation organized under the laws of the State of Indiana.

WITNESSETH:

THE OWNER, in consideration of the rents and covenants herein contained, does hereby enter in this Agreement for the temporary use of approximately four (4) acres of real property located in Tippecanoe Township, Kosciusko County, Indiana in the NE1/2 SW1/4 of Section 28, Township 33 North, Range 7 East and more particularly shown on the attached Exhibit A and Exhibit B (hereinafter after referred to as the Property) and does grant to THE ASSOCIATION access to said Property for construction and demolition of a sediment disposal basin.

WHEREAS, THE ASSOCIATION is a not-for-profit Indiana Corporation, whose activities include improving the water quality of the Barbee Lakes, located in Kosciusko County, Indiana; and

WHEREAS, THE ASSOCIATION wishes to undertake construction activities on the Property as part of its lake dredging project to improve the water quality of the Barbee Lakes, located in Kosciusko County, Indiana; and WHEREAS, THE OWNER is in agreement with THE ASSOCIATION's desire to improve the Barbee Lakes.

NOW, THEREFORE, THE OWNER, for themselves, their successors and assigns, and their administrators, in consideration of the covenants, undertakings and agreements hereinafter set forth, hereby grants *reasonable* access to THE ASSOCIATION to Property described hereinabove under the following terms and conditions:

AGREEMENT PART I - ACCESS

1. REFERENCE. Agreement Part I shall refer to the access unto the Property as designated on the attachment marked Exhibit A and Exhibit B.
2. TERM. The term shall commence on the day this agreement is signed by the parties hereto and shall continue for a term of 2 years. It is further agreed that this agreement, or as modified at that time by the parties, shall be renewable by either party upon mutual agreement Sixty Days (60) prior to the expiration of said agreement.
3. USE.
 - A. THE OWNER grants to THE ASSOCIATION, their agents and assigns, the right to do specific acts on the Property as set out herein and THE OWNER retains all rights to the Property, with consideration of those rights granted to the THE ASSOCIATION.
 - B. THE OWNER grants THE ASSOCIATION reasonable right of access for the purpose of construction, inspections, and demolition (leveling) of a sediment disposal area as shown on Exhibit B.

C. THE OWNER grants to THE ASSOCIATION reasonable access to the project area on Exhibit B. Owner grants the right to ingress and egress from the property provided that THE ASSOCIATION shall give prior notice of their intentions before entering upon the Property. THE OWNER, for themselves, their heirs, assigns and administrators agree that reasonable access shall be maintained, throughout the term of this agreement (2 years).

AGREEMENT PART II - GENERAL PROVISIONS

1. MANAGEMENT.

A. THE OWNER agrees that THE ASSOCIATION and its agents shall be permitted to enter onto the Property with such machinery, materials and equipment and the personnel and workers to operate said machinery and equipment to carry out the intended use of the Property by THE ASSOCIATION, including, the construction, inspections and leveling of the disposal area. It is agreed that all improvements shall stay with the land.

B. THE OWNER agrees that THE ASSOCIATION shall have the right to take such tests and borings on the Property as THE ASSOCIATION deems necessary to carry out its intended use, and to take photographs of the Property, provided, THE OWNER is advised of such borings, tests, and photographs, and the necessity of such.

C. THE OWNER limits the rights granted to THE ASSOCIATION as contained herein, and that THE ASSOCIATION may enter onto the Property for the intended use as described, and not for any other use by THE ASSOCIATION and/or its agents, or the general public.

D. Rights to the Property shall be retained by THE OWNER. Further, THE OWNER agrees that those activities agreed between the parties will not be interfered with, provided, that THE ASSOCIATION has not deviated from said agreement of intended use without first securing the permission or agreement from THE OWNER.

E. THE ASSOCIATION shall give notice to THE OWNER of its intention to enter onto the Property for purpose of construction, inspections, and leveling of the disposal basin and the eventual leveling of the disposal area. THE ASSOCIATION shall not enter Property without permission from THE OWNER, which permission will not be unreasonably withheld.

F. Upon completion of the project, THE ASSOCIATION retains no rights to area.

2. TAXES. Shall be borne by THE OWNER, or their successors and/or assigns of the said real estate, and any assessments, shall also be born by the same.

3. LIABILITY/INSURANCE.

A. Nothing in this Agreement shall be construed as imposing any additional liability on THE OWNER. All contractors accessing the property to perform work shall name THE OWNER as additional insured on their respective liability policies. At the request of THE OWNER, THE ASSOCIATION shall provide THE OWNER with a certificate or other evidence that such insurance is in effect by the contractors involved.

B. THE ASSOCIATION's contractors shall be responsible for and shall indemnify and hold THE OWNER harmless from any and all costs, including the expense of defending any claim of legal action related to any injury, caused by or resulting from THE ASSOCIATION's activities on the Property.

5. DAMAGES.

A. THE ASSOCIATION shall restore all road surfaces owned by THE OWNER to their original condition if said surfaces are damaged by equipment and/or machinery used by THE ASSOCIATION and its agents during ingress and egress from the Property.

B. Before final completion of the work on said premises, THE ASSOCIATION and its agents shall clean up and replant the construction site to the satisfaction of THE OWNER. All fences and trees removed during construction will be hauled off site. Fencing that has been removed shall be replaced up to the original length at the discretion of THE OWNER or terminated at a secure fence post with adequate bracing. THE OWNER will designate the areas to be left tillable prior to leveling the spoils and all disturbed areas outside of those identified tillable areas will be replanted to grass and straw mulched.

C. This commitment pertains to construction and leveling of the sediment basin by THE ASSOCIATION and its agents on the Property.

6. EXPENSE. THE ASSOCIATION shall be responsible for all expenses incurred in the construction, leveling, planting, and clean up of the Intended Use of the Property by THE ASSOCIATION as set out in Part I of this Agreement. Additionally, the ASSOCIATION, as part of the work described above, shall contract with a mutually agreeable construction firm or individual experienced with the installation drainage tile for the sole purpose of installing adequate drainage within the area of leveled spoils. The estimated fee for approximately 1,500-2,000 feet of drainage tile installation is five thousand dollars (\$5,000.00).

7. NO LIEN AGREEMENT. In consideration of the rents and covenants herein contained, THE ASSOCIATION, for itself and for all contractors, subcontractors, laborers, or persons performing labor upon or furnishing materials or machinery for the Intended Use of the Property as set out herein, agrees that:

A. No lien shall attach to the Property or to THE OWNER's property, or to any structure or other improvement to be constructed on the Property; and

B. Any recording of this Agreement is intended solely for the purpose of giving proper notice as provided under IC 32-8-3-1 et seq.; and no lien whatsoever is created against the real estate as the result of the execution or recordation of this Agreement.

8. TRESPASS. THE OWNER grants to THE ASSOCIATION and its contractor(s) permission to enter onto the Property during normal working hours (7am to 7pm), *with proper notice*, to carry out its Intended Use as set out herein. All others shall be considered trespassers on the Property unless the party has permission of THE OWNER to be on the Property.

9. DEFAULT.

A. Breach of any covenant herein shall constitute a default under this Agreement. In the event of a default, the defaulting party shall be entitled to thirty (30) days written notice specifying the nature of the default and giving the defaulting party an opportunity to cure the default. If the default is not corrected within thirty (30) days after written notice is received, the injured party may elect to terminate this Agreement.

B. If the use intended for the Property is not approved by any governmental agency having jurisdiction over the project, THE ASSOCIATION and THE OWNER shall each have the right to terminate the Agreement by giving thirty (30) days written notice to the other party.

10. NOTICE. Any notice required by this Agreement shall be served upon the other party by mail at the address set forth below or at such other address as the parties may hereinafter designate:

Terence and Lillie Hartup
6421 E. McKenna Road
Warsaw, IN 46582

H. Lewis Huston – Barbee Lakes Property Owners Association
101 EMS B61 Lane
Warsaw, IN 46582

11. AGENTS. Where in this instrument rights are given to THE ASSOCIATION or THE OWNER, such rights shall also extend to the agents, officers or employees of the parties.

12. BINDING EFFECT. This Agreement shall become effective at the time construction on the Property begins and shall be binding upon THE OWNER, their heirs, personal representatives, successors and assigns and upon THE ASSOCIATION and any successor organizations.

13. TITLE. THE OWNER hereby represent and warrant that they are owners of the Property covered by this Agreement and that they have the right to enter into this Agreement and to bind themselves and their heirs, successors, assigns, and personal representatives.

14. This Agreement shall be interpreted under the laws of the State of Indiana.

15. Headings are for reference only and do not affect the provisions of this Agreement.

16. Where appropriate, the singular shall include the plural.

17. This Agreement contains all of the agreements of the parties, all prior negotiations, understandings and agreements having been merged into it. Amendments of this Agreement shall not be effective unless made in writing and signed by both parties.

18. In the event THE ASSOCIATION should cease to exist, the Agreement shall be binding upon the organization that succeeds the said association, provided that the succeeding organizations' membership consists of property owners of real estate on the Barbee Lakes, Kosciusko County, Indiana.

19. Any person signing this Agreement in a representative capacity for a party affirms under the penalties for perjury that he or she has the actual authority to so sign.

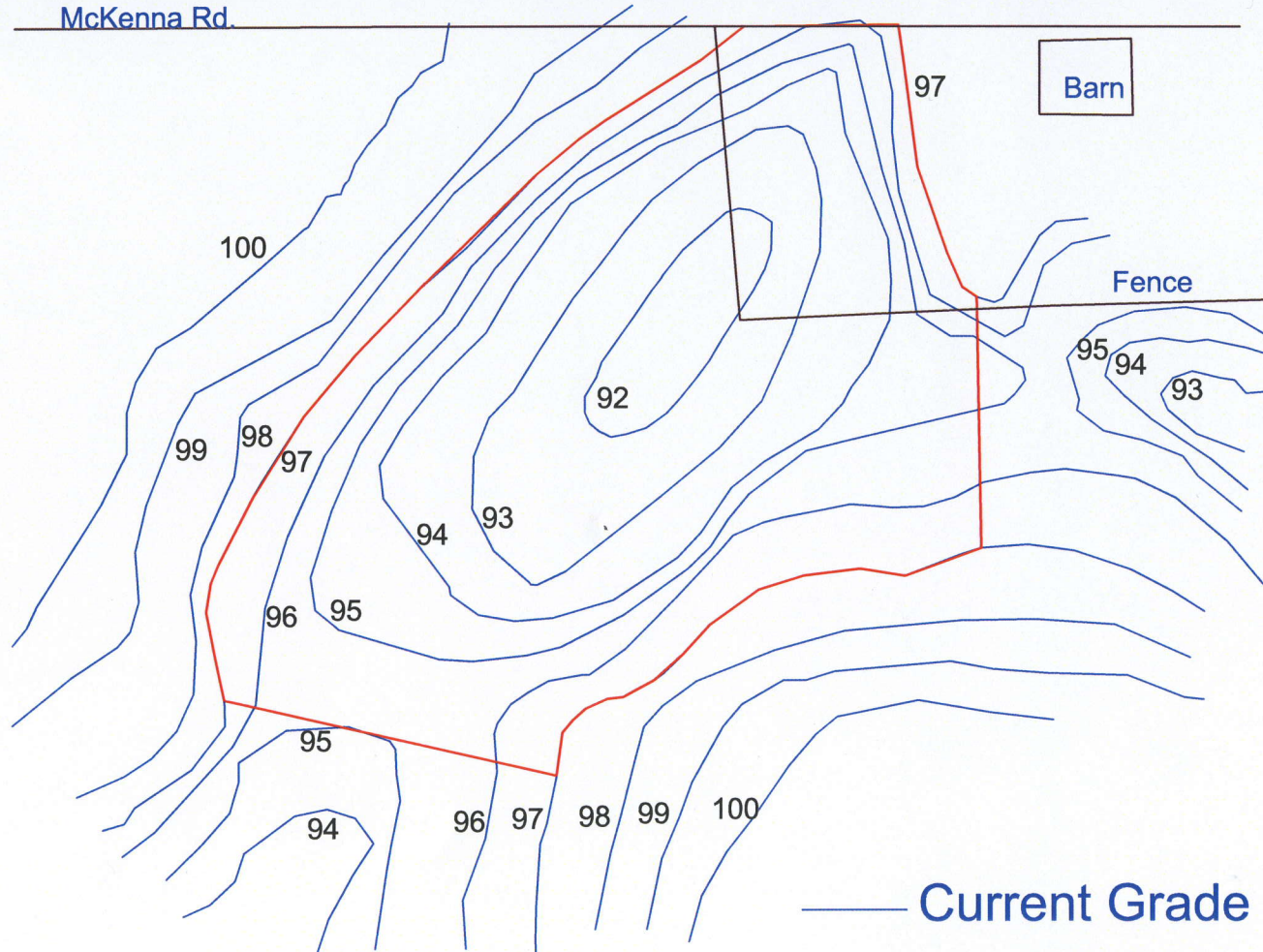
20. FEES: THE ASSOCIATION shall deliver a check in the amount of five-thousand dollars (\$5,000.00) to THE OWNER, prior to the start of any construction activity or this agreement becomes invalid. IN WITNESS WHEREOF, Terence and Lillie Hartup, THE OWNER(s), and H. Lewis Huston, Board member of THE ASSOCIATION, have caused this Agreement to be executed on the day and year above first written with the following signatures.

TERENCE HARTUP
Lillie F Hartup
THE OWNERS

Harold Lewis Huston
THE ASSOCIATION
James A. Scott
WITNESS

APPENDIX D:
SEDIMENT BASIN DESIGN DETAILS

McKenna Rd.



Barn

Fence

— Current Grade (92-100)

— Proposed Grade (97)

APPENDIX E:

PERMITS

STATE OF INDIANA
DEPARTMENT OF NATURAL RESOURCES

MAILED APR 19 2006

**CERTIFICATE OF APPROVAL
PUBLIC FRESHWATER LAKE**

APPLICATION # : PL-20329

LAKE : Little Barbee Lake

APPLICANT : Barbee Lakes Property Owners Association
Lewis H Huston
101 EMS B61 Lane
Warsaw, IN 46582-6651


AGENT : JFNew
John Richardson
708 Roosevelt Road
Walkerton, IN 46574-1220

AUTHORITY : IC 14-26-2 with 312 IAC 11

DESCRIPTION : Three areas are proposed for dredging. Area 1 is an existing 40' wide by 320' long channel at the outlet of Putney Ditch. Approximately 2.5' of accumulated sand and debris will be hydraulically dredged from the channel bed to an approximate depth of 6' below the lake's legal level at the center of the channel and sloping uniformly to a depth of less than 0.5' at the shoreline. Area 2 is an irregularly shaped channel lined with concrete seawalls and is roughly 100' long by a maximum of 150' wide. Approximately 5' of accumulated muck will be hydraulically dredged from this area to an approximate depth of 6' below the lake's legal level and sloping uniformly to the shoreline. In addition to the channel, a 45' by 45' area at the mouth of the channel will be dredged to the original bottom or a maximum depth of 6' below the lake's legal level. Area 3 is located at the mouth of the inlet channel to Little Barbee Lake from Big Barbee Lake. An existing channel along the north shore will undergo maintenance dredging along 400' of the shoreline. Accumulated muck and debris will be removed from the lakebed by hydraulic dredging to a maximum depth of 4' below the lake's legal level at a distance of 20' lakeward of the shoreline and sloping uniformly to the shoreline. All excavated material will be transported to an upland containment area for dewatering and disposal. Water from the containment area will be filtered and return to the lake. Details of the project are contained in information received electronically at the Division of Water December 30, 2005 and in plans and information received at the Division of Water on January 30, 2006 and April 10, 2006.

LOCATION : DOWNSTREAM: Area 1 is at the mouth of Putney Ditch on the southwest corner of the lake, Area 2 is at the northern point of the lake and Area 3 is at the east end of the lake near North Webster, Tippecanoe Township, Kosciusko County N½, Section 28, T 33N, R 7E, North Webster Quadrangle
UTM Coordinates: Downstream 4571642 North, 606773 East
UPSTREAM: Kosciusko County

UTM Coordinates: Upstream 4571561 North, 607515 East

APPROVED BY : 
James J. Hebenstreit, P.E., Assistant Director
Division of Water

APPROVED ON : April 19, 2006

STATE OF INDIANA
DEPARTMENT OF NATURAL RESOURCES

NOTICE OF RIGHT TO ADMINISTRATIVE REVIEW

APPLICATION #: PL- 20329

This signed document constitutes the issuance of a permit by the Department of Natural Resources, subject to the conditions and limitations stated on the pages entitled "General Conditions" and "Special Conditions".

The permit or any of the conditions or limitations which it contains may be appealed by applying for administrative review. Such review is governed by the Administrative Orders and Procedures Act, IC 4-21.5, and the Department's rules pertaining to adjudicative proceedings, 312 IAC 3-1.

In order to obtain a review, a written petition must be filed with the Division of Hearings within 18 days of the mailing date of this notice. The petition should be addressed to:

Mr. Stephen L. Lucas, Director
Division of Hearings
Room W272
402 West Washington Street
Indianapolis, Indiana 46204

The petition must contain specific reasons for the appeal and indicate the portion or portions of the permit to which the appeal pertains.

If an appeal is filed, the final agency determination will be made by the Natural Resources Commission following a legal proceeding conducted before an Administrative Law Judge. The Department of Natural Resources will be represented by legal counsel.

STATE OF INDIANA
DEPARTMENT OF NATURAL RESOURCES

SPECIAL CONDITIONS

APPLICATION #: PL- 20329

PERMIT VALIDITY : This permit is valid for 24 months from the "Approved On" date shown on the first page. If work has not been completed by April 19, 2008 the permit will become void and a new permit will be required in order to continue work on the project.

This permit becomes effective 18 days after the "MAILED" date shown on the first page. If both a petition for review and a petition for a stay of effectiveness are filed before this permit becomes effective, any part of the permit that is within the scope of the petition for stay is stayed for an additional 15 days.

CONFORMANCE : Other than those measures necessary to satisfy the "General Conditions" and "Special Conditions", the project must conform to the information received by the Department of Natural Resources on: December 30, 2005, January 30, 2006 and April 10, 2006. Any deviation from the information must receive the prior written approval of the Department.

Number Special Condition

- (1) dredging may not occur from March 1 through June 30
- (2) minimize the movement of resuspended bottom sediment from the immediate project area
- (3) if sediment is removed hydraulically and transported to an upland dewatering basin, adequate slurry detention time and sediment removal measures must be used to ensure that the water returned to the lake is not carrying excessive sediment back to the lake
- (4) revegetate all bare and disturbed areas landward of the shoreline with a mixture of grasses (excluding all varieties of tall fescue) and legumes as soon as possible upon completion
- (5) all excavated material must be properly spread landward of the shoreline on the property described on page 1 under "DESCRIPTION" or completely removed from the project site such that erosion and off-site sedimentation of the material is prevented
- (6) in Area 3, the dredged area may not extend more than 20 feet lakeward, and will be limited to a maximum depth of 4 feet
- (7) dredging may only occur within the area depicted in yellow in the photo that was received at the Division of Water from JFNew & Associates on April 3, 2006

STATE OF INDIANA
DEPARTMENT OF NATURAL RESOURCES

GENERAL CONDITIONS

APPLICATION #: PL- 20329

- (1) If any archaeological artifacts or human remains are uncovered during construction, federal law and regulations (16 USC 470, et seq.; 36 CFR 800.11, et al) and State Law (IC 14-21-1) require that work must stop and that the discovery must be reported to the Division of Historic Preservation and Archaeology within 2 business days.

Division of Historic Preservation and Archaeology
Room W274
402 West Washington Street
Indianapolis, IN 46204

Telephone: (317) 232-1646, FAX: (317) 232-8036

- (2) This permit must be posted and maintained at the project site until the project is completed.
- (3) This permit does not relieve the permittee of the responsibility for obtaining additional permits, approvals, easements, etc. as required by other federal, state, or local regulatory agencies. These agencies include, but are not limited to:

Agency	Telephone Number
*US Army Corps of Engineers, Louisville District	(502) 315-6733
Barbee Lakes Conservancy District	
Kosciusko County Drainage Board	(574) 372-2367
Indiana Department of Environmental Management	(317) 233-8488 or (800) 451-6027
Local city or county planning or zoning commission	

- (4) This permit must not be construed as a waiver of any local ordinance or other state or federal law.
- (5) This permit does not relieve the permittee of any liability for the effects which the project may have upon the safety of the life or property of others.
- (6) This permit may be revoked by the Department of Natural Resources for violation of any condition, limitation or applicable statute or rule.
- (7) This permit shall not be assignable or transferable without the prior written approval of the Department of Natural Resources. To initiate a transfer contact:

Mr. Michael W. Neyer, PE, Director
Division of Water
Room W264
402 West Washington Street
Indianapolis, IN 46204

Telephone: (317) 232-4160, Toll Free: (877) 928-3755
FAX: (317) 233-4579

- (8) The Department of Natural Resources shall have the right to enter upon the site of the permitted activity for the purpose of inspecting the authorized work.
- (9) The receipt and acceptance of this permit by the applicant or authorized agent shall be considered as acceptance of the conditions and limitations stated on the pages entitled "General Conditions" and "Special Conditions".

STATE OF INDIANA
DEPARTMENT OF NATURAL RESOURCES

MAILED FEB 22 2006

CERTIFICATE OF APPROVAL
PUBLIC FRESHWATER LAKE

APPLICATION # : PL-20335

LAKE : Big Barbee Lake

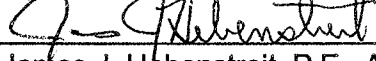
APPLICANT : John T Duncan
1507 Matter Park Road
Marion, IN 46952-2032

AGENT : JF New & Associates, Inc
John Richardson
708 Roosevelt Road, Suite A
Walkerton, IN 46574-1220

AUTHORITY : IC 14-26-2 with 312 IAC 11

DESCRIPTION : An approximate 80' by 300' existing channel will be restored to its original condition. Muck and debris will be hydraulically dredged to a maximum depth of 8' below the legal lake level at the center of the channel and will slope uniformly to a depth of 0.5' at the shoreline. The dredge spoils will be pumped to an upland containment area for dewatering and disposal. Adequate detention time will be provided to allow suspended sediments to settle out of the decanted water before returning the water to the lake. Details of the project are contained in information received electronically at the Division of Water on January 5, 2006 and in plans and information received at the Division of Water on January 31, 2006 and February 22, 2006.

LOCATION : Along the channel connecting Big Barbee Lake with Little Barbee Lake, just south of the McKenna Road crossing near North Webster, Tippecanoe Township, Kosciusko County
NE $\frac{1}{4}$, SW $\frac{1}{4}$, NE $\frac{1}{4}$, Section 28, T 33N, R 7E, North Webster Quadrangle
UTM Coordinates: Downstream 4571526 North, 607590 East

APPROVED BY : 
James J. Hebenstreit, P.E., Assistant Director
Division of Water

APPROVED ON : February 22, 2006

Attachments: Notice Of Right To Administrative Review
General Conditions
Special Conditions
Service List

STATE OF INDIANA
DEPARTMENT OF NATURAL RESOURCES

NOTICE OF RIGHT TO ADMINISTRATIVE REVIEW

APPLICATION #: PL- 20335

This signed document constitutes the issuance of a permit by the Department of Natural Resources, subject to the conditions and limitations stated on the pages entitled "General Conditions" and "Special Conditions".

The permit or any of the conditions or limitations which it contains may be appealed by applying for administrative review. Such review is governed by the Administrative Orders and Procedures Act, IC 4-21.5, and the Department's rules pertaining to adjudicative proceedings, 312 IAC 3-1.

In order to obtain a review, a written petition must be filed with the Division of Hearings within 18 days of the mailing date of this notice. The petition should be addressed to:

Mr. Stephen L. Lucas, Director
Division of Hearings
Room W272
402 West Washington Street
Indianapolis, Indiana 46204

The petition must contain specific reasons for the appeal and indicate the portion or portions of the permit to which the appeal pertains.

If an appeal is filed, the final agency determination will be made by the Natural Resources Commission following a legal proceeding conducted before an Administrative Law Judge. The Department of Natural Resources will be represented by legal counsel.

SPECIAL CONDITIONS

APPLICATION #: PL- 20335

PERMIT VALIDITY : This permit is valid for 24 months from the "Approved On" date shown on the first page. If work has not been completed by February 22, 2008 the permit will become void and a new permit will be required in order to continue work on the project.

This permit becomes effective 18 days after the "MAILED" date shown on the first page. If both a petition for review and a petition for a stay of effectiveness are filed before this permit becomes effective, any part of the permit that is within the scope of the petition for stay is stayed for an additional 15 days.

CONFORMANCE : Other than those measures necessary to satisfy the "General Conditions" and "Special Conditions", the project must conform to the information received by the Department of Natural Resources on: January 5, 2006, January 31, 2006 and February 22, 2006. Any deviation from the information must receive the prior written approval of the Department.

Number	Special Condition
(1)	minimize the movement of resuspended bottom sediment from the immediate project area
(2)	if sediment is removed hydraulically and transported to an upland dewatering basin, adequate slurry detention time and sediment removal measures must be used to ensure that the water returned to the lake is not carrying excessive sediment back to the lake
(3)	revegetate all bare and disturbed areas landward of the shoreline with a mixture of grasses (excluding all varieties of tall fescue) and legumes as soon as possible upon completion
(4)	all excavated material must be properly spread landward of the shoreline on the property described on page 1 under "DESCRIPTION" or completely removed from the project site such that erosion and off-site sedimentation of the material is prevented
(5)	dredging may only occur during the last half of the calendar year
(6)	a silt screen must be maintained throughout the dredging process to prevent off-site sediment transport

STATE OF INDIANA
DEPARTMENT OF NATURAL RESOURCES

GENERAL CONDITIONS

APPLICATION #: PL- 20335

- (1) If any archaeological artifacts or human remains are uncovered during construction, federal law and regulations (16 USC 470, et seq.; 36 CFR 800.11, et al) and State Law (IC 14-21-1) require that work must stop and that the discovery must be reported to the Division of Historic Preservation and Archaeology within 2 business days.

Division of Historic Preservation and Archaeology
Room W274
402 West Washington Street
Indianapolis, IN 46204

Telephone: (317) 232-1646, FAX: (317) 232-8036

- (2) This permit must be posted and maintained at the project site until the project is completed.
- (3) This permit does not relieve the permittee of the responsibility for obtaining additional permits, approvals, easements, etc. as required by other federal, state, or local regulatory agencies. These agencies include, but are not limited to:

<u>Agency</u>	<u>Telephone Number</u>
*US Army Corps of Engineers, Louisville District	(502) 315-6733
Barbee Lakes Conservancy District	
Kosciusko County Drainage Board	(574) 372-2367
Indiana Department of Environmental Management	(317) 233-8488 or (800) 451-6027
Local city or county planning or zoning commission	

- (4) This permit must not be construed as a waiver of any local ordinance or other state or federal law.
- (5) This permit does not relieve the permittee of any liability for the effects which the project may have upon the safety of the life or property of others.
- (6) This permit may be revoked by the Department of Natural Resources for violation of any condition, limitation or applicable statute or rule.
- (7) This permit shall not be assignable or transferable without the prior written approval of the Department of Natural Resources. To initiate a transfer contact:

Mr. Michael W. Neyer, PE, Director
Division of Water
Room W264
402 West Washington Street
Indianapolis, IN 46204

Telephone: (317) 232-4160, Toll Free: (877) 928-3755
FAX: (317) 233-4579

- (8) The Department of Natural Resources shall have the right to enter upon the site of the permitted activity for the purpose of inspecting the authorized work.
- (9) The receipt and acceptance of this permit by the applicant or authorized agent shall be considered as acceptance of the conditions and limitations stated on the pages entitled "General Conditions" and "Special Conditions".

STATE OF INDIANA
DEPARTMENT OF NATURAL RESOURCES

MAILED APR 04 2006

DENIAL NOTICE
PUBLIC FRESHWATER LAKE

APPLICATION # : PL-20328

LAKE : Banning Lake

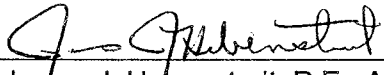
APPLICANT : Richard Long
15 EMS B39W Lane
Leesburg, IN 46538-9460

AGENT : JFNew
John Richardson
708 Roosevelt Road
Walkerton, IN 46574-1220

AUTHORITY : IC 14-26-2 with 312 IAC 11

DESCRIPTION : A 60' wide strip along the north shore of Banning Lake will undergo hydraulic dredging of the lake bottom along 200' of the shoreline to improve access to the lake. Approximately 3' of accumulated muck and debris will be removed from the lake bed by dredging to a depth of 6' below the legal lake level at a distance of 60' from the shoreline and uniformly sloping back to the legal lake level at the shoreline. The excavated material will be pumped to an upland containment area for dewatering and disposal. Water from the containment area will be allowed to return to the lake through filters. Details of the project are contained in information received electronically at the Division of Water on December 30, 2005 and in plans and information received at the Division of Water on January 30, 2006.

LOCATION : 15 EMS B39 Lane near North Webster, Tippecanoe Township, Kosciusko County
NE $\frac{1}{4}$, SE $\frac{1}{4}$, NW $\frac{1}{4}$, Section 20, T 33N, R 7E, North Webster Quadrangle
UTM Coordinates: Downstream 4572891 North, 605465 East

DENIED BY : 
James J. Hebenstreit, P.E., Assistant Director
Division of Water

DENIED ON : April 03, 2006

Attachments: Notice Of Right To Administrative Review
Denial Reasons
Service List

STATE OF INDIANA
DEPARTMENT OF NATURAL RESOURCES

NOTICE OF RIGHT TO ADMINISTRATIVE REVIEW

APPLICATION #: PL- 20328

This signed document constitutes the denial of your application by the Department of Natural Resources. The denial may be appealed by applying for administrative review. The review will be governed by the Administrative Orders and Procedures Act, IC 4-21.5, and the Department's rules pertaining to adjudicative proceedings, 312 IAC 3-1.

In order to obtain a review, a written petition containing the specific reasons for the appeal must be filed with the Division of Hearings within 18 days of the mailing date of this notice. The petition should be addressed to:

Mr. Stephen L. Lucas, Director
Division of Hearings
Room W272
402 West Washington Street
Indianapolis, Indiana 46204

If an appeal is filed, the final agency determination will be made by the Natural Resources Commission following a legal proceeding conducted before an Administrative Law Judge. The Department of Natural Resources will be represented by legal counsel.

STATE OF INDIANA
DEPARTMENT OF NATURAL RESOURCES

DENIAL REASONS

APPLICATION #: PL- 20328

This permit application was denied on April 3, 2006 for the reason(s) listed below. There shall be no work at the project site without the prior written approval of the Department of Natural Resources.

Number Denial Reason

- (1) failure to provide a complete application and the information necessary to adequately review the project as requested in the Incomplete Application Notice dated January 30, 2006, copy enclosed
- (2) direct and cumulative impacts on the natural resources and natural scenic beauty of the lake; this project is located in a Significant Wetland as defined in 312 IAC 11-2-24; based on the 2005 Barbee Lakes Sediment Removal Plan (draft), as prepared by JFNew & Associates, the sediments at this site are of historic origin and are now dominated by spatterdock, an important emergent plant; the proposed site is historically shallow, composed mainly of in-lake natural accumulation of organic matter and comprised of muck and marl; shallow, nearshore areas over muck soils that support emergent plants provide habitat for a variety of fish and wildlife species for nesting, brood production, resting, feeding and protection; loss of these areas reduces the amount and diversity of available habitat and alters the natural appearance and character of the lake

STATE OF INDIANA
DEPARTMENT OF NATURAL RESOURCES

SERVICE LIST

APPLICATION #: PL- 20328

Richard Long
15 EMS B39W Lane
Leesburg, IN 46538-9460

JFNew
John Richardson
708 Roosevelt Road
Walkerton, IN 46574-1220

*US Army Corps of Engineers, Louisville District
Jim Townsend
Regulatory Functions Branch
PO Box 59
Louisville, KY 40201-0059

Barbee Lakes Conservancy District
PO Box 407
North Webster, IN 46555-0407

Kosciusko County Drainage Board
County Surveyor
Courthouse, Room 103
100 West Center Street
Warsaw, IN 46580-2872

*Indiana Department of Natural Resources
North Region Headquarters Dist 1
Division of Law Enforcement
1124 North Mexico Road
Peru, IN 46970

Kosciusko County Soil and Water Conservation
District
217 Bell Drive
Warsaw, IN 46580-9362

Staff Assignment:

Administrative : Stuart L. Peckham
Technical : Stuart L. Peckham
Environmental : Christie L. Stanifer

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, LOUISVILLE
CORPS OF ENGINEERS
INDIANAPOLIS FIELD OFFICE
9799 BILLINGS ROAD
INDIANAPOLIS, INDIANA 46216-1055
FAX: (317) 532-4228
<http://www.lrl.usace.army.mil>

January 27, 2006

Operations Division
Regulatory Branch (North)
ID No. 200600103-djd

Mr. Richard Long
Barbee Lakes Property Owners Association
15 EMS B39W Lane
Leesburg, Indiana 46538

Dear Mr. Long:

This is in regard to your application requesting authorization to dredge Little Barbee and Big Barbee Lakes using the hydraulic pipeline dredging method with upland placement and dewatering of the dredged lake sediments. Approximately 12,000 cubic yards of material will be removed from four locations. Dredged sediments will be pumped to an upland sediment basin for subsequent dewatering and the decant water will be drained into Putney Ditch, a tributary of the lakes. The containment area is located in the southwest quarter of Section 28, Township 33 North, Range 7 East in Barbee, Kosciusko County, Indiana. We have reviewed the submitted data to determine whether a Department of the Army (DA) permit will be required under the provisions of Section 404 of the Clean Water Act.

Based upon the submitted data, your proposal is authorized under the provisions of Nationwide General Permit 33 CFR 330 (16), Return Water from Upland Contained Disposal Areas, as published in the Federal Register, January 15, 2002. We do require compliance with the enclosed Nationwide Permit General Conditions, the terms of the Nationwide permit, and the Indiana Department of Environmental Management (IDEM) Section 401 Water Quality Certification (WQC) dated July 6, 2004 (copies enclosed).

You may proceed with the work without further contact or verification from us. The enclosed Compliance Certification should be signed and returned when the project is completed. This decision is valid until March 18, 2007. If your project is not completed before this date, or if your plans change, you should contact us for another determination.

A copy of this letter is being sent to IDEM and your agent. If you have any questions, please contact me by writing to the above address, ATTN: CELRL-OP-FN, or by calling (317) 532-4197. Any correspondence on this matter should refer to our ID No. 200600103-djd.

Sincerely,

ORIGINAL SIGNED

Deborah Duda Snyder
Regulatory Specialist
Regulatory Branch

Enclosure

Copy Furnished:

Mr. John Richardson
J.F. New and Associates, Inc.

Ms. Liz Elverson
Indiana Department of Environmental Management

No. 16, Return Water from
Upland Contained Disposal Areas
(NWP Final Notice, 67 FR 2081)

Return water from an upland, contained dredged material disposal area. The dredging itself may require a section 404 permit (33 CFR 323.2(d), but will require a Section 10 permit if located in navigable waters of the United States. The return water from a contained disposal area is administratively defined as a discharge of dredged material by 33 CFR 323.2(d) even though the disposal itself occurs on the upland and thus does not require a Section 404 permit. This NWP satisfies the technical requirement for a Section 404 permit for the return water where the quality of the return water is controlled by the state through the Section 401 certification procedures. (Section 404)



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

February 3, 2006

Mr. Richard Long
Barbee Lakes Property Owners Assn.
15 EMS B39 West Lane
Leesburg, IN 46538

Dear Mr. Long:

Re: No 401 Water Quality Certification Needed
Project: Hydraulic Dredging of Four (4)
Locations at Little Barbee Lake
IDEM No.: 2006-55-43-EME-A
County: Kosciusko

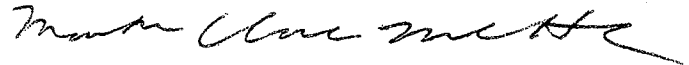
The Indiana Department of Environmental Management (IDEM) has reviewed your application dated October 19, 2005, and received January 26, 2006. According to the application, you propose to hydraulically dredge approximately 12,000 cubic yards of sediment from four (4) areas of Little Barbee Lake to improve recreation and reduce the suspension of phosphorous into the water column. The site is located in Section 28, Township 33 North, Range 7 East, near North Webster, Kosciusko County. Because the proposed activity does not involve a discharge of fill material to or work below the Ordinary High Water Mark of waters of the State of Indiana, it does not require a Section 401 Water Quality Certification.

This correspondence does not relieve the recipient of the responsibility of obtaining any other permits or authorizations that may be required for this project or related activities from IDEM or any other agency or person. You may wish to contact the Indiana Department of Natural Resources at 317-232-4160 (toll free at 877-928-3755) concerning the possible requirement of natural freshwater lake or floodway permits. In addition, you may wish to contact IDEM's Stormwater Permits Section at 317-233-1864 concerning the possible need for a 327 IAC 15-5 (Rule 5) permit if you plan to disturb greater than one (1) acre of soil during construction.

The discharge of return water from upland contained disposal areas is regulated by IDEM's National Pollution and Discharge Elimination System (NPDES) Municipal Permitting Program. You may wish to contact the IDEM NPDES Program at 317-232-8760 regarding the possible need for additional permits or authorizations.

If you have any questions about this letter, please contact Ms. Liz Elverson, Project Manager, of my staff at 317-233-2482, or you may contact the Office of Water Quality through the IDEM Environmental Helpline (1-800-451-6027).

Sincerely,



Martha Clark Mettler, Chief
Watershed Planning Branch
Office of Water Quality

cc: Tim Smith, USACE-Indianapolis Field Office
John Richardson, JF New-Walkerton

APPENDIX F:
EXAMPLE BID INVITATION

INSTRUCTIONS TO BIDDERS
BARBEE LAKES SEDIMENT REMOVAL PROJECT
KOSCIUSKO COUNTY, INDIANA

WORK DESCRIPTION

The work under this contract covers both the construction and demolition of _____ sediment basin(s) and the hydraulic dredging of _____ locations within the Barbee Lakes. The hydraulic dredging and the sediment basin construction may be performed under one contract or as two separate contracts. Unless indicated otherwise by the contractor, the bids for the basin construction will be considered separately from the bids for the hydraulic dredging. The general project location is shown on the attached Figure 1. Locations of the sediment basin and the dredging areas are shown on Figure 2. Details of the sediment basin construction and required turbidity curtain are shown on the attached Figures 3 and 4. All work areas are located in the vicinity of North Webster, Kosciusko County, Indiana.

PLANS and SPECIFICATIONS: The plans and specifications to be used in the construction of this project are contained within this bid document. Contractors are responsible for visiting the site and determining material estimates for use in developing a firm bid price. The OWNER is not responsible for estimates of dredge spoil volumes or any quantities or measurements provided within these bid documents or other documents produced in the planning of this project.

PROPOSALS: Bid proposals shall be submitted on the forms provided herein.

INTERPRETATION OF THE PLANS AND SPECIFICATIONS: If any person contemplating submitting a bid for this work is in doubt as to the true meaning of any part of the plans, specifications or other proposed contract documents, he or she may submit a written request to the OWNER for clarification. The OWNER shall make any such clarifications in writing and shall provide such clarifications to all known bidders. The OWNER will not be responsible for any other explanations or interpretations of the contract documents.

ADDENDA: Any addenda issued during the time of bidding, or forming a part of the contract documents given to the bidder for preparation of his or her proposal, shall be covered in the proposal and shall be made a part of the proposal. Receipt of each addendum shall be acknowledged and attached to the proposal.

AWARD OF THE CONTRACT: After a satisfactory bid is received, the OWNER shall notify the bidders of a selection on or before _____ (Date) and award a contract to the lowest responsible and responsive bidder(s) on or before _____ (Date).

INSURANCE

Contractor(s) shall be required to provide a certificate of insurance to the OWNER specifically naming affected property owners of the dewatering basin construction and access sites and the OWNER as additionally insured. The amount of the insurance shall not be for less than \$1,000,000 (\$1 million) per occurrence.

Bid Documents and Specifications: Section 3

**BIDDERS LUMP SUM PROPOSAL
BARBEE LAKES SEDIMENT REMOVAL PROJECT
KOSCIUSKO COUNTY, INDIANA**

Instructions to Bidders:

All Bidders shall utilize this form. Except as otherwise specifically provided, all parts shall be fully and accurately filled in and completed.

Project: **BARBEE LAKES DREDGING PROJECT – KOSCIUSKO COUNTY, INDIANA**

Date: _____

To: _____

BIDDER INFORMATION

(Print or Type)

1.1 Bidder Name: _____

1.2 Bidders Address: _____

City: _____ State: _____ Zip: _____

Phone: (_____) _____ Fax: _____

1.3 Bidder is a/an [mark one]:

_____ Individual _____ Partnership _____ Indiana Corporation
_____ Foreign (Out of State) Corporation
_____ Joint Venture _____ Other: _____

1.4 Bidders Federal ID No. _____

**BARBEE LAKES DREDGING PROJECT
KOSCIUSKO COUNTY, INDIANA**

2.1 The undersigned Bidder proposes to furnish all necessary labor, equipment, tools, apparatus, materials, equipment, service and other necessary supplies, and to perform and fulfill all obligations incident thereto in strict accordance with and within the time(s) provided by the terms and conditions of the Contract Documents for the work described on page 3 of this bid document, including any and all addenda thereto, for the total sum of: _____ Dollars (\$ _____).

Signed the _____ day of _____, 2005.

Bidder/Contractor - Signature

Name - Printed

PART 3
BID WORKSHEET
BARBEE LAKES DREDGING PROJECT
KOSCIUSKO COUNTY, INDIANA

Item Number	Description	Quantity	Unit Price*	Amount
1	This work will consist of preparing the identified dewatering basin for receipt of the hydraulic dredge spoils (including tree removal), temporary seeding, and after the dredging is completed - leveling of the basin, drainage tile work, and fence replacement as per the drawings and specifications provided.			
2	This work will consist of equipment mobilization and demobilization for performing the sediment removal projects identified below. The task includes providing and installing turbidity curtains lakeward of any potential discharge.			
3	This work will consist of all labor, machinery and expenses associated with dredging of 0.75 acres at the outlet of Putney Ditch in Little Barbee Lake to the original lake bottom or to average depth of 6 feet below legal lake level and sloping uniformly to the shoreline.			
5	This work will consist of all labor, machinery and expenses associated with dredging of 0.4 acres of Little Barbee Lake (northeast corner) to the original lake bottom or to average depth of 6 feet below legal lake level and sloping uniformly to the shoreline.			
6	This work will consist of all labor, machinery and expenses associated with dredging of 0.7 acres at the outlet of the channel into Little Barbee Lake to the original lake bottom or to average depth of 4 feet below legal lake level and sloping uniformly to the shoreline.			

Bid only on those items upon which you are able to perform. It is not necessary to bid on both the hydraulic dredging and basin construction. The bids for each item will be considered separately (except number 2 which is associated with 3 through 6) if it is advantageous to the OWNER.

CONTRACT
BARBEE LAKESDREDGING PROJECT
KOSCIUSKO COUNTY, INDIANA

THIS AGREEMENT, made and entered into by and between _____,
party of the first part, hereinafter called the "Owner and _____
_____, as party of the second part, hereinafter called the
"Contractor".

WITNESSTH

That for and in consideration of the mutual covenants herewith enumerated, the Owner does hereby hire and employ the Contractor to furnish all materials, equipment and labor necessary to fully construct the work designated on Bid Worksheet 3 (attached) according to the plans, standard specifications, supplemental specifications, profiles and drawings therefrom, and any supplemental or special provisions set out or referred to in the Contractor's attached proposal, and hereby agrees to pay the Contractor therefor, for the actual amount of work done and materials in place, as measured and approved by the Engineer or duly authorized representative, for the lump sum price as stated in the Contractor's attached Lump Sum Bid Proposal dated _____, which sum the Contractor agrees to accept as full payment for such construction work; and

IT IS FUTHER MUTALLY AGREED:

That the accompanying proposal together with the plans, standard and supplemental specifications and special provisions herein designated and referred to, are hereby made a part of the Contract the same as if herein fully set forth; and

That the Contract amount may be paid to the Contractor upon progress estimates of completed and approved work prepared by OWNER, in an amount not exceed Eighty Five Percent (85%) of such estimates, fifteen percent (15%) shall be withheld by the _____ for a period sixty (60) days after the completion of the work, for the purpose of securing payment of all properly prepared and certified statements of indebtedness which shall have been filed against the Contractor for labor performed and materials furnished or other services rendered in carrying forward, performing and the completing of this contract, and such estimates shall also be subject to the provisions of the Standard Specifications on file in the office of the Owner and made a part hereof; and that before any estimate is paid to the Contractor, he shall furnish receipts for all debts incurred in the prosecution of such work or satisfactory evidence and assurance that the same have been paid; or shall consent to the withholding by Owner from his final estimate of sums sufficient to cover such indebtedness, which sums may be held until such indebtedness is settled, or until conclusion of any litigation in the relation thereto filed within such period; and that no monies due on this final estimate shall be paid until the work is fully completed and accepted as provided in the Specifications.

PART 4
CONTRACT DOCUMENTS AND ADDENDA

- 4.1 The bidder agrees to be bound by the terms and provisions of all Contract Documents and incorporates such Contract Documents herein by reference.
- 4.2 The Bidder acknowledges receipt of the following addenda:

<u>Addendum Number</u>	<u>Date</u>
_____	_____
_____	_____

IN TESTIMONY WHEREOF, the Bidder has hereunto set his hand this _____ day of _____
_____, 2005.

Contractor

By

IN TESTIMONY WHEREOF, _____, (OWNER)
does hereby accept the foregoing agreement and has herewith set their hands this _____
_____ day of _____, 2005.

President of the Board,
OWNER

By