

Illinois Department of Natural Resources
BLANDINGS TURTLE CONSERVATION PLAN

(Application for an Incidental Take Authorization)
Per 520 ILCS 10/5.5 and 17 Ill. Adm. Code 1080

It is understood that a 150-day minimum time frame is typically required for public review, biological and legal analysis, and permitting

PROJECT APPLICANT: Fox Waterway Agency (FWA)
PROJECT NAME: Dredging and Waterway Maintenance of the Fox River Chain of Lakes
COUNTY: Lake, McHenry
AREA OF IMPACT: Selected sites located throughout the Fox River from the Algonquin Dam to the Wisconsin State line, the interconnected lakes and channels north of the Stratton Lock and Dam, and existing sediment storage and dewatering facilities at Cooper Farms and Ackerman Island.

The incidental taking of endangered and threatened species shall be authorized by the Illinois Department of Natural Resources (IDNR) only if an applicant submits a conservation plan to the IDNR Incidental Take Coordinator that meets the following criteria:

1. Provide a description of the impact likely to result from the proposed taking of the species that would be covered by the authorization, including but not limited to:

A) Identification of the area to be affected by the proposed action, include a legal description and a detailed description including street address, map(s), and GIS shapefile. Include an indication of ownership or control of affected property. Attach photos of the project area.

The Fox Waterway Agency is responsible for maintaining the Fox River Chain of Lakes under the authority granted to the Fox Waterway Agency via 615 ILCS 90 that includes approximately 30 miles of the Fox River from the Algonquin Dam to the Wisconsin State Line, approximately 40 miles of navigable channels and portions of the interconnected lakes within the Fox River Chain of Lakes (see attached maps below and digitized aerial maps in Appendix as Exhibit 2). All proposed action areas are within the “territory” of the Fox Waterway Agency as defined under 615 ILCS 90/4 The Chain of Lakes is a Public Waterway that is owned by the State of Illinois. Of the total 8,220-acre area, a total of 132 individual sites have been identified and prioritized for potential dredging over the next 5 years (see attached figures). These identified areas include an estimated 250 total acres. A GIS Shapefile is also provided that includes all potential dredging areas digitized from an aerial base map.

A specific listing of sites will be identified each year for targeted completion prior to the dredging season that typically starts after May 15 to minimize fish spawning impacts. The annually updated list is revised and prioritized each winter in preparation for that season’s work efforts. The FWA proposes to provide a Draft List of targeted sites prior to May 1 of each year along with a GIS Shapefile that clearly delineates the approximate working limits

of the proposed sites to the IDNR EcoCAT and Incidental Take Coordinator. The list of sites that were identified for 2018 included the following eight (8) sites includes Haling's channels north & south) and accounted for an estimated total of 20.5 acres.

1. FWA Headquarters Entrance & Harbor (G-14 Mechanical Dredging – 2.2 acres)
2. Moraine Hills S. P. Canoe Launch on Fox R. (M-06 Mechanical Dredging – 0.05 ac)
3. Rushmore Road Channel Mouth on Fox Lake (G-22 Mechanical Dredging – 0.35 ac)
4. West Dunn's Lake Channel on Nippersink Lake (AN-18 Hydraulic Dredging – 7.6 ac)
5. Governor's Channel on Pistakee Lake (G-24 Mechanical Dredging - approx. 8.1 ac)
6. L-10 Channel on Grass Lake – AN-05 (approx. 1.7 acres)
7. Haling's Channel on Grass Lake – AN-17 (S. Channel 0.3 acres)
8. Haling's Channel on Grass Lake – AN-17 (N. Channel 0.5 acres)

However, as a result of numerous flood events that occurred throughout the Chain of Lakes during the 2018 construction season, several of the sites targeted for 2018 dredging were not completed (i.e. FWA Headquarters, Moraine Hills S.P. Canoe Launch, Haling's Channel). The Governor's Channel and the West Dunn's Lake areas were completed by the November seasonal shutdown and any uncompleted areas were to be completed in 2019 and 2020. The sites prioritized for 2019 and 2020 include:

FWA Headquarters Entrance & Harbor (G-14 Mechanical Dredging) Summer 2020

Boone Creek (M-11 Mechanical Dredging); Completed 2019

Viscaya Channel on Grass Lake (AN-29 Mechanical Dredging); Completed 2019

Moraine Hills S.P. Canoe Launch (M-06 Mechanical Dredging); Completed 2019

Ackerman Island Access Bridge and Pond Cleanout; Currently active

Sequiot Creek Inner Channel on Lake Marie (AN-25 Mechanical Dredging); Currently active

L-10 Channel on Grass Lake (AN-05 Hydraulic Dredging approx. 1.7 acres); Summer 2020

Dolphin Cove on Grass Lake (AN-21 Hydraulic Dredging; Summer 2020

Grass Lake Landing Channel (AN-19 Hydraulic Dredging; Completed in 2019

Grass Lake - Lake Marie Channel (AN-08 Hydraulic Dredging 8.2 acres; Summer 2020

Enlarged aerial photos of the prioritized list of sites through 2020 are inserted below.

In addition, the two existing sediment storage sites at Cooper's Farm and Ackerman Island are typically cleaned out during the winter to provide ongoing storage capacity for each season of dredging. The Cooper's Farm site will be actively pumped into during the 2020 season, while Ackerman Island is being cleaned out (winter 2019 / 2020) for use in 2021.

Fox Waterway Agency Jurisdiction Maps

Figure 1. Overall Fox Chain of Lakes Location Map

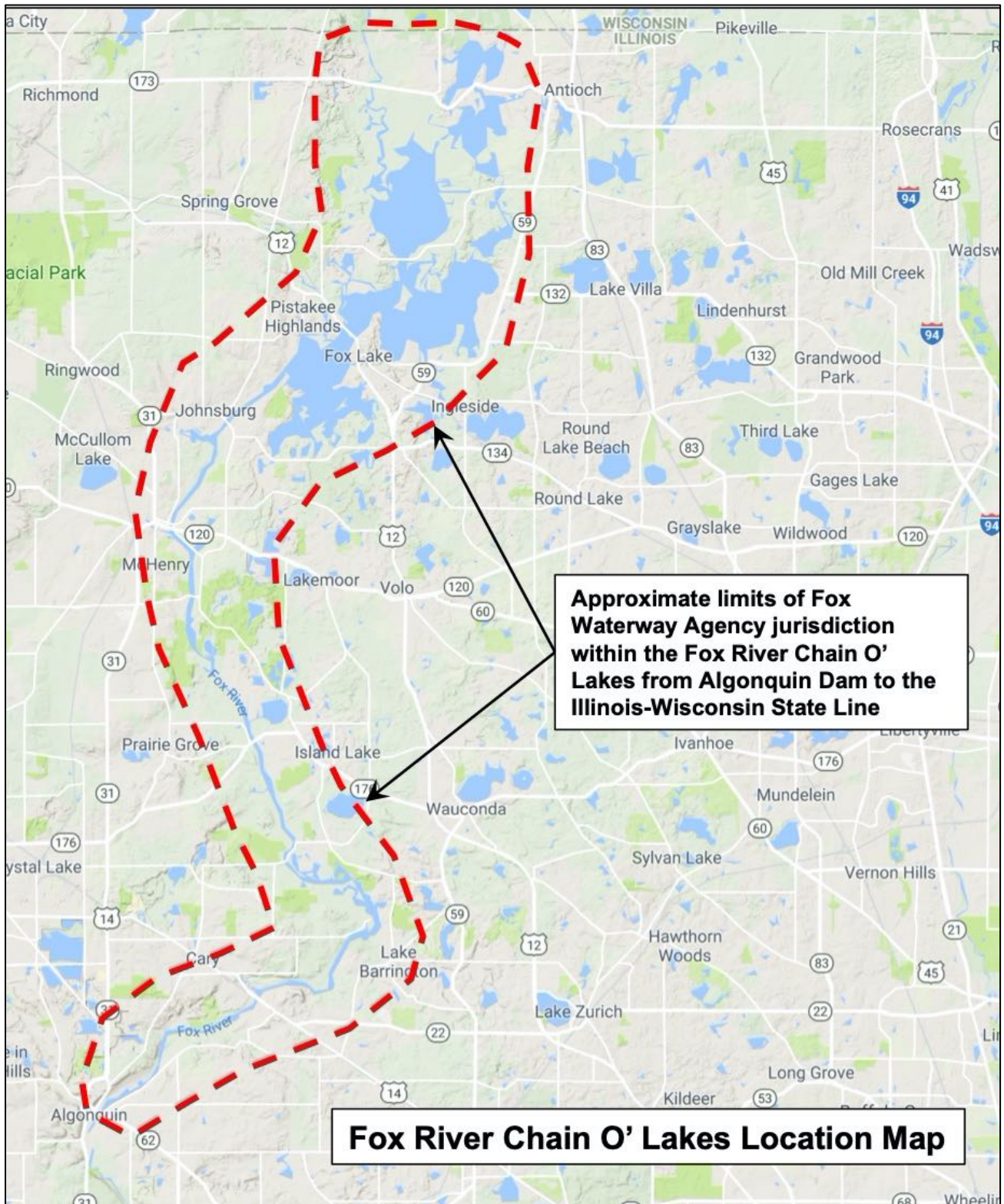


Figure 2. FWA Jurisdiction Map for Zone C – Chain O' Lakes

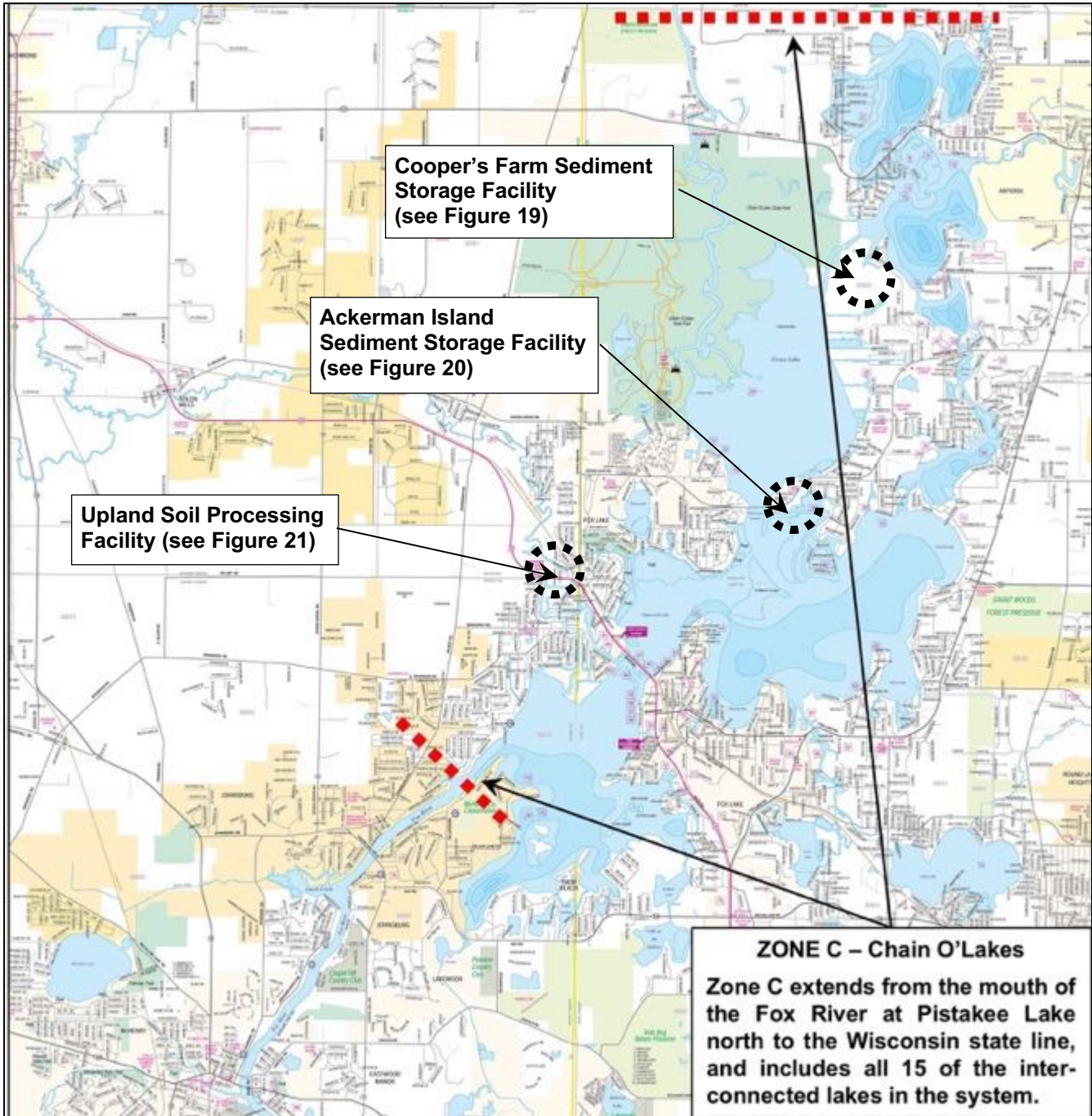


Figure 3. Potential 5 Year Dredging Sites - Northern Chain O' Lakes Area

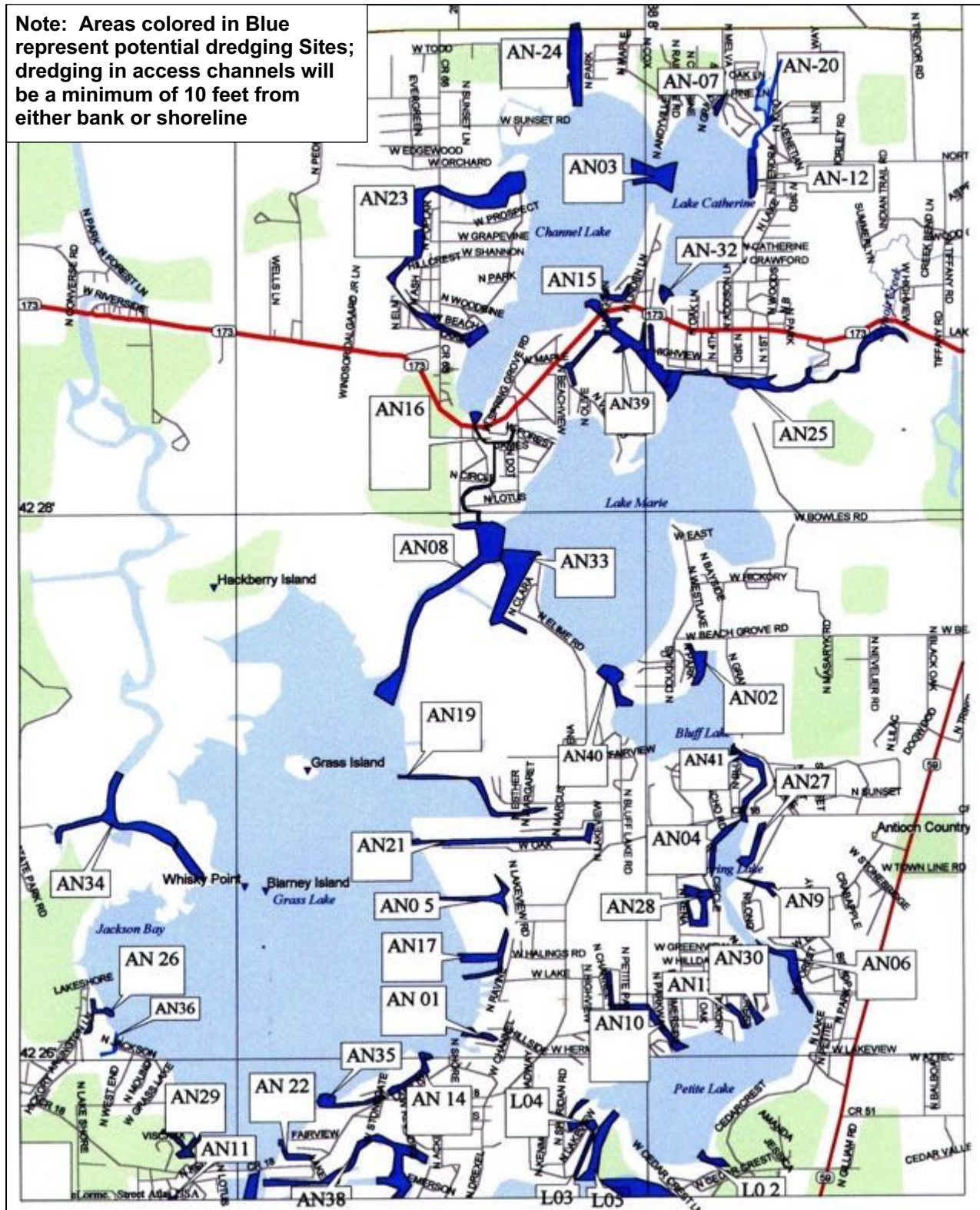


Figure 4. Potential 5 Year Dredging Sites - Central Chain O' Lakes Area

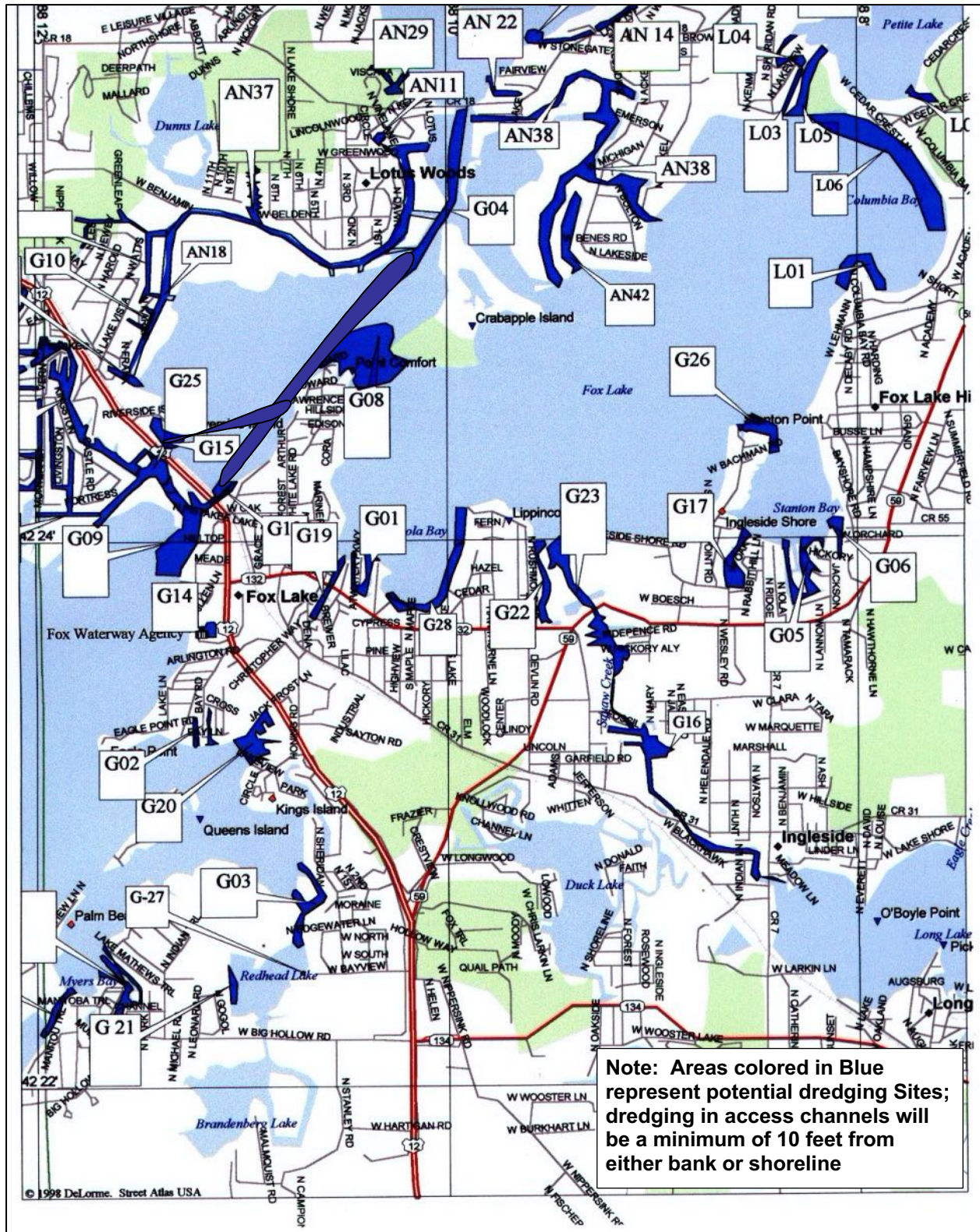


Figure 5. Potential 5 Year Dredging Sites - Southern Chain O' Lakes Area

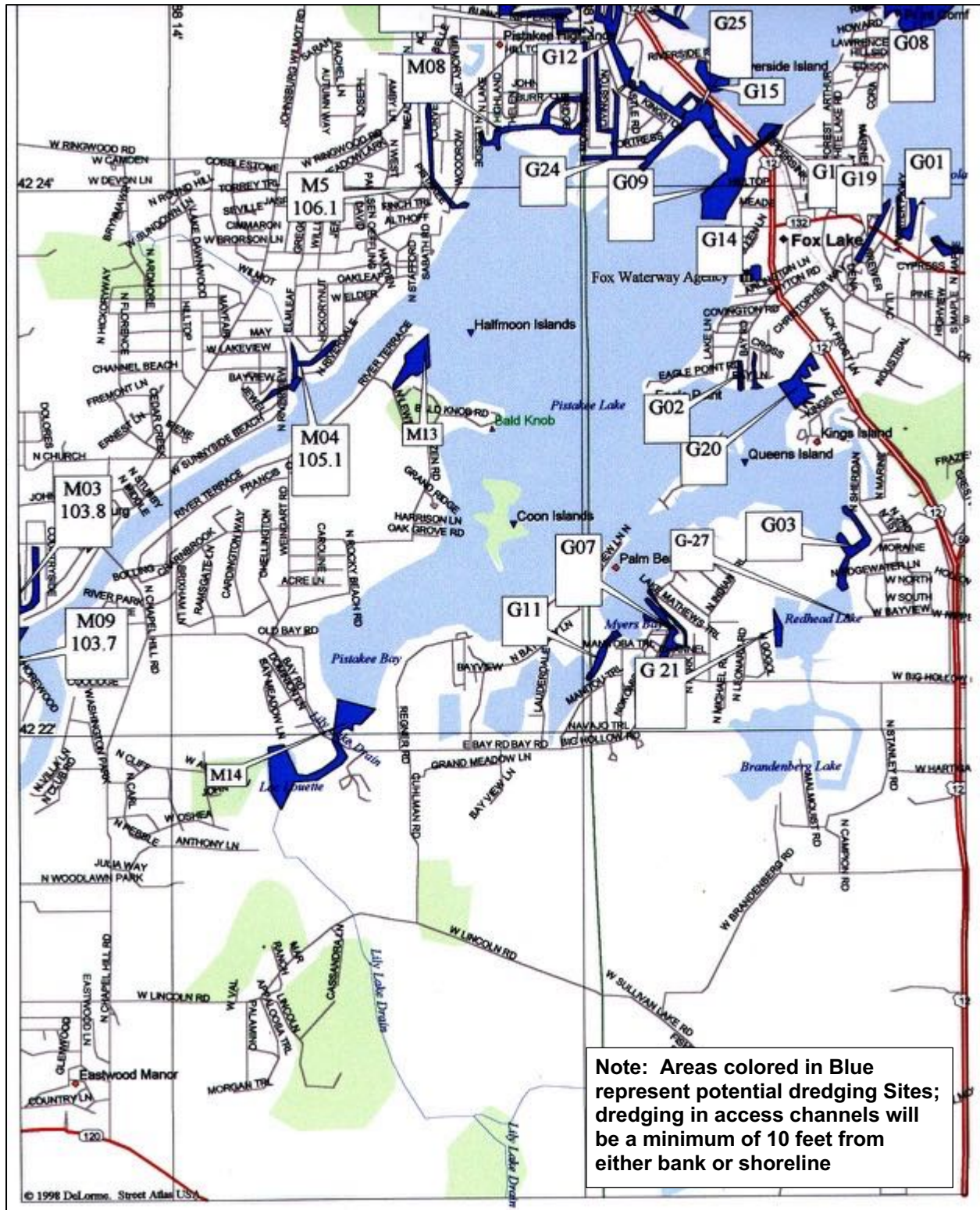


Figure 6. FWA Jurisdiction Map for Zone B – Upper Fox River

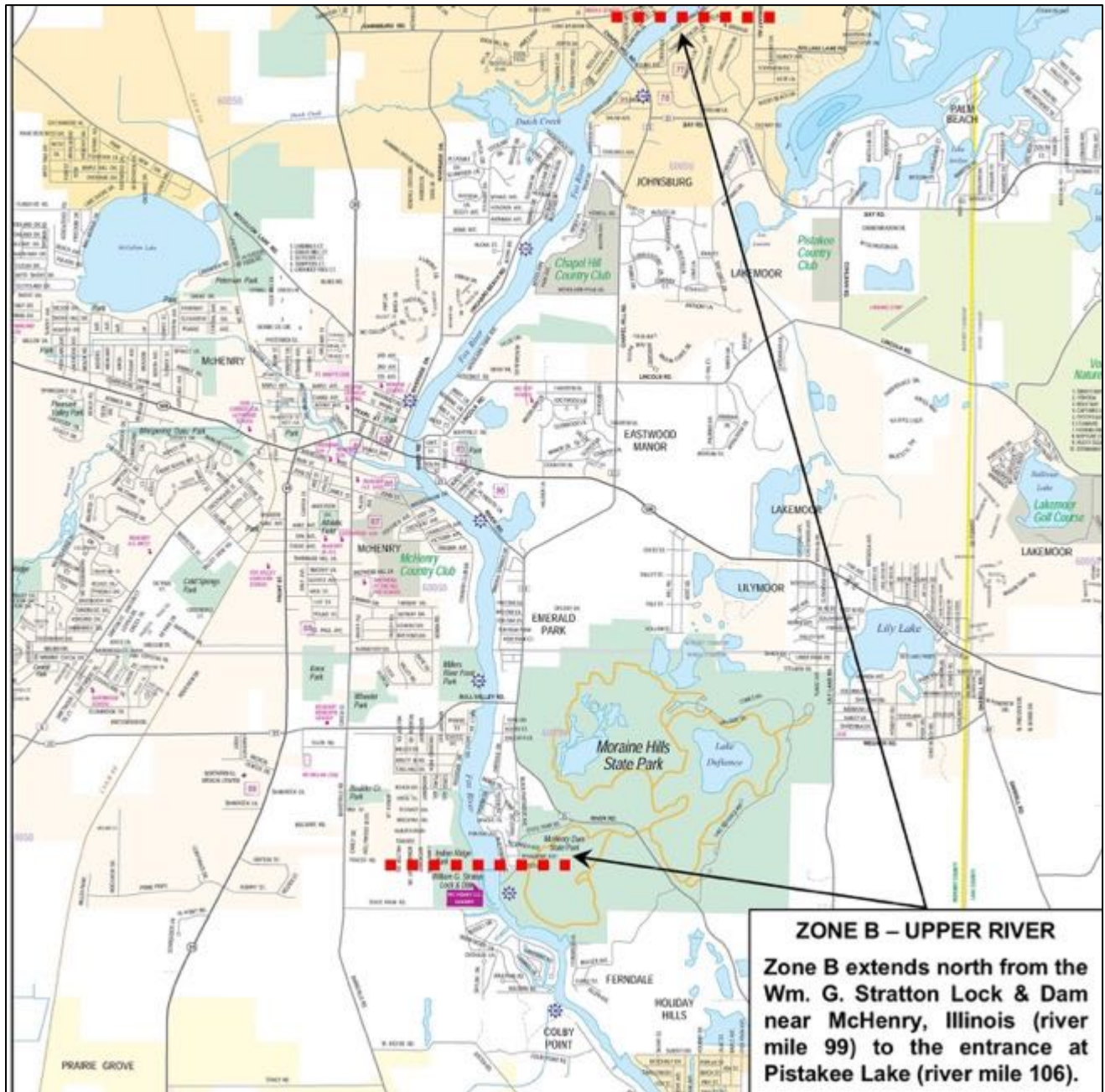


Figure 7. Potential 5 Year Dredging Sites – Dutch Creek to Stratton Lock & Dam

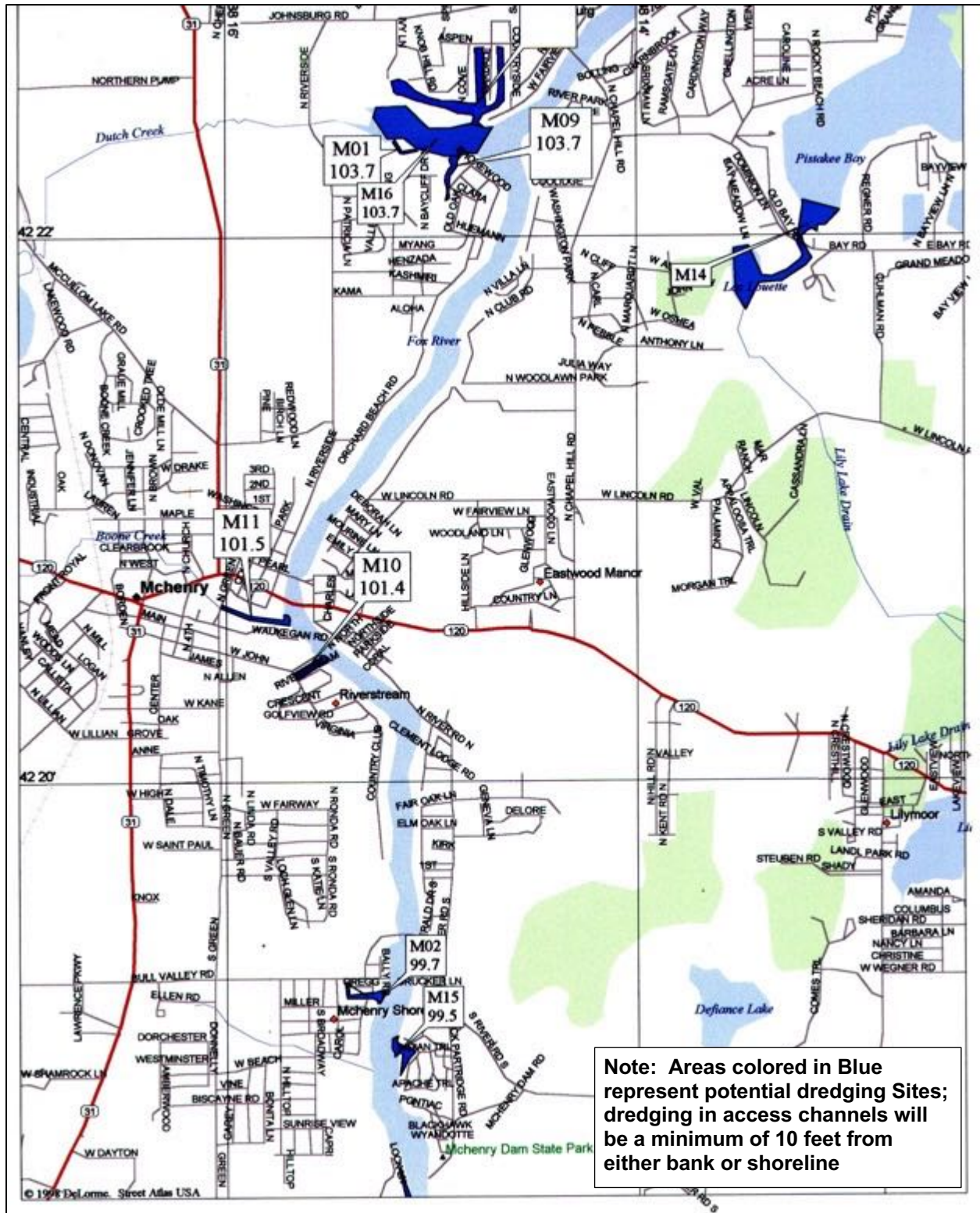


Figure 8. FWA Jurisdiction Map for Zone A – Lower Fox River

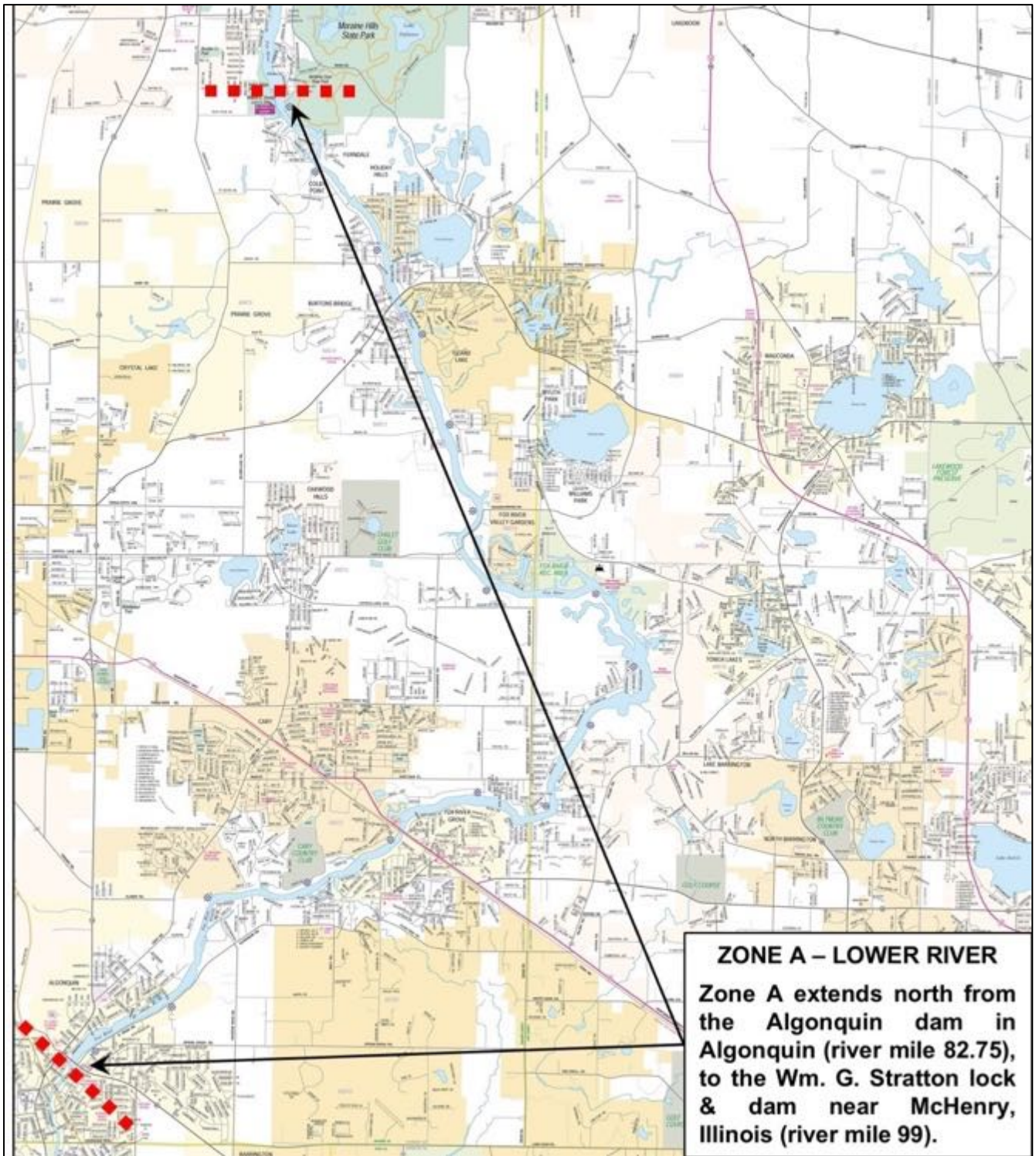


Figure 9. Potential 10 Year Dredging Sites – Stratton Lock & Dam to Fox River Valley Gardens

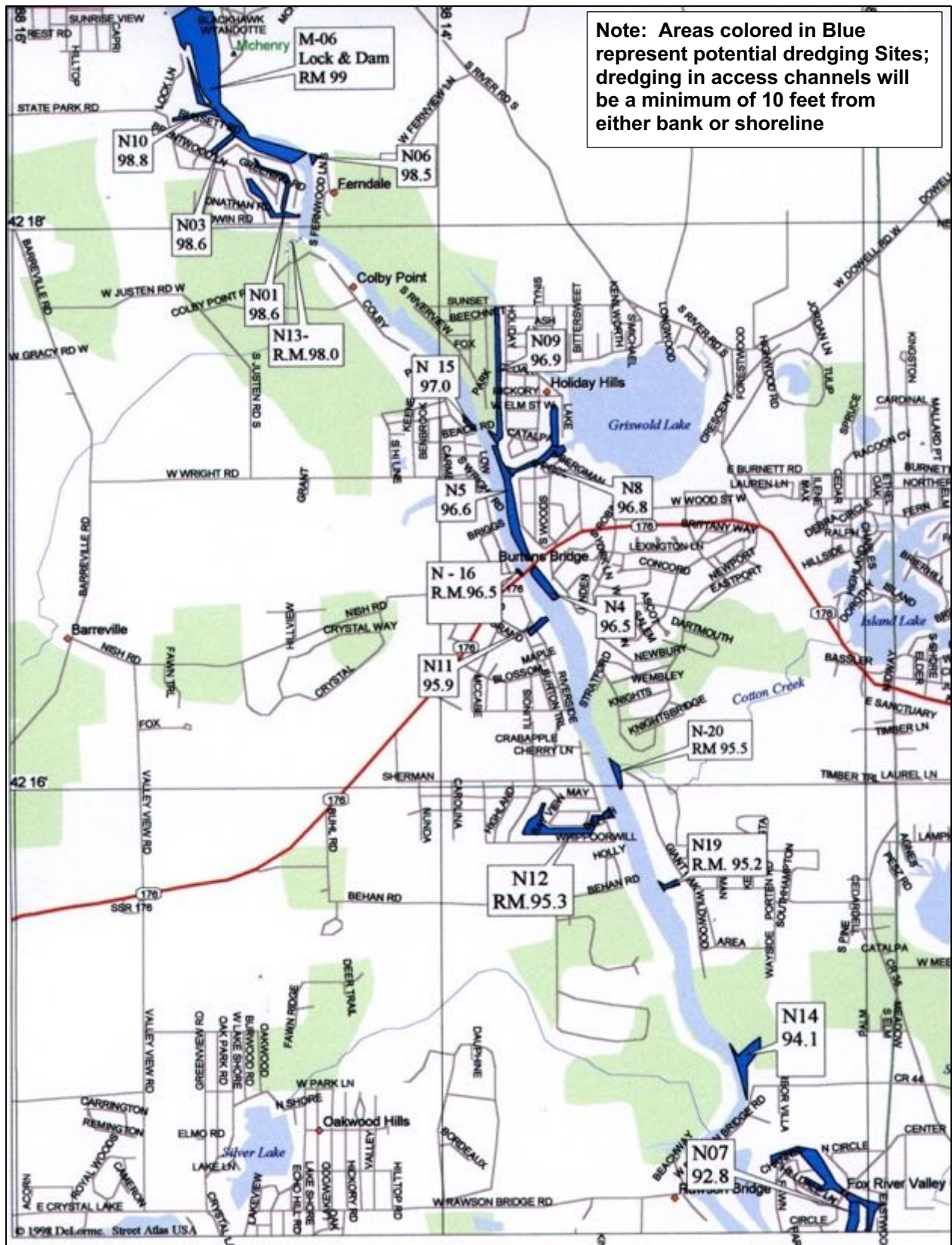


Figure 10. Potential 10 Year Dredging Sites – Fox River Valley Gardens to Cary

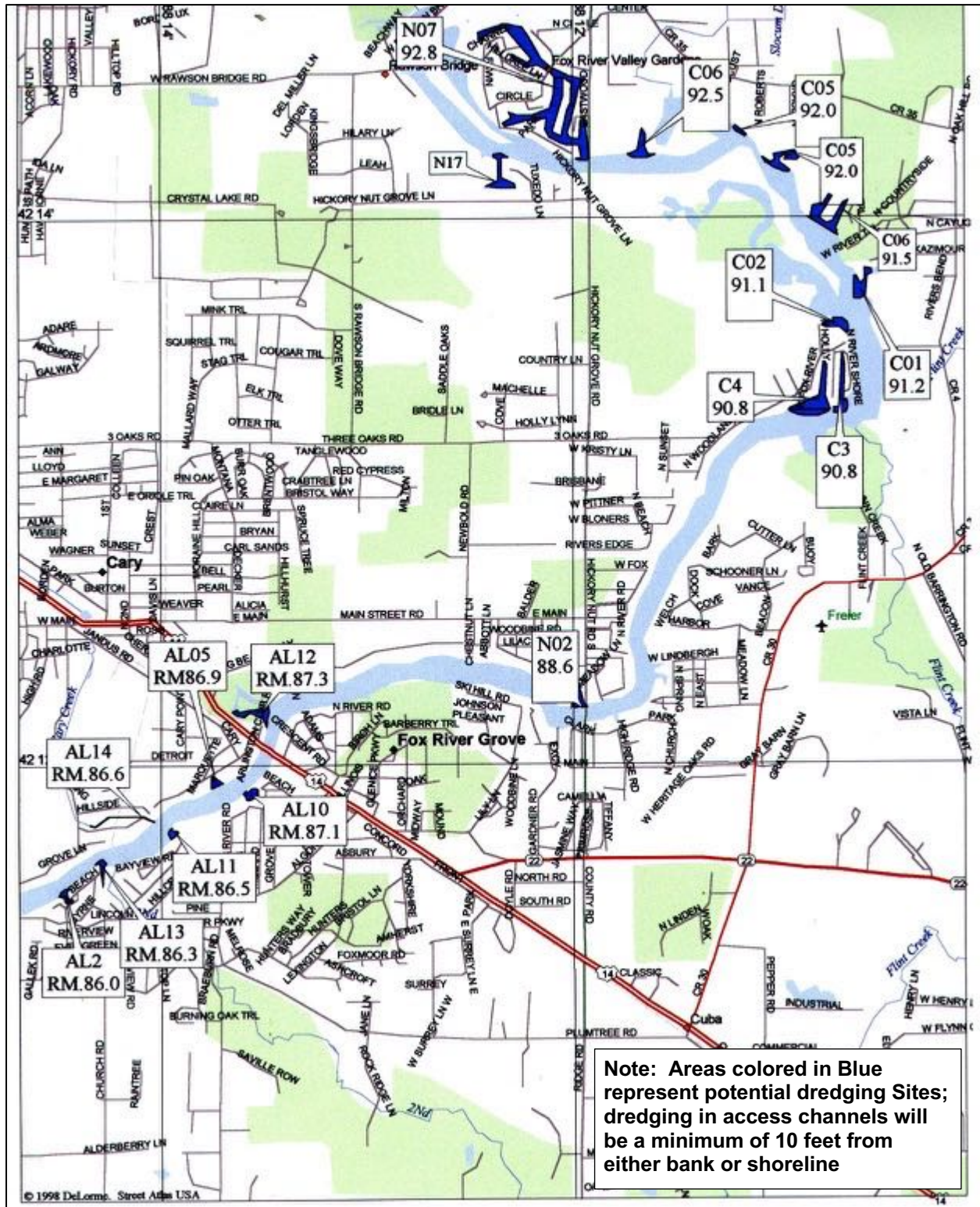
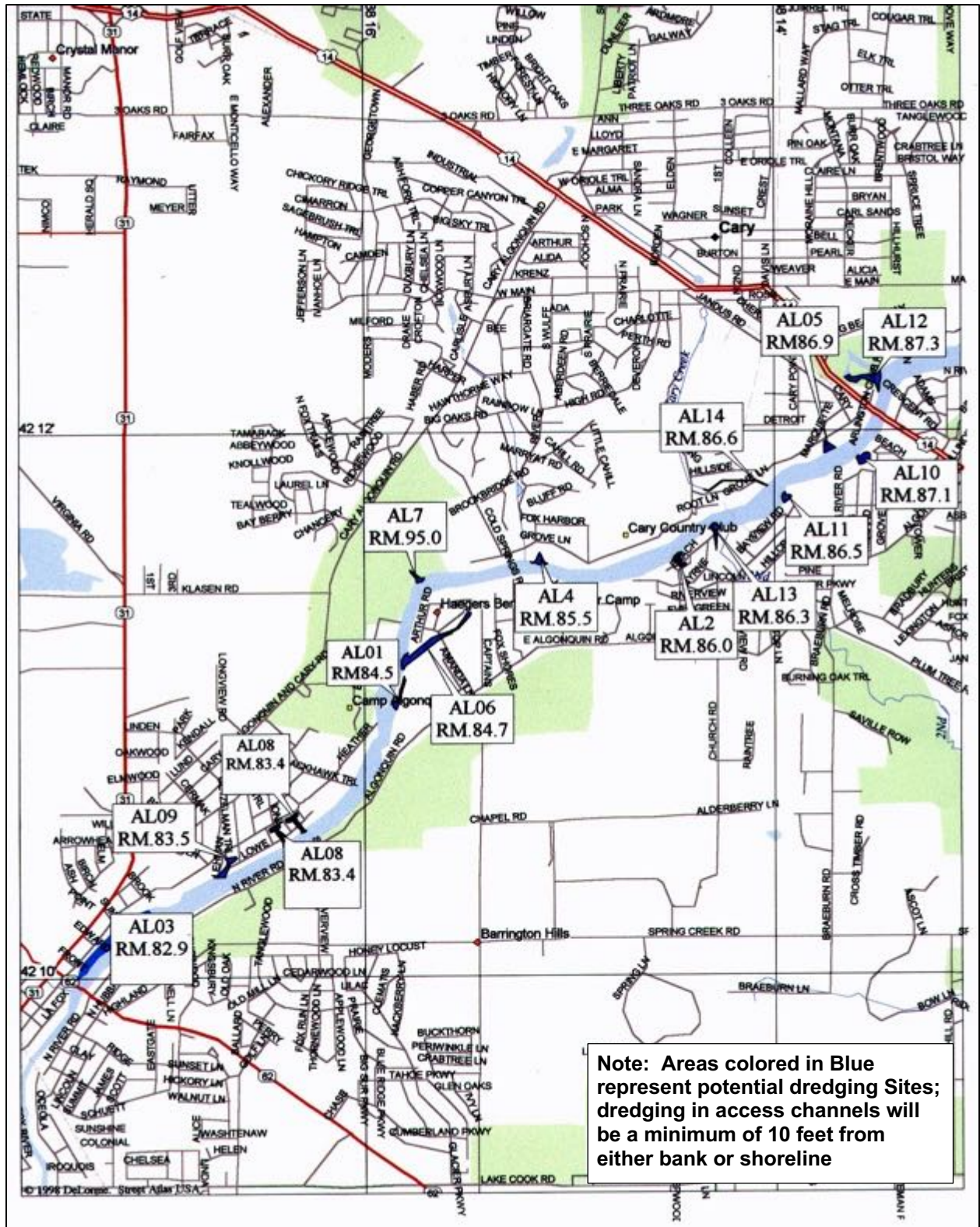


Figure 11. Potential 10 Year Dredging Sites – Fox River from Cary to Algonquin



List of Sites Prioritized for Dredging in 2018, 2019 and 2020

Figure 12. FWA Headquarters Entrance & Harbor (G-14 Mechanical Dredging - 2.2 acres)

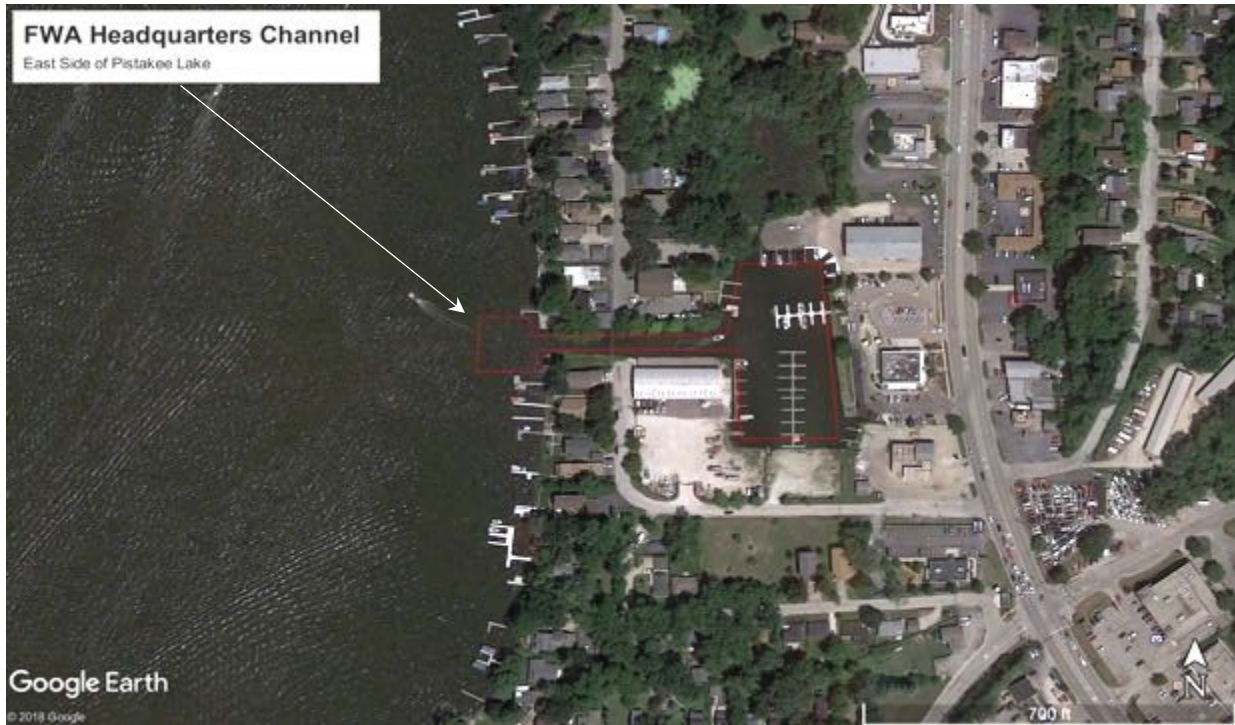


Figure 13. Moraine Hills S. P. Canoe Launch on Fox R. (M-06 Mechanical Dredging - 0.05 ac)



Figure 14. Rushmore Road Channel Mouth on Fox Lake (G-22 Mechanical Dredging - 0.35 ac)



Figure 15. West Dunn's Lake Channel on Nippersink Lake (AN-18 Hydraulic Dredging - 7.6 ac)



Figure 16. Governor's Channel on Pistakee Lake (G-24 Mechanical Dredging - approx. 8.1 ac)



Figure 17. L-10 Channel on Grass Lake – AN-05 (approx. 1.7 acres)



Figure 18. Haling's Channel on Grass Lake – AN-17 (S. Channel 0.3 acres, N. Channel 0.5 ac)



Figure 19. Sequit Creek Inner Channel - AN-25 (approx. 1.4 acres)

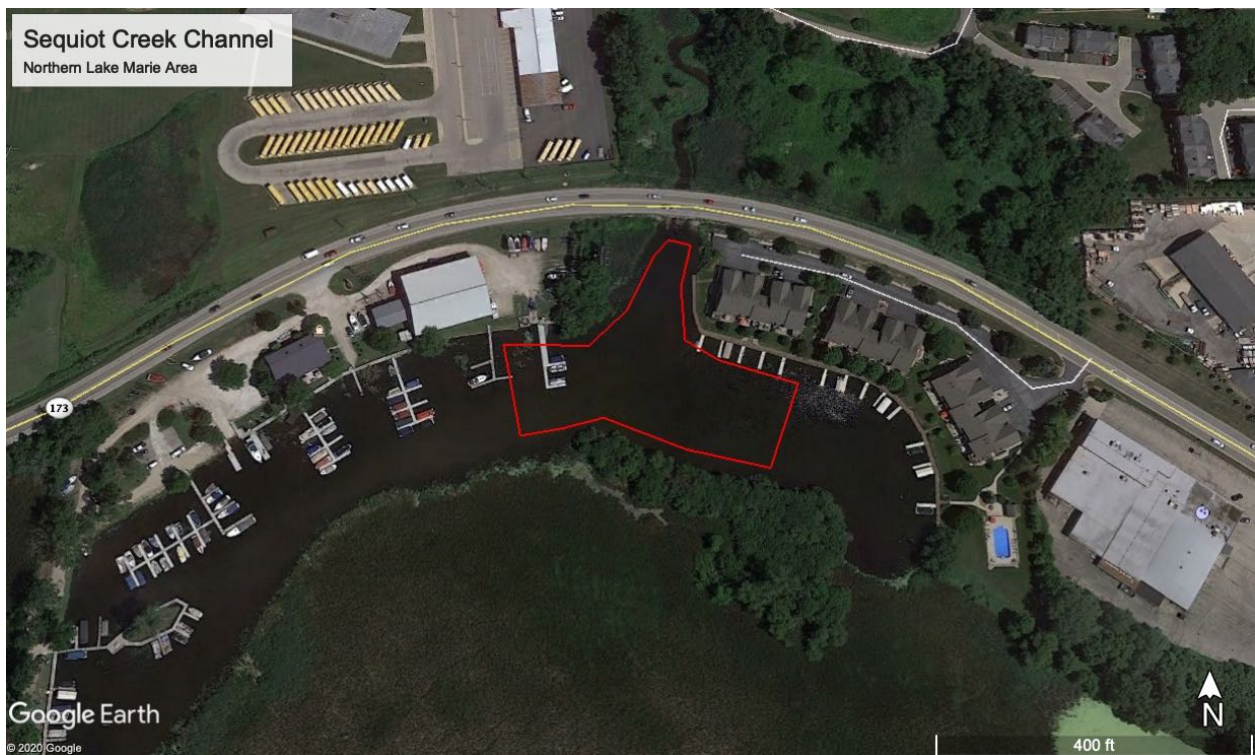


Figure 20. Grass Lake – Lake Marie Channel (8.2 acres)



Figure 21. Grass Lake Landing Channel, aka Heart O' Lakes (Hydraulic Dredging, 2.2 acres)



Figure 22. Dolphin Cove Channel (Hydraulic Dredging, 2.0 acres)



Figure 19. Cooper's Farm Sediment Storage Facility



Figure 20. Ackerman Island Sediment Storage Facility




Figure 21. Upland Soil Processing Facility



B) Biological data on the affected species including life history needs and habitat characteristics.
Attach all biological survey reports.

Blanding’s Turtles are a small to medium-size semi-aquatic turtle that is easily recognized by the vivid yellow hue of its chin and throat. The table below highlights some of the common biological attributes of the Blanding’s Turtle.

The life history of Blanding’s turtles is very unique. Unlike most turtles, it can swallow food both in and out of the water. They are not strong swimmers and tend to spend the majority of their time in shallow emergent marshes, prairie wetlands, sedge meadows, and shallow vegetated littoral zones of lakes (INHS 2011); they are also highly dependent upon the terrestrial environment to carry out reproduction. Blanding’s turtles have been documented to move long distances overland in search of mates, suitable nesting areas, and other wetland sites. Research on Blanding’s turtle dispersal conducted by Sue Hayden of the McHenry County Conservation District (MCCD), indicates turtle populations can travel much farther than originally thought and suggests Blanding’s turtles frequently move through areas utilized by humans (Parker and Murrow 2005).

Blanding's Turtle – Biological Attribute Chart	
Adult carapace length:	6.4 – 9.5 inches (16 – 24 cm)
Size at sexual maturity:	6.4 inches (16.3 cm)
Years to reach sexual maturity:	14 – 20 years
Nesting time:	Late May and June
Clutch size:	3 - 22 eggs (average = 12 eggs)
Egg size:	Ellipsoidal shaped – 0.75 x 1.2 inches (30 x 20 mm)
Hatchling carapace length:	1.1 - 1.5 inches (3 - 3.9 cm)
Life span:	Up to 77 years
Coloration:	Bright yellow chin and throat; head and carapace patterned with light spots and dashes; plastral scute patterned with a large dark blotch usually bordered with yellow; older individuals, entire plastron may be black. Pleural scutes of young are unpatterned or have faint radiating streaks
	
Shell characteristics:	Smooth upper shell, lower shell hinged
Similar looking species:	Box turtle, spotted turtle

Blanding’s Turtles occupy a variety of eutrophic wetlands such as swamps, marshes, beaver dams, permanent and temporary ponds, and slow flowing streams. They frequently emerge from water to bask on logs and tussocks, or sedge clumps. The core habitat of Blanding’s Turtles has an aquatic component that consists of a permanent wetland and a suite of other, usually smaller and more temporary, wetlands such as vernal pools that are used by adults and hatchlings as temporary refugia and seasonal food sources. Blanding’s Turtle habitat also has a large terrestrial component that consists of nesting areas and movement corridors. The terrestrial component of the core habitat is larger than that of many other aquatic turtle

species, and both sexes use terrestrial corridors for movements among wetlands and for nesting migrations (Congdon and Keinath, 2006).

C) Description of project activities that may result in taking of an endangered or threatened species, including practices to be used, a timeline of proposed activities, and any permitting reviews, such as a USFWS biological opinion or USACE wetland review. Please consider all potential impacts such as noise, vibration, light, predator/prey alterations, habitat alterations, increased traffic, etc.

The Fox Waterway Agency (FWA) is responsible for performing maintenance dredging and debris removal throughout the Fox River Chain O' Lakes. The project location consists of the Fox River Chain of Lakes from the Illinois/Wisconsin State line to the Dam in Algonquin, Illinois just south of Illinois Route 62. The Chain of Lakes includes the immediate vicinities of Channel Lake, Lake Catherine, Lake Marie, Bluff Lake, Petite Lake, Grass Lake, Fox Lake, Nippersink Lake, Pistakee Lake and all navigational connecting channels. As part of the ongoing Dredging for Navigation Program, the FWA is required to perform:

1. Maintenance dredging on public channels to provide improved navigation, boat access, and to reduce re-suspension of sediment due to boat traffic. The dredging activity generally focuses on the navigation channel and does not disturb or remove sediment within 10 feet of any bank or shoreline.
2. Mechanical dredging activities include removing accumulated sediment from the specific navigational access channels using an amphibious excavator and a floating barge to carry the excavated sediment to shore for offloading into trucks. The access areas for unloading onto trucks are either FWA property or via temporary easements on private roads or access areas suitable for supporting loaded trucks.
3. Hydraulic dredging includes the use of a cutterhead dredge to remove soft sediment and pump a sediment and water slurry via pipeline into the existing Sediment Storage and Dewatering Facilities at Cooper's Farm and Ackerman Island, and also into geotextile tubes for smaller isolated access channels.
4. Once the sediment storage facilities are filled with sediment and dewatered, they are periodically cleaned out with excavating equipment. The dried sediment is placed into low ground pressure trucks and hauled offsite to the existing FWA upland soil processing facility for beneficial use or to another approved upland soil placement location. This is typically completed during the winter time and provides continuing storage space for the seasonal dredging operations.
5. The FWA is also responsible for the removal of floating and submerged debris that is interfering or potentially interfering with safe navigation within the Chain of Lakes and adjacent public navigable channels. This work includes the removal of navigation impairments within the Chain and adjacent public waters. All debris removed is hauled away to appropriate facilities. Large trees may be selectively placed along the bank of uninhabited shoreline to protect the shoreline and to provide aquatic habitat. This has been done at the

constructed Ackerman Island facility by securing the woody debris into the outer riprap embankment slope. It is typically done in open water areas and not in emerging wetland habitat.

D) Explanation of the anticipated adverse effects on listed species; how will the applicant's proposed actions impact each of the species' life cycle stages.

As described above in the Biological data section, Blanding's turtles are generally not strong swimmers and tend to spend the majority of their time in shallow emergent marshes, prairie wetlands, sedge meadows, and shallow vegetated littoral zones of lakes.

The process of maintenance dredging by the Fox Waterway Agency in the Fox River Chain of Lakes, whether it is done hydraulically (cutterhead suction) or mechanically (via excavation) is only performed after May 15 (due to spawning period) and prior to November 1 due to the annual water level drawdown that occurs upstream of the McHenry Dam. During this allowable dredging period, work only occurs when lake levels are within safe summertime levels and no work is done during flood events, which often occur from May through July.

The dredging work, both hydraulic and mechanical, is focused on navigable channels that are either in open water or centered on narrow access channels and no dredging is completed within the near shore littoral zone. Therefore, during the process of dredging, it is unlikely that Blanding's turtles will be impacted unless they were crossing a channel or were resting on a log as the equipment approached. When mechanically dredged sediment is offloaded onto trucks for hauling, it is generally to an approved upland site with very little probability of species impact.

Hydraulic dredging includes pumping a sediment and water slurry to a constructed impoundment for storage and dewatering. There are currently two existing sediment dewatering facilities with the potential for an additional facility in the future. The FWA understands that if and when an additional sediment dewatering facility is pending, that it will require separate evaluation and approval and is not included under this ITA. The Cooper's Farm facility is located at an upland site near the northeast corner of Grass Lake and the Ackerman Island facility is located at the northern end of Nippersink Lake and just south of Grass Lake. When dredging is active, the water and sediment slurry is pumped into the earthen dewatering cells, so the sediment can settle, and the clear lake water can be discharged back to the lake. Water and sediment gradually build up within the dewatering cells and any turtles present would be able to swim or move out of the pond due to the slow and gradual filling process. When the storage cell is filled with sediment, the FWA cleans out the dewatered sediment with excavators and hauls the material to either their own soil processing facility or to another upland site. Since this activity is generally done during the winter months (for Ackerman Island) or during off-dredging periods, there is a chance that the species may be impacted.

Another activity performed by the FWA that may have adverse effects on the Blanding's turtle is the process of removing large floating debris that has been washed into the Chain of lakes

due to significant flood events and is causing navigational impacts. Since large trees and other miscellaneous debris are required to be removed with large workboats, winches and sometimes excavators, it is possible that adverse effects on the Blanding's turtle may occur, but more likely any turtles present will safely emigrate from the location.

2) **Measures the applicant will take to minimize and mitigate that impact and the funding that will be available to undertake those measures, including, but not limited to -**

A) **plans to minimize the area affected by the proposed action, the estimated number of individuals of each endangered or threatened species that will be taken, and the amount of habitat affected (please provide an estimate of area by habitat type for each species).**

The FWA will take measures to prevent the taking of the turtles during and after dredging and waterway maintenance activities and does not anticipate a negative impact on the local population. However, based on the potential impacts outlined above, the normal waterway maintenance activities such as dredging in navigable boating channels, removing floating woody debris and other navigation hazards and operating sediment storage facilities could potentially result in negative impacts to the turtle.

These turtles hibernate in wetlands and emerge in March and April, depending on the temperature. Females start basking in April and hatchlings can still be active and traveling back to wetlands until October. They may travel up to one mile in their search for upland nesting habitat, nesting usually occurs in June. It is likely that the species may inhabit a dewatering cell located at one of the existing sediment storage facilities or at the soil processing sites. These sites will require routine site reconnaissance surveys and may require exclusionary features to restrict turtle access if any individuals and/or nests are observed.

In an effort to prevent impacts to individuals, the FWA shall be required to provide education to the workers to identify and avoid impact to turtles within the working area. All FWA equipment will contain an informational Blanding's turtle poster to provide a visual reminder and reference images of a typical Blanding's turtle. Prior to the start of and during all dredging, debris removal or other construction activities, the project area shall be visually surveyed by the FWA for the presence of Blanding's turtles. In addition, an informational handout (Exhibit 1) will be distributed at the FWA headquarters to all who might be expected to encounter Blanding's turtles in order to improve turtle identification skills and public awareness.

During the dredging phase, heavy equipment operators will be instructed to halt excavation and debris removal operations if any Blanding Turtles are observed to be present. All work areas will be inspected prior to start of work daily to locate any adult turtles or hatchlings that may have become trapped or to locate any nests that may have been constructed overnight. If turtles or turtle nests are encountered, the IDNR Endangered Species Recovery Specialist will be notified immediately at (630) 399-3242. If any Blanding's Turtle nests are discovered, steps will be taken to protect the nest following notification of and in consultation with the IDNR. If determined to be practicable and beneficial by the IDNR, it is possible that nest/egg

relocation would be conducted under IDNR guidance. Areas outside of the work area shall continue to be managed as wetland and wetland buffers. The portions of the project area that will be disturbed by construction activities shall be returned to their natural habitat pre-construction. There shall be no major change in land use or management after work is complete.

Review of the Natural Heritage Database for the Blanding's turtle indicates that the extent and frequency of observed individuals and nesting habitat varies throughout the Fox River Chain of Lakes from the Algonquin Dam to the northern limits of the FWA Jurisdictional area. Some potential FWA dredging areas are located in areas where no individuals have been observed, which may be influenced by the level of shoreline development and the lack of potential turtle habitat. Therefore, in order to adequately assess the potential impact and associated incidental take, the specific list of priority dredging areas should be evaluated each year so that the potential impact can be more accurately assessed.

The FWA normally determines the list of priority dredging areas each year prior to the start of the active dredging season. There was a total of eight sites targeted for the 2018 dredging season (see Section 1.A., page 2) and only two of the eight sites were either completed or nearly completed due to frequent flood events that occurred throughout the season. Although it is likely that the remaining 6 sites will be targeted for the 2019 and 2020 list (with the potential for adding or subtracting sites). The finalized list of sites will generally include both mechanical and hydraulic dredging requirements. Therefore, the existing sediment dewatering facilities will be either utilized for active sediment storage or "cleaned out" to remove dried and consolidated sediment to maintain storage capacity. The soil processing facility will continue to operate seasonally as conditions allow. These sites will require routine site reconnaissance surveys and may require exclusionary features to restrict turtle access if any individuals and/or nests are observed.

Based on the normal operations of the Fox Waterway Agency, it is therefore requested that a potential annual incidental take of 1 to 2 individuals and 1 nest be allowed. The goal of the FWA includes avoiding and minimizing potential impact with zero incidental takes of individuals or nests. In addition, the FWA will actively seek to assist and coordinate with the McHenry County Conservation District and the Lake County Forest Preserve District with local Blanding's turtle conservation efforts.

B) plans for management of the area affected by the proposed action that will enable continued use of the area by endangered or threatened species by maintaining/re-establishing suitable habitat (for example, native species planting, invasive species control, use of other best management practices, restored hydrology, etc.). +

The portions of the project area that will be disturbed by construction activities shall be returned to their natural habitat pre-construction. There shall be no major change in land use or management after work is complete.

C) description of all measures to be implemented to avoid, minimize, and mitigate the effects of the proposed action on endangered or threatened species.

- **Avoidance measures include working outside the species' habitat.**
- **Minimization measures include timing work when species is less sensitive or reducing the project footprint.**
- **Mitigation is additional beneficial actions that will be taken for the species such as needed research, conservation easements, propagation, habitat work, or recovery planning.**
- **It is the applicant's responsibility to propose mitigation measures. IDNR expects applicants to provide species conservation benefits 5.5 times larger than their adverse impact.**

The FWA will take measures to prevent the taking of the turtles during and after waterway maintenance activities (dredging and debris removal) and/or periodic sediment storage site cleanout and does not anticipate a negative impact on the local population. However, for reasons outlined above, the normal FWA work activities could potentially result in a negative indirect impact to the turtle. In an effort to prevent impacts to individuals, the FWA shall be required to provide education to the workers to identify and safety avoid turtles within the working area. Once annual work sites have been determined, EcoCATs will be submitted to IDNR as required for an environmental review prior to starting work at a specific site. Prior to the start of work, the project area shall be surveyed for the turtles and any identified individuals shall be reported to the Illinois DNR so that they can be relocated to a safer area. All FWA personnel working on-site will be informed of the possible presence of the Blanding's Turtles. Dredging and waterway equipment operators will be instructed to halt dredging and debris cleanup operations if the Blanding Turtles are observed to be present. If turtles or turtle nests are encountered at a sediment storage site, the IDNR Endangered Species Recovery Specialist will be notified immediately at (630) 399-3242.

Staff will be advised that they are not authorized to handle Blanding's Turtles. If any Blanding's Turtle nests are discovered, steps will be taken to protect them following notification of and in consultation with the IDNR. If determined to be practicable and beneficial by the IDNR, it is possible that nest/egg relocation would be conducted under IDNR guidance. Areas outside of the work area shall continue to be managed as wetland and wetland buffers. The portions of the sediment storage areas that will be disturbed by periodic cleanout activities shall be returned to their pre-cleanout condition. There shall be no major change in land use or management after work is complete.

After discussion with IDNR regarding various mitigation alternatives, the Fox Waterway Agency has agreed to provide a mitigation package that includes a total \$3,000 annual donation over the next 10 years for a total of \$30,000 to the existing Blanding's Turtle Recovery Programs in Lake County (LCFPD) and McHenry County (MCCD), in addition to continuing the FWA mission of habitat preservation via shoreline stabilization (etc.) and habitat creation via island development throughout the northern Fox River Chain of Lakes

complex. The total annual donation would be equally distributed to these programs (\$1,500 to LCFPD and \$1,500 to MCCD) in order to benefit ongoing turtle recovery efforts.

D) plans for monitoring the effects of the proposed actions on endangered or threatened species, such as species and habitat monitoring before and after construction, include a plan for follow-up reporting to IDNR.

The FWA will take measures to prevent the taking of the turtles during and after construction and does not anticipate a negative impact on the local population. However, for reasons outlined above, the normal activities completed by the FWA in maintaining navigable waterways throughout the Chain O' Lakes could potentially result in a negative indirect impact to the turtle. To prevent impacts to individuals, the FWA shall be required to provide education to the workers to identify and avoid turtles within the dredging or debris cleanup area. Prior to the start of work, the project area shall be surveyed. If turtles or turtle nests are encountered, the IDNR Endangered Species Recovery Specialist will be notified immediately at (630) 399-3242. If any Blanding's Turtles or nests are discovered, steps will be taken to protect the individual or nest following notification of and in consultation with the IDNR. If determined to be practicable and beneficial by the IDNR, it is possible that nest/egg relocation would be conducted under IDNR guidance. Active monitoring will be completed on an ongoing basis and reported to IDNR on an annual basis or immediately if individuals or nests are observed.

E) adaptive management practices that will be used to deal with changed or unforeseen circumstances that affect an endangered or threatened species. Consider environmental variables such as flooding, drought, and species dynamics as well as other catastrophes. Management practices should include contingencies and specific triggers. Note: Not foreseeing any changes does not quality as an adaptive management plan.

The FWA completes dredging activities from May 15th through November 1 of each year due to spring spawning activities and the annual fall drawdown in the Chain of Lakes. During periods of high water due to flood conditions, waterway maintenance work is stopped and no-wake or even no boating conditions are imposed by the Fox Waterway Agency. During winter time cleanouts, extra care will be taken to avoid and minimize potential impacts to turtles that may have over-wintered within the sediment dewatering ponds and adjacent ground. If individuals are observed during dredging or debris cleanup activities, the Illinois DNR will be notified, and all work will stop until it is confirmed that no individuals are observed to be in the targeted work area.

F) verification that adequate funding exists to support and implement all mitigation activities described in the conservation plan. This may be in the form of bonds, certificates of insurance, escrow accounts or other financial instruments adequate to carry out all aspects of the conservation plan.

The Fox Waterway Agency will be responsible for and will maintain adequate funding in their annual and ongoing operating fund to support and implement all mitigation activities described in the Conservation Plan.

3) A description of alternative actions the applicant considered that would reduce take, and the reasons that each of those alternatives was not selected. A “no-action” alternative shall be included in this description of alternatives. Please, describe the economic, social, and ecological tradeoffs of each action.

The Fox Waterway Agency is required by Illinois DNR to wait until May 15 of each year to begin any dredging work to facilitate walleye, muskie and northern pike spawning movements throughout the Fox Chain of Lakes. This delayed start-up schedule will also avoid the State-endangered Greater Redhorse and State-threatened River Redhorse spawns as well. Since the FWA is responsible for maintaining safe navigational access throughout the Fox River Chain of Lakes, selective dredging and debris removal is required annually. No work is done during flood events where high-water levels restrict boating. The FWA is committed to avoiding and minimizing potential “take” incidents through strategic work timing, annual employee training and education, and careful pre-work surveys and regular observations during work activities. The “no-action alternative” is not possible since the Fox Waterway Agency is responsible for maintaining safe navigable waterways throughout the Fox River Chain of Lakes, and this responsibility includes maintenance dredging, debris removal and the operation of sediment storage and dewatering facilities. The required alternative action is to continue maintaining safe navigable waterways while implementing measures to avoid and minimize impacts to the Blanding’s turtle population.

4) Data and information to indicate that the proposed taking will not reduce the likelihood of the survival of the endangered or threatened species in the wild within the State of Illinois, the biotic community of which the species is a part, or the habitat essential to the species existence in Illinois.

Records for the state-endangered Blanding’s Turtle (*Emydoidea blandingii*) indicate this species may exist within 0.5 mi away of select locations within the overall proposed project area that the FWA is tasked with maintaining. These turtles generally hibernate in wetlands and emerge in March and April, depending on the temperature. Females start basking in April and hatchlings can still be active and traveling back to wetlands until October. They may travel up to one mile in their search for upland nesting habitat, nesting usually occurs in June. It is likely that the species may inhabit a pond or wetland located within or proximal to the project area. However, the normal dredging related activities completed by the FWA only include several localized projects each year and will not reduce the likelihood of the survival of the endangered or threatened species in the wild within the State of Illinois, the biotic community of which the species is a part, or the habitat essential to the species existence in Illinois.

Since the normal and ongoing project activities may result in an accidental take of this species, the IDNR recommended that the Fox Waterway Agency apply for Incidental Take Authorization (ITA) for the Blanding’s Turtle in accordance with 17 Ill Adm. Code Part 1080. In an effort to minimize adverse effects to the species, the following measures will be incorporated into the FWA operating procedures as described in other sections of this Conservation Plan:

- Educate FWA waterway maintenance personnel working on site about the species. Post photos of juvenile and adult turtles at the FWA Headquarters office and on work equipment;
- Conduct daily inspections during construction to check if any turtles are present on site and to ensure that exclusionary barriers, if any were required as a result of observed individuals and/or nests, are properly installed, and;
- Before starting each work day, work areas should be routinely inspected to ensure no turtles (or other reptiles) have become trapped within them;
- If Blanding's Turtles are encountered, crews should stop work immediately and contact the IDNR Endangered Species Recovery Specialist immediately at (630) 399-3242.

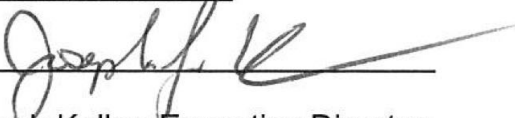
5) An implementing agreement, which shall include, but not be limited to (on a separate piece of paper containing signatures):

An Implementing Agreement is provided below, and on a separate document, that contains the names and signatures of all participants of the conservation plan; the obligations and responsibilities of the identified participants along with anticipated schedules and submittal of progress reports; a certification that each participant has the legal authority to carry out their respective obligations and responsibilities; and an assurance of compliance with all other federal, State and local regulations pertinent to execution of the conservation plan.

A) the names and signatures of all participants in the execution of the conservation plan;

This Conservation Plan will be implemented by the Fox Waterway Agency (FWA) located at 45 South Pistakee Lake Road in Fox Lake Illinois. The Executive Director of the Agency oversees all operations that include a Field Superintendent and various Waterway Maintainers to complete the ongoing dredging and debris removal work necessary to maintain safe navigation in this heavily used public waterway.

Fox Waterway Agency Executive Director:

Signature: 
 Printed name: Joseph Keller, Executive Director
 Date: August 30, 2019

B) the obligations and responsibilities of each of the identified participants with schedules and deadlines for completion of activities included in the conservation plan and a schedule for preparation of progress reports to be provided to the IDNR;

The obligations and responsibilities of the Fox Waterway Agency along with deadlines for completion and a schedule for preparation of progress reports to be provided to IDNR are listed below.

- 1) FWA will submit a Draft List of targeted sites prior to May 1 of each year along with a GIS Shapefile that clearly delineates the approximate working limits of the proposed sites to the IDNR EcoCAT and Incidental Take Coordinator.
- 2) Once annual work sites have been determined, EcoCATs will be submitted to IDNR as required for environmental review prior to starting work at a specific site.
- 3) Active monitoring will be completed by FWA on an ongoing basis and reported to IDNR on an annual basis, or immediately if individuals or nests are observed.

C) certification that each participant in the execution of the conservation plan has the legal authority to carry out their respective obligations and responsibilities under the conservation plan;

The Fox Waterway Agency is a regional body of government created by the State of Illinois in 1984 to specifically manage the waterways of the Chain O'Lakes and the Illinois Fox River. They are responsible for maintaining safe navigation depths and boating access channels throughout the Fox River Chain of Lakes, which is a public waterway.

D) assurance of compliance with all other federal, State and local regulations pertinent to the proposed action and to execution of the conservation plan;

The Fox Waterway Agency strives to secure and maintain compliance with all necessary regulatory permits and requirements, such as the 10-year renewable dredging permits (mechanical and hydraulic) and operating permits for the two existing sediment storage and dewatering sites at Cooper's Farm and Ackerman Island.

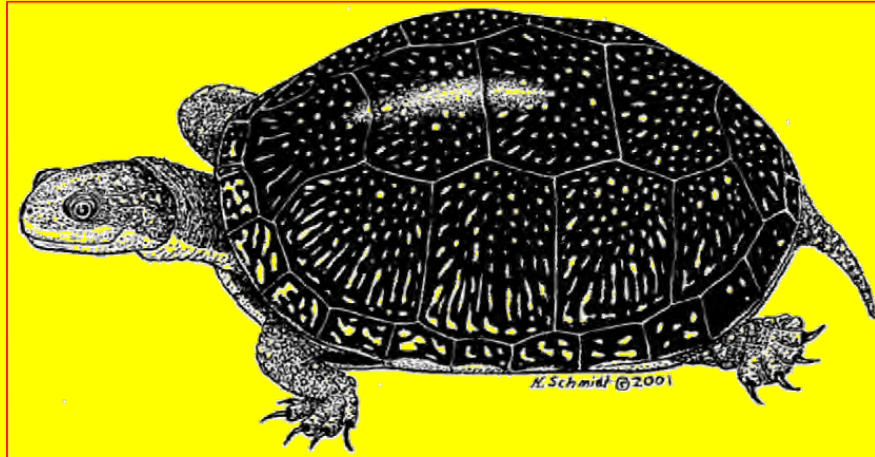
E) copies of any final federal authorizations for a taking already issued to the applicant, if any.

There are currently no federal authorizations for a taking of any species that have been issued to the Fox Waterway Agency.

PLEASE SUBMIT TO: Incidental Take Authorization Coordinator, Illinois Department of Natural Resources, Division of Natural Heritage, One Natural Resources Way, Springfield, IL, 62702 OR DNR.ITAcoordinator@illinois.gov

Exhibit 1. Blanding's Turtle Informational Poster

CAUTION - BLANDING'S TURTLES MAY BE PRESENT



FOX WATERWAY AGENCY - EMPLOYEE & PUBLIC INFORMATION

BLANDINGS TURTLE AVOIDANCE AND PROTECTION DURING CONSTRUCTION

According to the Illinois Department of Natural Resources, Blanding's turtles have been known to occur within this area. Blanding's turtles are a State endangered species and protected by the Illinois Endangered Species Protection Act (520 ILCS 10/). Under the law, it is illegal to disturb, harass, injure, capture or kill Blanding's Turtles and their nests. These animals are known to occur in an around the Fox River Chain of Lakes Area and may be encountered in both aquatic and upland habitats, even those that are a great distance from water.

In an event that the Blanding's turtles are found onsite, **ALL SITE WORK IN THE VICINITY MUST STOP IMMEDIATELY** and the IDNR resource agency contact must be notified

Brad Semel (or current staff)
Illinois Department of Natural Resources
8916 Wilmot Road, Spring Grove, IL 60081
815-675-2386 ext. 216 (office)



DESCRIPTION: Typical adult Blanding's turtles are medium-sized turtles, attaining lengths of 5 to 10 inches. Their carapace (shell) is highly domed and black with yellow flecks, similar to eastern box turtles. The body is also black with yellow flecks, while the underside of the neck and chin is bright yellow.

Hatchling turtles may also be encountered especially during August and September. Hatchlings are not as vividly marked. Their shell is brown or gray, and is not high domed as in the adults. The legs are usually unmarked, but the head does have some yellow markings and the throat is pale yellow.



The Fox Waterway Agency has committed to several key measures to protect the Blanding's turtle during normal dredging and waterway maintenance activities, that includes operation of the sediment storage facilities at Cooper Farms and Ackerman Island, and all site personnel must be familiar with these measures. A copy of the Blanding's Turtle Conservation Plan will be available at all times during waterway maintenance work.

Please Be Careful when working and feel free to contact Joe Keller or Rob Bowman at the FWA office if you have any questions or need any additional information.

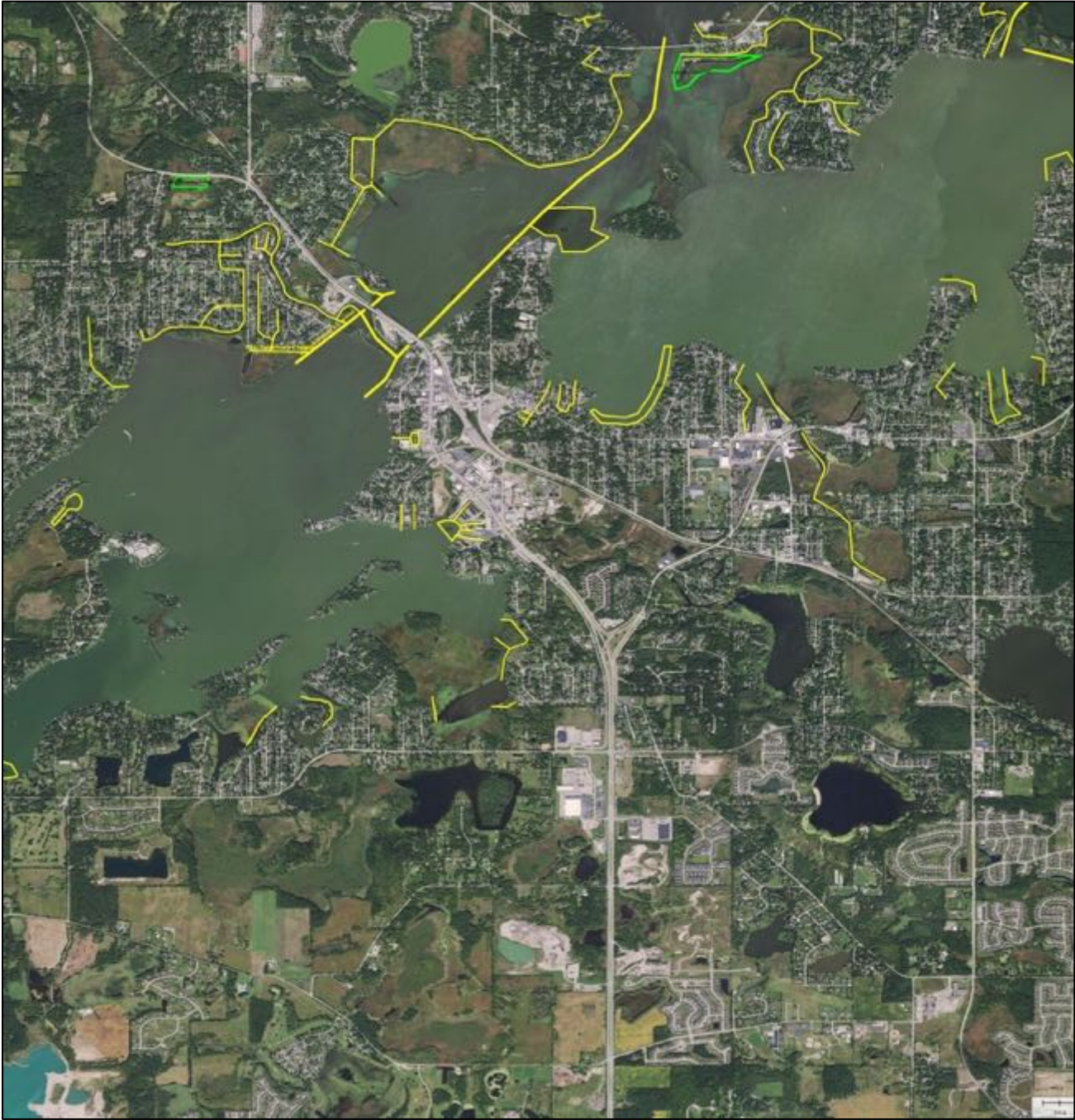
Joe Keller - Executive Director
Rob Bowman - Field Superintendent
Fox Waterway Agency
45 S. Pistakee Lake Rd.
Fox Lake, IL, 60020 (847) 587- 8540
Joe@foxwaterway.com; Rob@foxwaterway.com

Exhibit 2. Potential Dredging Areas with Aerial Imagery Base Map

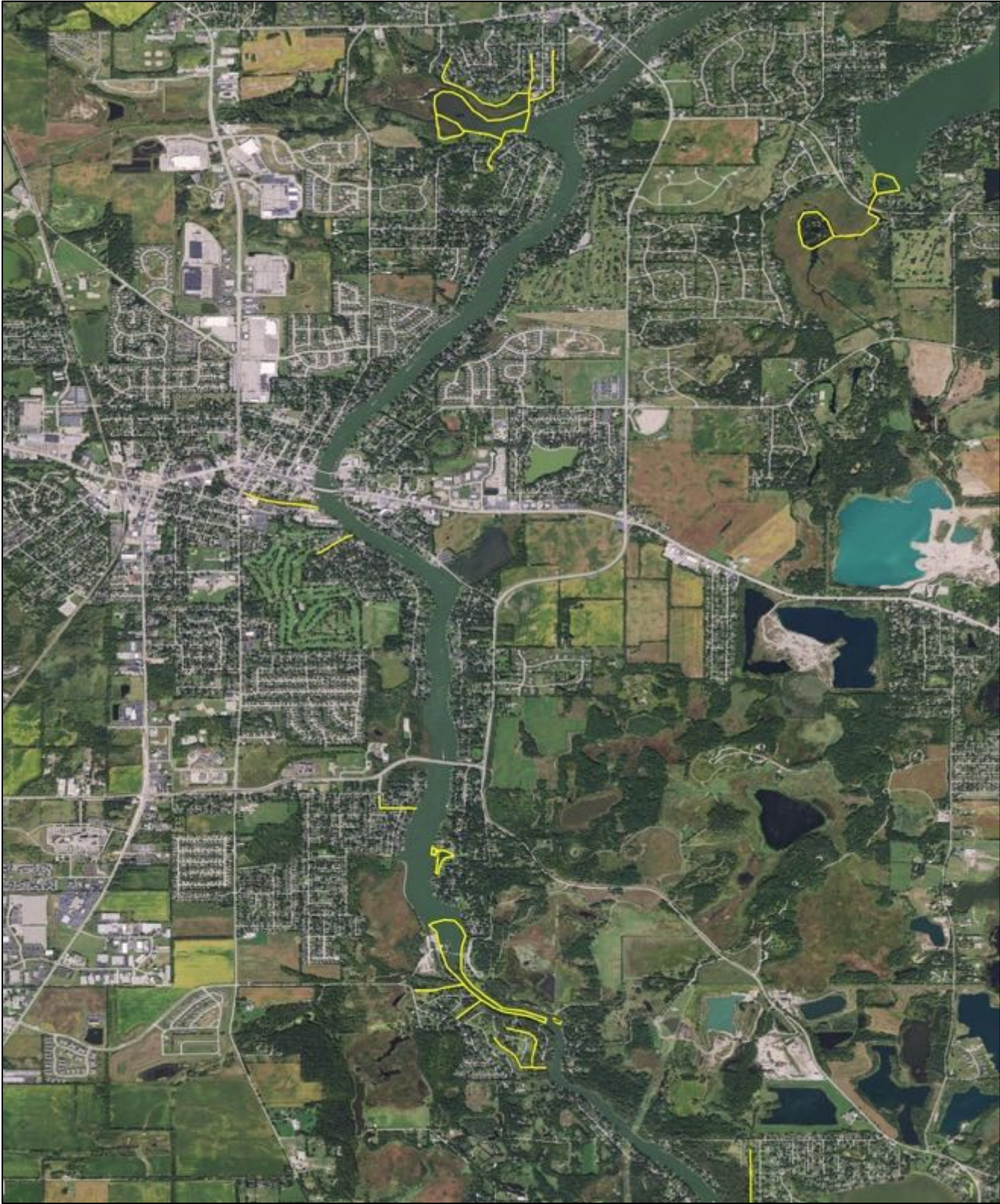
Map 1 – Northern Chain of Lakes Area (see GIS Shape file)



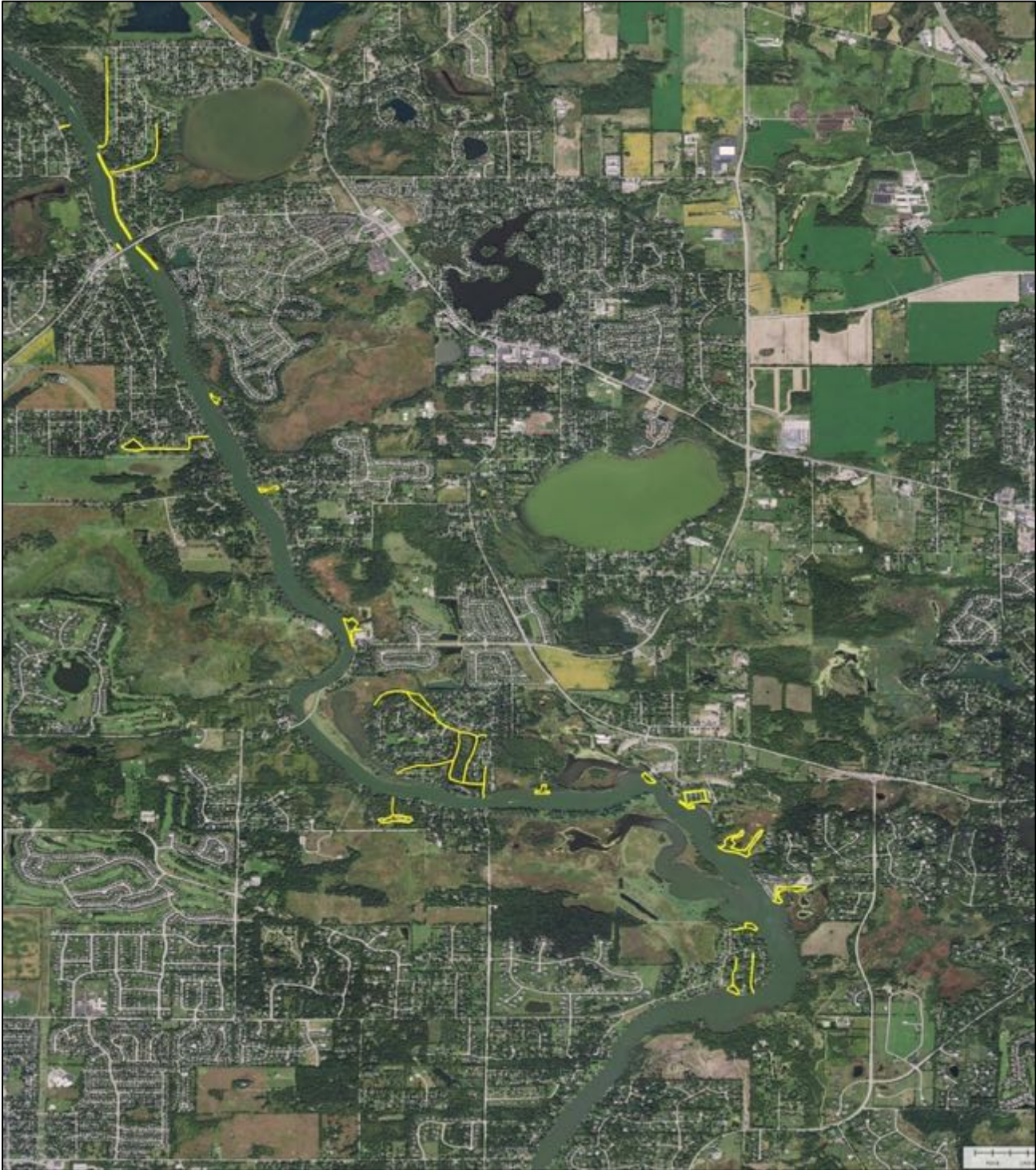
Map 2 – Central and Southern Chain of Lakes Area (see GIS Shape file)



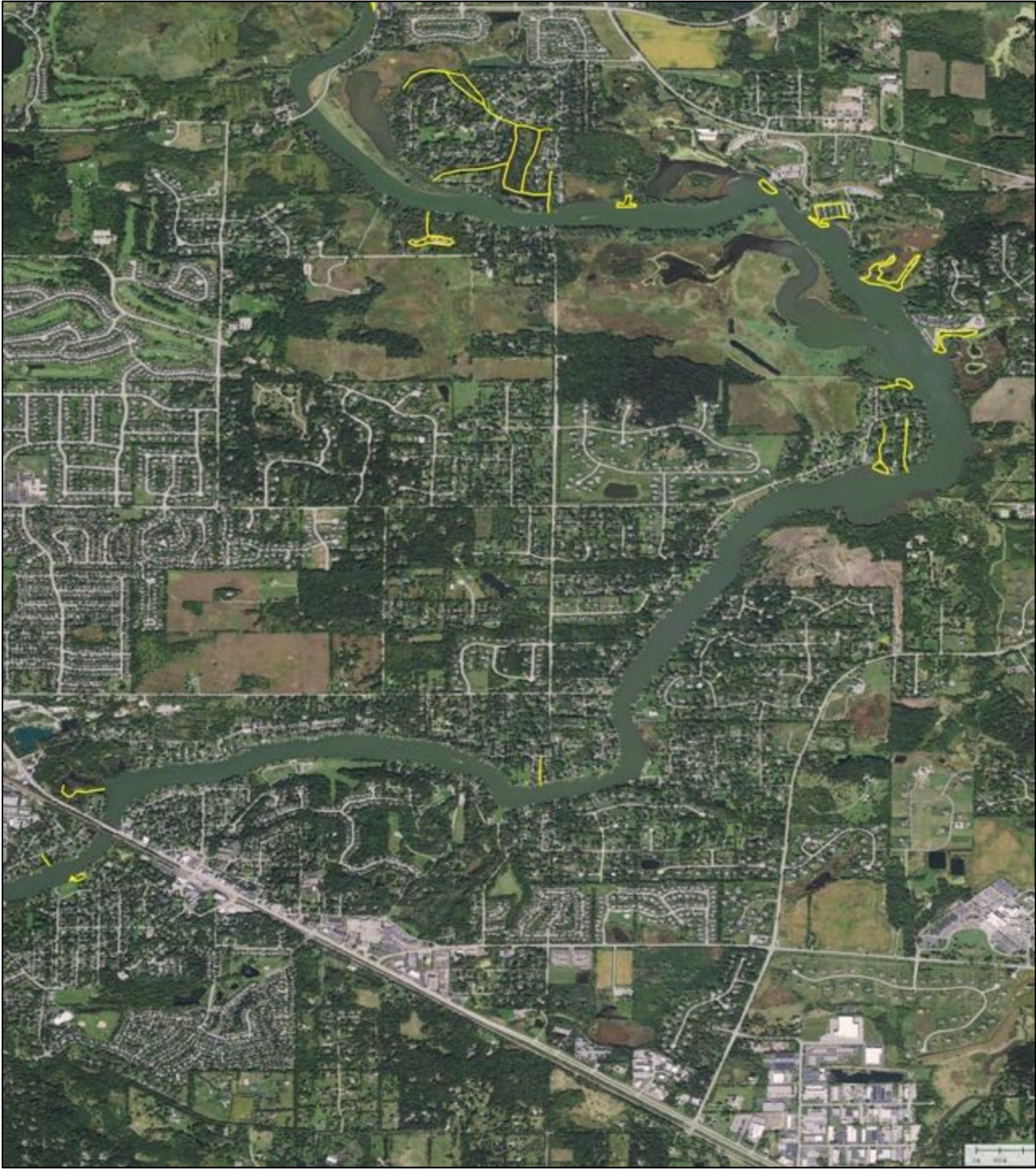
Map 3 – Dutch Creek to McHenry Lock and Dam Area (see GIS Shape file)



Map 4 – Griswold Lake to Fox River Grove Area (see GIS Shape file)



Map 5 – Fox River Valley Gardens to Cary Area (see GIS Shape file)



Map 6 – Fox River from Cary to Algonquin Dam Area (see GIS Shape file)

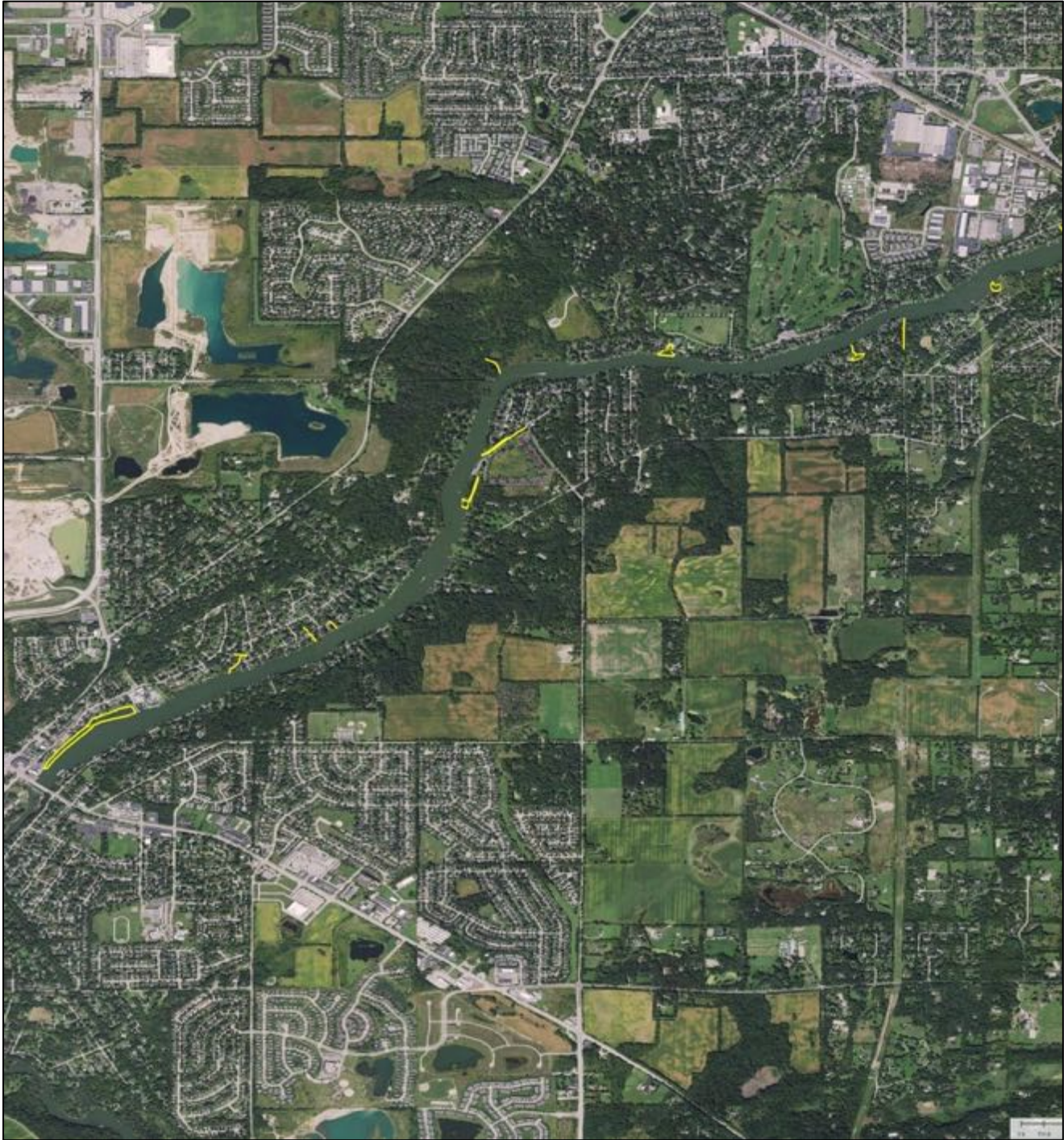
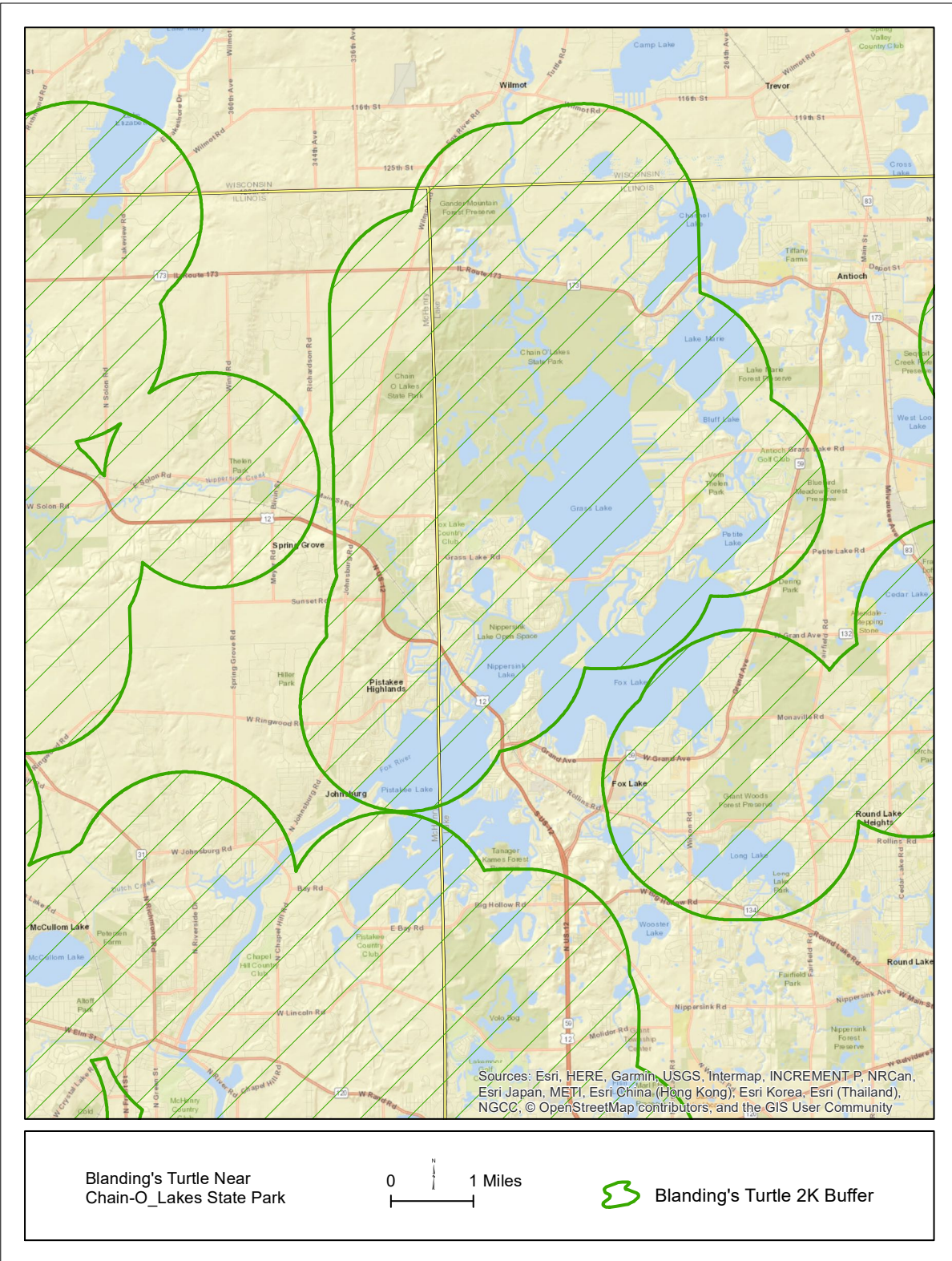
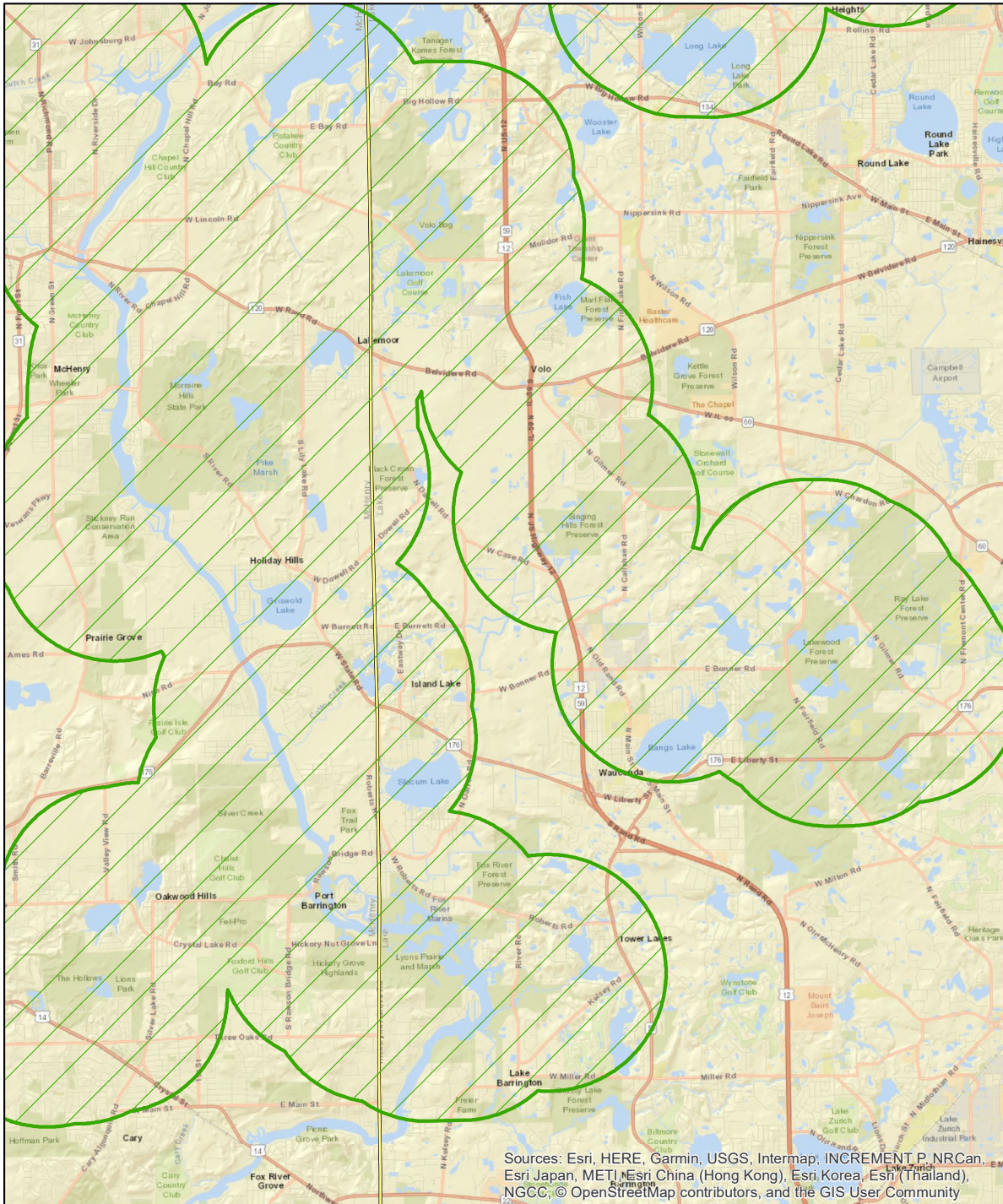
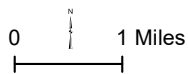


Exhibit 3. Blanding's Turtle Buffer Maps with a 2 Kilometer Dispersal Distance





Blanding's Turtle South of Chain-O_Lakes State Park



 Blanding's Turtle 2K Buffer