NFWF GLRI Grants – Supplemental Environmental/Cultural Compliance Information

Project title Lemont Heritage Quarries Recreation Area Community Activation Project
County(s) Cook, DuPage State(s) IL Proposed Start Date 1 Nov, 2026
Is any of this project occurring on FWS-owned lands? Yes ____ No _X__
Township(s) (e.g. 103N) 37N Range(s) (e.g. 17E) 11E Section(s) 15,21 Project in Acres _56___
Primary Investigator (PI) Alex Bacon email alex@thewilderworldtrust.org
Additional contact Jeremie Bacon email jeremie@thewilderworldtrust.org

1 – **Project Summary** – Please write a few sentences or less with the main idea/goals project, e.g. culvert removal project, habitat restoration, invasive removal, green infrastructure for a school yard, etc. (You can also copy and paste your project description here).

The Wilder World Trust (TWWT; formerly The Forge Charitable Adventures / TFCA) proposes a multifaceted green space activation project at the Heritage Quarries Recreation Area in Lemont, IL, connected to the Great Lakes via its border on the Chicago Sanitary and Ship Canal. The project consists of investments in community engagement, emphasizing environmental stewardship and restoration, public infrastructure, and nature education. Project activities include invasive species management, wildlife surveys, plant surveys, and planting of native species.

The original grant application included a boat launch and scenic overlook as capital projects, however, these developments are now being pursued by the Village of Lemont as part of their OSLAD Grant Project. As such, we have redacted that portion of the proposal and redistributed the budget to fund more environmental restoration work.

The Heritage Quarries Recreation Area is a reclaimed dolomite limestone quarry managed by TWWT. Public uses include hiking, biking, fishing, boating, and birding. TWWT oversees stewardship and outdoor education activities and is actively restoring ~300 acres at the Quarries. The proposed Sustain Our Great Lakes grant project will cover ~56 acres of land and up to 2 miles of shoreline. Potential beneficiaries are not limited to visitors or students; a 2024 IDNR EcoCAT review determined that the project area can support the endangered Hine's emerald dragonfly, Blanding's turtle, black-billed cuckoo, and northern long-eared bat. Other confirmed species of interest include bald eagles, osprey, and killdeer.

2 – **Detailed Methods** – FWS biologists and archaeologists need to assess how the field work you plan on conducting may affect any endangered species, critical habitat and cultural resources in the project area. Please provide detailed field methods for all planned activities and the equipment planned for use. This may be a paragraph or a few pages. Examples include (1) how you plan to access your field site (i.e., on-foot, two 4-wheelers, a pick-up truck, by boat, etc.); (2) survey methods (i.e., 2 observers conducting point count surveys for birds on foot using playback); (3) management actions (i.e., hand-pulling, chemical backpack spraying, or prescribed fires for invasive plant species removal or removal of a concrete culvert with jackhammers, bobcats or other heavy machinery).
*Please note if tree removal is a planned action, give an estimate of how many trees/ or acres are to be removed, if trees larger than 3-inches DBH are planned for removal, size/ or age of trees, and if known tree species.

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(1) The field site will be accessed on-foot. Small side-by-side OHVs may be utilized for equipment and/or personnel transport around the site, but will be limited to the trails and roadways. The terrain at the HQRA is rocky, uneven, and covered in scattered pocketed of developing native species that limit vehicle access. Vulnerable plants will be flagged to increase visibility. Ground crews will be advised on native species present in the project areas to minimize risk of trampling, accidental cutting, and/or overspray with herbicides.

(2) Plant surveys are currently headed by TWWT's development manager with recent surveys taking place in 2025 and 2026. Original Stantec plant surveys took place in 2023. Overall, baseline species composition is well understood in all project units. Additional plant surveys may take place before implementing grant work as a final check for desired species and/or sensitive wildlife. In terms of protocol, the surveyor meanders target units on-foot while taking notes and measurements. Woody species are surveyed depending on species – only priority tree and shrub species for conservation are measured, tagged, and recorded into the online database (DBH, height class, canopy radius, GPS, other notes). Priority species for conservation were first defined in the Stantec Restoration Plan. All other weedy and non-native species (like buckthorns, non-native honeysuckles, and weedy species like box elder or eastern red cedar) are advised for removal and are not to be surveyed. Notes and photographs describing herbaceous species composition will also be taken while surveying. Rare species are flagged and recorded in an online database (including GPS). Species are identified using features like bark pattern, texture, leaf type, leaf arrangement, growth habit, leaf scars, buds, inflorescence, and/or fruit.

Wildlife surveying capacity will greatly expand thanks to NFWF SOGL grant support. Passive ultrasonic acoustic monitoring systems from Wildlife Acoustics (SM5BAT Ultrasonic-Acoustic Recorders) will be installed at select locations (habitat edges, shorelines near waterbodies, other openings) to monitor bird and bat activity. The acoustic recorders will be placed 2-3 meters above the ground, secured to steel conduit poles with zip ties or steel cables. Surrounding trees and landscaping will obscure placement to reduce the likelihood of theft or tampering. Acoustic recorders will be triggered; we don't need or want 24/7 recording. Data will be recorded to SD cards and swapped periodically (monthly to start). Year 1 data will establish a baseline that will be compared against future datasets. Ideally, native bird and bat activity will increase over

time as restoration work continues.

Ultrasonic recorders (EchoMeter Touch 2 Bat Detectors) for active use will be purchased for outdoor recreation activities and field surveys. These special recorders can be used with iOS or Android devices, enabling surveyors and guided groups to walk around the site and collect acoustic data using their own mobile device (as opposed passively operating cameras installed at specific locations). The free companion app allows for spectral viewing of recoded audio and automatic species ID. Data from these walks will supplement data from the installed recorders.

Trail cameras equipped for nighttime use will be installed as a compliment to the acoustic recorders. Like the recorders, trail cameras will be placed at choice locations around habitat edges and waterbodies to monitor wildlife activity. Of particular interest are the bats and beavers at the HQRA. Other species are of concern too, but bats and beavers are nocturnal species with crepuscular tendencies. In general, staff and other people are around during the day and make regular reporting of any “interesting” species active during daytime hours (like the bald eagles that visit the site!), but we really don’t get to see much of what happens after hours. Cameras will be drilled into trees or installed on poles like the audio recorders.

(3) Management actions will consist of hand-pulling, selective mowing, selective woody removal (using tools like brush cutters or chainsaws), stump herbicide treatments, chemical backpack spraying, and native planting (seed broadcasting, plug and/or sapling planting). Most of the work will be performed on-foot by ground crews. The uneven, rocky terrain at the HQRA directly limits safe vehicle access. This is preferable anyway since vehicles cause greater soil disturbance and can easily damage populations of beneficial native species.

The target species for removal follow recommendations from Stantec in our Restoration Plan for the HQRA. These species were first identified during field surveys in 2023, and still dominate much of the site. Approved woody species for removal include common buckthorn, glossy buckthorn, Amur honeysuckle, Tatarian honeysuckle, Morrow’s honeysuckle, tree-of-heaven, white mulberry, Callery pear, Norway maple, Siberian elm, non-native crabapples, oriental bittersweet, multiflora rose, European cranberry, box elder, black locust, honey locust, and eastern red cedar. Tree removal will be scheduled between October 1 to March 31st to minimize potential impacts to wildlife.

Selective thinning of native woody species may be pursued following Stantec specifications. This is to encourage diverse native herbaceous growth and prevent the formation of dense thickets. While native, some species like gray dogwood and staghorn sumac can form large colonies that, with time, will shade out and limit other species.

Likely thousands of invasive and weedy trees and shrubs will be cut and/or treated over the grant period; a significant number of these will be resprouts or young / shrubby plants with a DBH of 4” or less. Removal of larger trees (DBH >12”) will be limited to mitigate overall habitat disturbance and control the rate of canopy loss. Complete, 100% removal of invasive trees is not

expected within this grant period. The emphasis will be on opening the understory and establishing native ground cover.

Ground crews are expected to identify species in the field. While trees and shrubs for conservation are marked and/or flagged, crews are still responsible for determining if a plant is invasive or not. Crew leads are informed of target species for removal or conservation in project areas, and are provided with project-specific plans and maps, as well as copies of our Stantec Restoration Plan for the HQRA.

Approved herbaceous species for removal include garlic mustard, Dame's rocket, common burdock, mullein, cutleaf teasel, non-native thistles, white sweet clover, yellow sweet clover, crown vetch, birdsfoot trefoil, purple loosestrife, mugwort, motherwort, reed canary grass, phragmites, and other non-native generalist grasses like giant foxtail and smooth brome. Herbicide use will be avoided in wetland units during spring and summer months to avoid potential impacts to insects like the Hine's emerald dragonfly. In the areas supporting dolomite prairie, herbicides will be avoided in the summer to prevent potential impact to any leafy prairie clover that could be present. Plants will be cut with brushcutters and/or hand-pulled instead.

All cut plant material will be stacked in brush piles to dry, and burnt when conditions are good (i.e. safe wind speeds, ideal vent rate, ideal humidity).

Recommended native species for planting are identified in the Stantec Restoration Plan Appendix C, Recommended species for revegetation. Any of the species listed therein may be planted, but specific examples that we have on-hand include grasses like: big bluestem, little bluestem, Indiangrass, sideoats grama, switchgrass, purpletop tridens, prairie dropseed, Canada wild rye, Virginia rye, and bluejoint grass; and forbs like leadplant, Canada milkvetch, wild blue indigo, wild senna, partridge pea, white prairie clover, purple prairie clover, Illinois bundleflower, common milkweed, butterfly milkweed, false aster, false boneset, lanceleaf (sand) coreopsis, pale purple coneflower, rattlesnake master, spotted Joe-Pye weed, false sunflower, alum root, purple coneflower, marsh blazingstar, wild bergamot, stiff goldenrod, foxglove beardtongue, prairie cinquefoil, narrowleaf mountain mint, mountain mint, grayheaded coneflower, black-eyed Susan, brown-eyed Susan, compass plant, cup plant, gray goldenrod, smooth blue aster, calico aster, New England aster, sky blue aster, Ohio spiderwort, hoary vervain, Culver's root, and golden Alexander. For trees and shrubs, it will depends on nursery availability at the time, but viable candidate species for planting include oaks (white oak, swamp white oak, bur oak, chinquapin oak, northern red oak, black oak, or pin oak), hickories (shagbark hickory, bitternut hickory, mockernut hickory), American hophornbeam, native hawthorns, American hazelnut, Viburnum (nannyberry or black haw), and serviceberry.

New clearing areas (most of project area 2 and all of project area 3) will be seeded with a native grass and cover crop mix. Grasses are listed above, and the dominant cover crop is seed oats (*Avena sativa*). While non-native, seed oats are recommended by Stantec as they are relatively non-competitive, die off in the winter cold, and provide an intermediate source of fuel and

ground cover while native grasses develop. WIP clearing areas (higher quality parts of project areas 1 and 2 where non-grant restoration work has happened in the past) will be seeded with a mix of native grasses and forbs such as to increase plant diversity and native grass dominance.

3 -- **Timeline of Planned Activities** – approximate timeline of activities based on seasons or specific months to determine potential risks for migratory, breeding, or wintering/ hibernating species as well as cultural sites under the ground.

There are no cultural sites at the Heritage Quarries Recreation Area.

In general, tree and other woody removal work will take place between October 1 to March 31st to minimize impacts on wildlife and developing native plants. Woody removal during the warmer months will be approached tactically to promote native plant development while minimizing negative side effects. Snags and decaying logs / wood ("nurse logs") will be left as-is whenever possible to provide habitat and nutrients. Seed will be cold stratified artificially in refrigerators or naturally by planting in fall months.

Fall 2026* (project start date depends on when grant approval is received) – selective woody removal, native seeding, brush pile burns

Winter 2026-27 – selective woody removal, brush pile burns, supplemental native seeding (depending on outdoor conditions and total seed coverage achieved in Fall 2026)

Spring 2027 – selective woody removal, brush pile burns (while temperatures remain cooler and fuel is dry), supplemental native seeding and/or plug planting (March / April; depends on outdoor conditions and total seed coverage achieved in Fall-Winter 2026), resprout / herbaceous species control (selective mowing and/or hand-pulling, limited herbicide use outside of wetland units; exact timing depends on species and rate of plant growth)

Note: Spring work will likely begin in late March or April after the local killdeer have finished nesting (killdeer started nesting in the prairie and along parts of the shoreline at the HQRA as of 2-3 years ago – as a ground-nesting species, their nests, eggs, and young are vulnerable to ground crews and vehicles).

Summer 2027 – selective woody removal (less than in cooler months), resprout / herbaceous species control (main task – limited herbicide use, selective mowing and/or hand-pulling)

Note: Buffer zones containing all (or mostly all) native vegetation will be maintained to provide habitat for wildlife. While some selective mowing of weedy native species may be desirable to promote diversity (like if Canada goldenrod is forming a monoculture in an area), we will

generally avoid native vegetation whenever possible. Herbicide use will be avoided in wetland and prairie units to avoid negative impacts to sensitive species.

Aside from its utility as habitat, we are also trying to establish adequate fuel load for an open prairie burn in 2027. This will only be possible if vegetation remains on the ground.

Fall 2027 – selective woody removal, native seeding, brush pile burns

Winter 2027 – selective woody removal, brush pile burns, supplemental native seeding (depending on outdoor conditions and total seed coverage achieved in Fall 2027)

4 – **Ground Disturbance and Historical Buildings** – Please describe the nature of ground disturbance taking place during planned activities, if any, the extent/depth of the ground disturbance (e.g. digging will occur above or below the plow line, a parking lot will be removed, etc.), and if the project area has been previously disturbed or not. Additionally, please note if any buildings or structures are planned to be removed or altered within the action area. If so, include a description and photograph and note the age of each building/structure to be affected.

Ground disturbance will be limited to erosion caused by ground crews walking on soil, or OHV use on trails (particularly on dirt / single-track trails). No digging is planned outside of plug or tree planting. Planting hole sizes will vary depending on the plug, but we don't anticipate anything larger than 5-gallon potted trees at the largest. Plugs will most likely be limited to 1 to 3 gallon pots or smaller (4" plastic pot size). Holes will be dug at the time of planting.

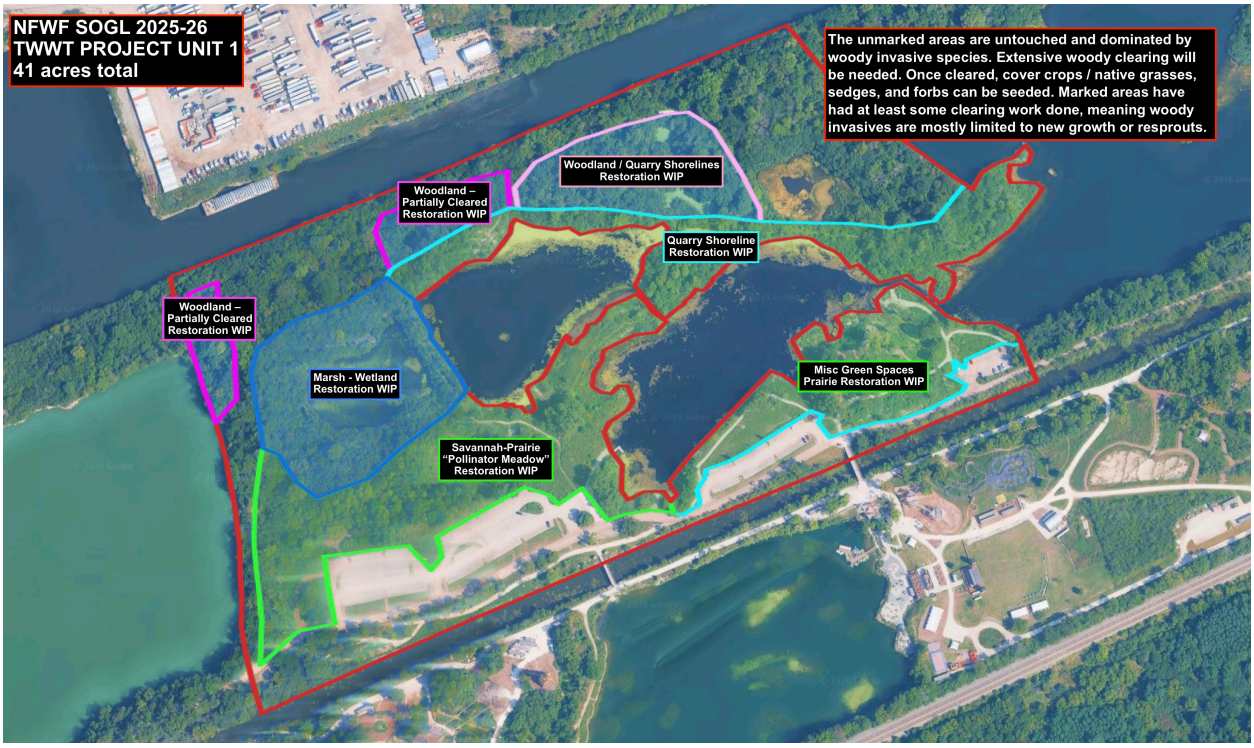
No buildings or structures will be removed or altered within the action area.

5 – **Location** – Please provide additional details about project location, especially the habitat types and acreages associated with management actions (e.g. 26 of 60 acres are planned for prescribed burning). Additionally, please outline if the action area overlaps or borders with critical habitats, Rusty Patch Bumble Bee High Potential Zone (RPBB HPZ), and the range of White-nose syndrome (WNS) for Northern Long-eared Bats (NLEB).

The project locations are at the Heritage Quarries Recreation Area (HQRA), a reclaimed dolomite limestone quarry located in Lemont, IL. While formal quarrying operations stopped around a century ago, no long-term restoration efforts took place until The Wilder World Trust (TWWT) became involved in 2019. The site is unique due to the dolomite limestone bedrock at or near the surface throughout the Area. This bedrock is porous and allows groundwater to flow. If invasive species weren't an issue, the HQRA would support many acres of rare dolomite prairie and dolomite fen ecosystems.

Despite the environmental degradation, the HQRA supports a variety of different ecosystems including savannah-prairie / dolomite prairie, marsh / wetland, forested wetland, woodland, and quarry shoreline. Woodlands at the HQRA are most consistent with a bottomland hardwood woodland, mostly containing faster-growing species like American elm, black cherry, eastern cottonwood, green ash[1], hackberry, and silver maple.

Project Unit 1 (41.29 acres):



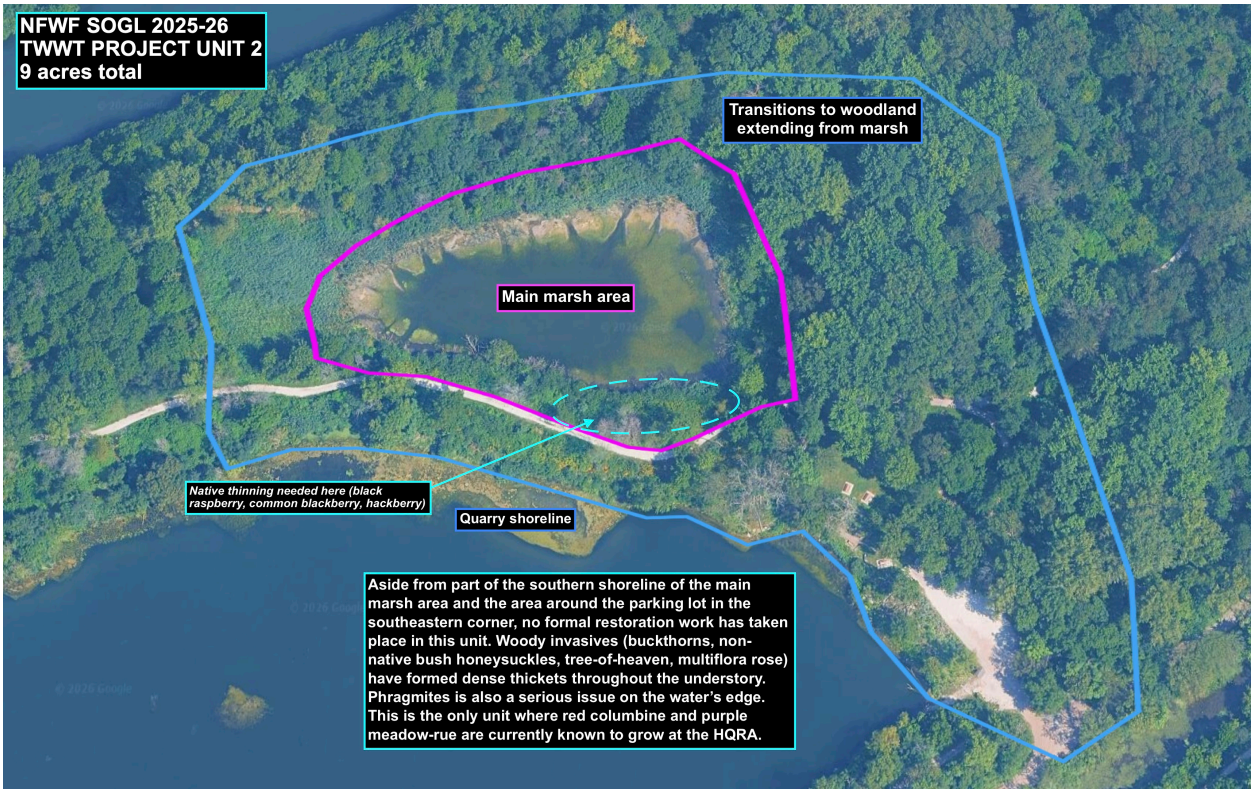
[1] *young trees only – all mature ash were apparently killed by the emerald ash borer within the last 10-20 years*

Project Unit 1 is the main restoration unit for the project and contains the bulk of the TWWT restoration area to-date. Grant support will fund continued maintenance on existing restoration areas, and allow us to "fill in the gaps" by clearing the invasive-dominant, untouched patches between these areas. The southwest section of the unit is ~7 acres of "pollinator meadow" (savannah-prairie) and quarry shoreline. This prairie area is the oldest restoration area maintained by TWWT and has relatively high plant diversity for the area. While invasive woody species are still present, especially on the borders, it is mostly limited to resprouts and new growth.

There is a shallow quarry lake just north of the prairie that serves as the foundation of the ~4.5 acre marsh ecotone present between the prairie and the woodland that extends along the entire northern border of the HQRA. Approximately 5 acres in the woodland has had at least some clearing work done in the past 1-2 years, enabling native seeding to begin. The same goes for ~4 acres of land along the northeastern shorelines of Great Lakes Quarry. The rest of the project unit (~18.5 acres) will be new clearing and involve much higher rates of woody invasive removal. These parts of the woodland are densely populated by invasive buckthorn, bush honeysuckles, tree-of-heaven, and white mulberry. A couple mature Siberian elm are also in the northwestern corner of the unit, though, their removal is a lower priority.

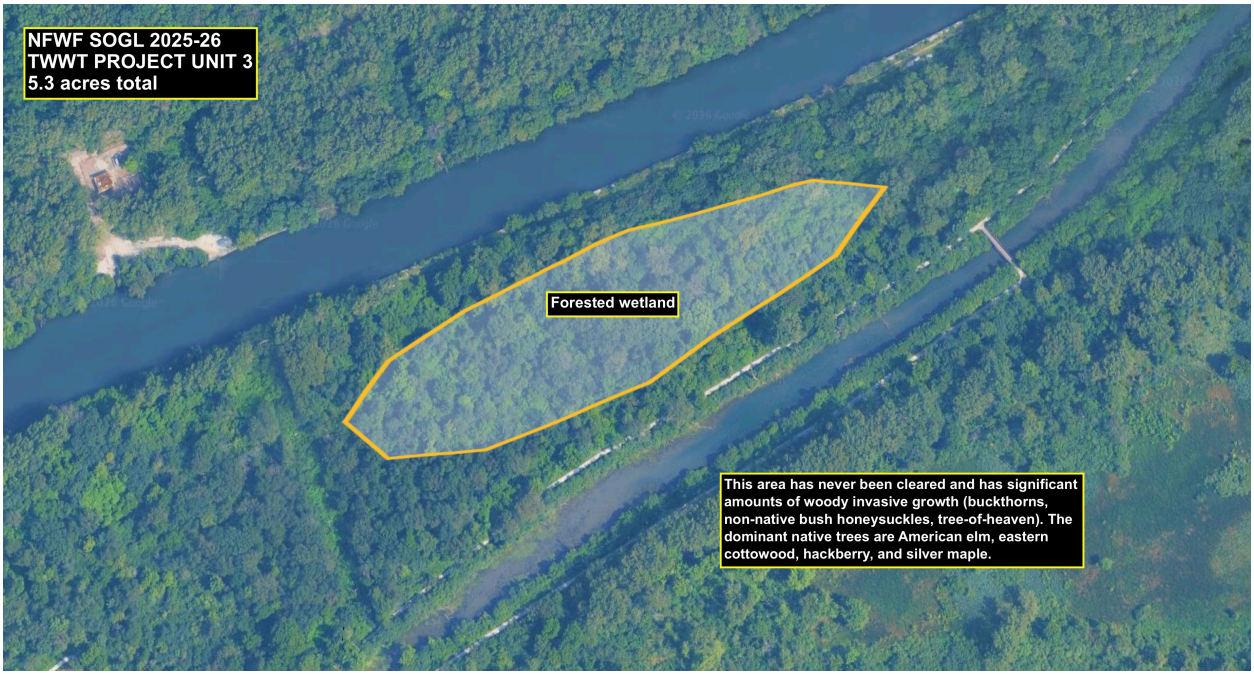
Native trees and shrubs for conservation in the unit include American elm, basswood, black currant, black cherry, black raspberry (partial), black walnut, chokecherry, eastern cottonwood, elderberry, green ash (young), hackberry, hop tree, silver maple, wild gooseberry, and various young oaks planted in the prairie area (bur oak, chinquapin oak, swamp white oak, white oak, black oak, and northern red oak).

<u>Project Unit 2 (9.02 acres)</u>:



This unit is a wetland / marsh bordered by woodland. While some clearing work has taken place in the past on the southern shoreline of the pond, the rest of the unit has not had any work done to it. Invasive species are a significant issue around the unit (buckthorns, non-native bush honeysuckles, multiflora rose, phragmites, reed canary grass being the main targets). Based on recent surveys, native thinning will also be needed to control the developing thickets of common blackberry and black raspberry just south of the pond. This area is home to a few plants that haven't been observed elsewhere at the HQRA (like purple meadow-rue and red columbine), and has a good native core that would thrive after a season of dedicated work.

Project Unit 3 (5.32 acres):



The is a forested wetland unit identified by Stantec. No restoration work has taken place in the unit to-date. Woody invasive species (buckthorns, bush honeysuckles, tree-of-heaven) dominate the area to a significant degree, though, there are some native trees in the area (mostly eastern cottonwood and American elm with some hackberry, black cherry, silver maple, and young ash).

According to IPaC, the action areas do not overlap with any critical habitats.

According to the linked RPBB HPZ map, the action areas are within a "Low Potential Zone (identified for scientific recovery permits and additional conservation efforts)."

Attempting to access the linked WNS map for NLEB leads to a 404 page so a statement cannot be made based on that map. However, this FWS map has Cook County listed under "White-Nose Syndrome Zone Per Final 4(d) Rule" (U.S. counties within 150 miles of positive counties/ districts (Data as of 07/10/20)).

Attachments – Please provide copies of the following documents, if applicable:

a. Any documents or correspondence with other FWS programs (e.g. the Ecological Services Field Office) and include any IPaC search results (saved as a PDF) with actions delineated, species listed and the shapefile of action area (only if you have a shapefile, not necessary for those using the county level in IPaC https://ipac.ecosphere.fws.gov/).
b. Appropriate permits or informal consultations for the action area or planned activities acquired from a state, another federal agency and/or a Native American tribe.
c. Land use history and environmental setting of the project area.
d. Results from a search of the State Historic Preservation Office's or State Archaeologist's Office database of all known professional cultural surveys and/or cultural sites within the project area.
   NO RESULTS FOUND
e. Relevant construction and design drawings, notes or additional details.
   N/A
f. USGS topographical map and aerial photo, ensuring that the project boundaries are exact. Please point out the location of all buildings/structures in the project area (on both the map and photo) that you will be affecting.