KD

PARKLANDS MASTER PLAN
UPDATE SUMMARY REPORT

KENOSHA COUNTY • WISCONSIN
DECEMBER 2016

SMITHGROUPJJR

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1.0
INTRODUCTION

Rolling topography creates many scenic vistas at KD Park

Park facilities currently include open picnic areas...

...and over four miles of hiking trails.

1.1 Project History

In 2001, Kenosha County purchased a former gravel mine site to convert to a park. Named KD Park, the site features rolling topography, a 45-acre lake, wetlands, and remnant oak savannas. It sits at the headwaters of a Class III trout stream and is also adjacent to the New Munster Wildlife Area, which has over 1,000 acres of conservancy land open for public hunting of pheasant, small game, deer, and waterfowl. Shortly after acquisition, the County created a Master Plan to develop the property as an active sports recreation complex. However, given the costs associated with capital improvements and operations, the decision was made to place the project on hold. In 2009, the County formed an exploratory committee to resume planning for KD Park, with the recommendation that the park be transformed into a venue emphasizing sustainable living, education, and recreation.

To pursue the goal of creating a Sustainable Living Park, in 2010 County Executive Jim Kreuser appointed the Green Ribbon Committee to spearhead the planning process and recommend a conceptual plan for park development to the County Board. This diverse group included membership from local public, private, and educational institutions. Beginning in May 2011, the Green Ribbon Committee worked with consulting firm SmithGroupJJR to evaluate the proposed park program and create a Master Plan for developing the facilities of KD Park. The resulting KD Parklands Master Plan Report was presented to the County Board of Supervisors in January 2012.

Following the completion of the Master Plan, the County had the opportunity to purchase 113 acres of land immediately adjacent to the west boundary of the park. The acquistion was completed for $810,000 in December 2012. In order to integrate the new property into the overall master plan, the County hired SmithGroupJJR to complete this Master Plan update.

1.2 Master Plan Update Process

As with the original master plan, the first step in evaluating the newly acquired parcel was to complete an Environmental Framework Plan that inventoried and assessed the natural and cultural resources of the project site. With assistance from County staff, the design team assembled and reviewed existing site information, including topography, surface drainage patterns, soils, utilities, structures, vegetation, invasive species control efforts, and historic context. The team also walked the new parcel with Parks Staff to evalutate the existing conditions and facilities present within the expanded project area.

After establishing a program for the new property, the original Master Plan graphics were revised to include facilities located on the new parcel. The diagrams include the following:

- Overall Master Plan
- Systems Overlay Diagram – Facilities
- Systems Overlay Diagram – Renewable Energy and Waste Management
- Systems Overlay Diagram – Restoration
- Systems Overlay Diagram – Circulation
- Systems Overlay Diagram – Recreation

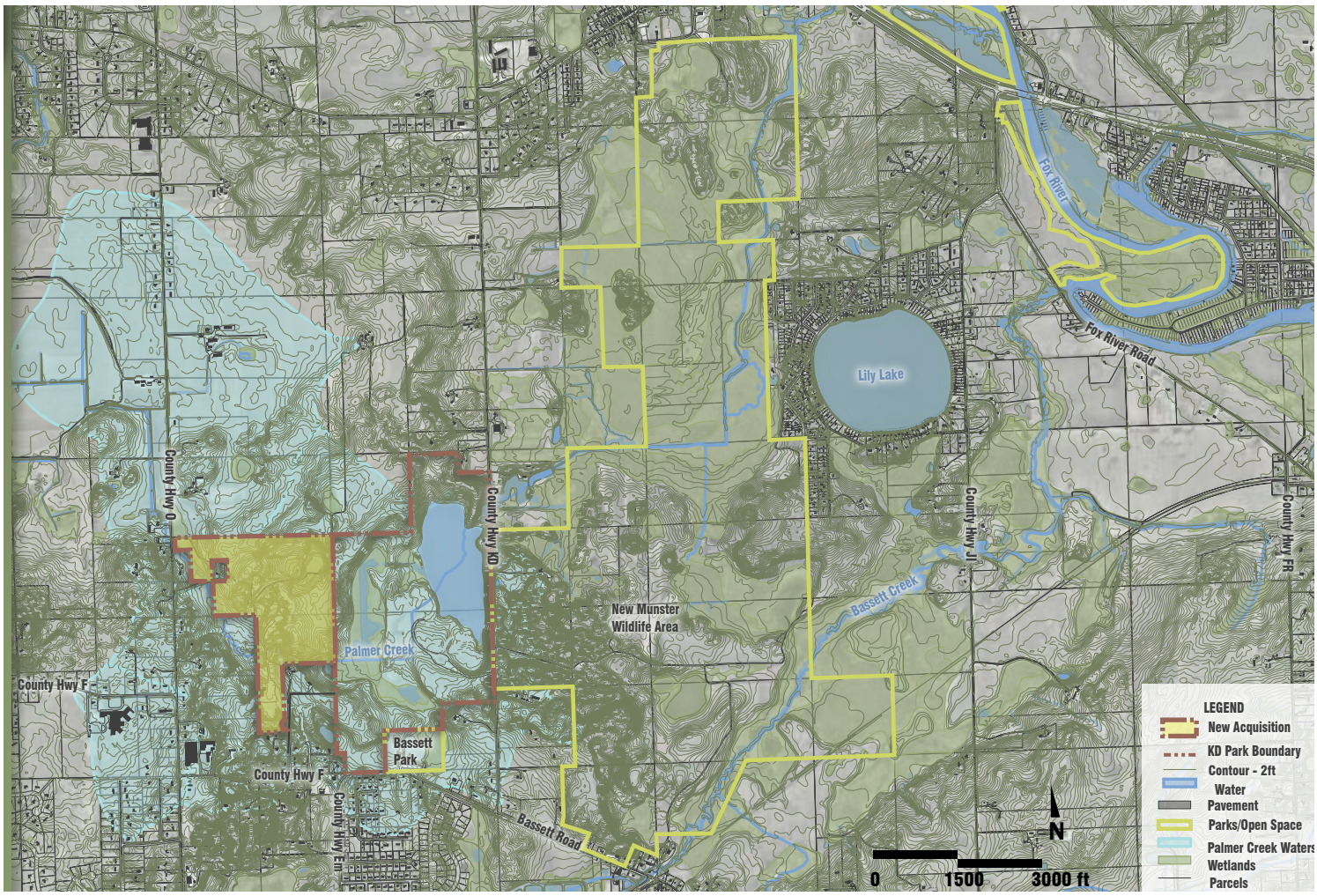
This summary document was then created as a companion to the original Master Plan report, and was presented to County Staff for approval.

The park features a diversity of habitat types from wetlands...

...to remnant oak savannas

2.0

ENVIRONMENTAL FRAMEWORK



Local Context Diagram

2.1 Description of New Property

Located to the west of the existing KD Park, the new park property encompasses approximately 113 acres, expanding the total park area to 347 acres. Formerly occupied by Powers Lake Construction, the rolling landscape provides excellent views both on and off the property. The land is entirely within the watershed for the KD Park lake, which forms the headwaters of an unnamed tributary to Palmer Creek. Palmer Creek is a cold water, Class III trout stream that is annually stocked in May with brown and rainbow trout. This purchase will provide greater protection of the fishery, as the permanently protected park land will maintain high water quality in the channel.

As with the original park, the majority of the property was purchased with a matching grant from the Knowles-Nelson Stewardship Program. The grant excluded the former construction office building, as well as the area south of the office that is reserved for the extension of CTH F. Stewardship grant restrictions apply to the remainder of the property, including the condition that the property must be open for hunting. This requirement applies only to the newly acquired parcel, not the original park, and may be managed by a permit system through the County.

2.2 Site Analysis

Property Access

Primary access to the recently acquired parcel is provided by Karow Road at the south edge of the property, which is a primarily residential street. However, the extension of CTH F planned for construction in 2019 will create a more visible entrance for the western portion of the park. The new CTH F road corridor will also clip the southwest corner of the existing park just south of the dog park to create a perpedicular intersection with CTH EM.

The northwest corner of the property also fronts on CTH O. Although this connection could provide a secondary entrance to the parcel, extensive wetlands and hydric soils appear to exist in this location that limit the area available for parking or trail improvements. A formal wetland delineation would be required prior to planning any facilities.

30% Preliminary Design layout for CTH F extension

Historic Land Use

As with KD Park, the park expansion area is a greatly disturbed landscape. The site was almost completely cleared of all natural vegetation for agricultural use by the 1930s. The construction operation that occupied the site for the last 50 years used the land as a dump site for excess materials, excavated soils, and discarded equipment. Many of the ravines in the center of the property are full of garbage, and numerous stockpiles of unknown materials are located in the center portion of a site. Large piles of broken asphalt and concrete are planned for removal by the County as part of the CTH F extension project, where they will be crushed as base material for the new road.

Existing Property

Property Acquisition

The former construction company headquarters provides offices, meeting space, and a large maintenance facility

A smaller garage is currently leased to a landscaping business

Structures and Circulation

The former Powers Lake Construction company headquarters sits at the end of Karow Road. A large building includes several offices, a conference room, a large meeting room, and a four-bay equipment storage and maintenance garage. The offices are currently unoccupied, but the garage area is being used as the Kenosha County Parks KD Maintenance Facility. A smaller, single garage building is located just to the north of the main facility, and is currently rented to a landscaping business. Surrounding these structures is a large asphalt parking lot and service yard, including fuel storage tanks.

A gravel service drive connects the maintenance facility to the center portion of the property, and a dirt-surfaced trail links to the current KD park through the southwest wooded area. Several snowmobile trails traverse the property, and an overhead electric line passes through the northwest corner to serve a residential property.

A gravel drive connects the former construction office to the quarry

The end of Karow Road currently splits to serve the gate to the new park property (left) and a private residence (right)

Hydrology

The headwaters of Palmer Creek pass through the site towards KD Park. Water generally enters the property at the northwest corner, where the stream has a defined channel through a wetland complex.

Four defined ponds exist on the property. A small pond located just north of the maintenance facility is shown on the 1995 aerial photo. Although the pond is located down in a steeply sided pocket, it appears to be connected via a culvert under the gravel service drive to a ditch leading east off the property that might convey water during large storm events. In line with this ditch is another small pond that is shared with the residential property to the south. The entire perimeter of this pond is being mowed by the adjacent property owner, who also has a small dock on his portion of the pond. Two quarry lakes in the center of the property were dug after the 1995 photo was taken. These lakes appear to be entirely disconnected from the stream hydrology, with no apparent surface outlet. Numerous small panfish were observed in the northern quarry lake.

Soils / Geotechnical

Soils on site consist of dark, muck soils in the wetlands and bottomlands, and well drained loamy soils in the uplands. The agricultural fields show evidence of erosion and mixing of the subsurface soil horizons, as the surface material is clay and very rocky. The center portion of the site has been highly disturbed by quarry operations. Over excavation of fill material may be required for facilities located within this area depending on building design and location.

No archeological resources are known to be on site.

Three small quarry lakes on the property are more sheltered than the larger KD lake

The southwest property line bisects a pond, the edge of which is being mowed by the adjacent property owner

Soils of the agricultural fields are eroded and rocky

Stockpiled asphalt and concrete debris will be used for the CTH F extension

Ravines throughout the upland old field area have been used as a dumping ground for equipment and trash

Snowmobile trail through an upland young woods

Natural Communities

Most of the site has regenerated naturally since being cleared for intensive agricultural uses in the early 1900's, and aggregate mining later in the century. Two remnant natural areas persist including a small, south-southwest facing dry hill prairie at the northeast corner of the site, and an oak woodland or savanna at the southeast end of the site. The following summarizes the existing conditions:

Upland Old Field/Scrub Shrub. This natural community occurs in the central portion of the site within the original mining footprint. Characteristic species include smooth brome, goldenrod, red top, Kentucky blue grass, daisy flea bane, phragmites, box elder, black locust, honeysuckle, walnut, and red cedar. Habitat value is low. This community would require intensive restoration of soils and vegetation to restore it to a healthy, functioning natural community.

Ponds. Four ponds which appear to be old gravel pits occur on site. Chara, curly dock, spike rush, cattail, phragmites, scouring rush, cottonwood, and sandbar willow are characteristic species that occur in and around the banks of the ponds. Common frogs and sunfish were observed in the deepest pond. Water clarity is good. These ponds could be restored to support sport fish and water dependent non-game species such as reptiles and amphibians, non-game fishes, and water dependent birds. Restoration measures could include excavation to create deep water habitat, and the creation of emergent wetland shelves along the water edge.

Dry Hill Prairie. The remnant hill prairie in the far northeast corner of the property is characterized primarily by a smooth brome grass matrix with pockets of remnant prairie plants including prairie dropseed, little bluestem, lead plant, flowering spurge, milkweeds and wild mint. It is likely that other native species preserved in the seed bank would emerge with management including prescribed fire, selective woody brush removal, and weed management. The restoration potential of this community is good.

Young Upland Woods. This natural community is most prevalent in the central area of the site surrounding the former aggregate mine. Characteristic species include box elder, walnut, black cherry, black locust, and other early successional species. While the soil structure of this community is likely intact, the native seed bank is likely gone due to intensive row cropping.

Mature Upland Woods. This woods in the southeast corner of the property is the highest quality natural community within the project area. Characteristic species include black oak, white oak, shagbark hickory, wild black cherry, enchanter's night shade and May apple. Invasive species such as European buckthorn, honeysuckle and box elder have begun to encroach. This natural community has the highest restoration potential on site and should be preserved, protected and restored.

Bottomland Forest and Marsh. Muck soils along Palmer Creek support stands of reed canary grass, phragmites and cattails. Woody vegetation including box elder, buckthorn, honeysuckle and wild cherry are encroaching along the edge of the marsh. While the effort to restore these wetlands would be relatively high, the return would be high as well since the County now owns most of the headwaters of Palmer Creek which feeds the large lake at KD Park.

Agricultural Land. Four agricultural fields at the north and east sides of the property are leased to a local farmer and are currently in soybean production. The soils in these areas are poor for agricultural use, and require high inputs of fertilizer and cultivation to produce crops. The fields are separated by strips of woodland that are dominated by invasive species such as buckthorn, garlic mustard, black locust, and honeysuckle.

No endangered species are known to be present on site.

Majestic oak trees dominate the canopy of the southeast woodland

A stream corridor and wetlands occupy the northwest corner of the property at CTH O

3.0

MASTER PLAN UPDATES

KD Parklands Master Plan

3.1 Overall Master Plan Summary

This document complements the original master plan report completed in November 2011. Programs and features designated for the original park property remain as defined by the earlier document. This report describes minor revisions to the original plan, as well as new facilities slated for the additional western parcel. This document also includes updated diagrams from the 2011 plan which describe key elements or systems including:

- Facilities
- Renewable Energy and Waste Management
- Restoration
- Access and Circulation
- Recreation

Park Program and Recommended Uses

The program for the original park area remains essentially unchanged from the 2011 master plan, which balanced faciliities teaching the benefits of sustainable living with other recreational uses such as fishing, kayaking, scuba diving, hiking, and bird watching. With the park expansion, the decision was made to expand recreational uses to the west while keeping the educational program concentrated closer to the main entrance.

The additional park area offers the opportunity to further develop the County's mountain bike trail system. The County's existing 10 miles of single-track and multi-use trails at Silver Lake Park are very popular, and are maintained through a partnership with the Southeast Wisconsin Trails Allianace (SEWTA). However, most of the trails at Silver Lake are targeted for beginner and intermediate trail users. The County hopes to continue their relationship with SEWTA to develop trails throughout the western portion of KD Park to target more advanced user groups.

In addition to the trail expansion, the small ponds located in the center of the western parcel provide a much more sheltered area for fishing that could be used when conditions are too windy on the larger lake. Families with young children may also prefer fishing access on this smaller water area.

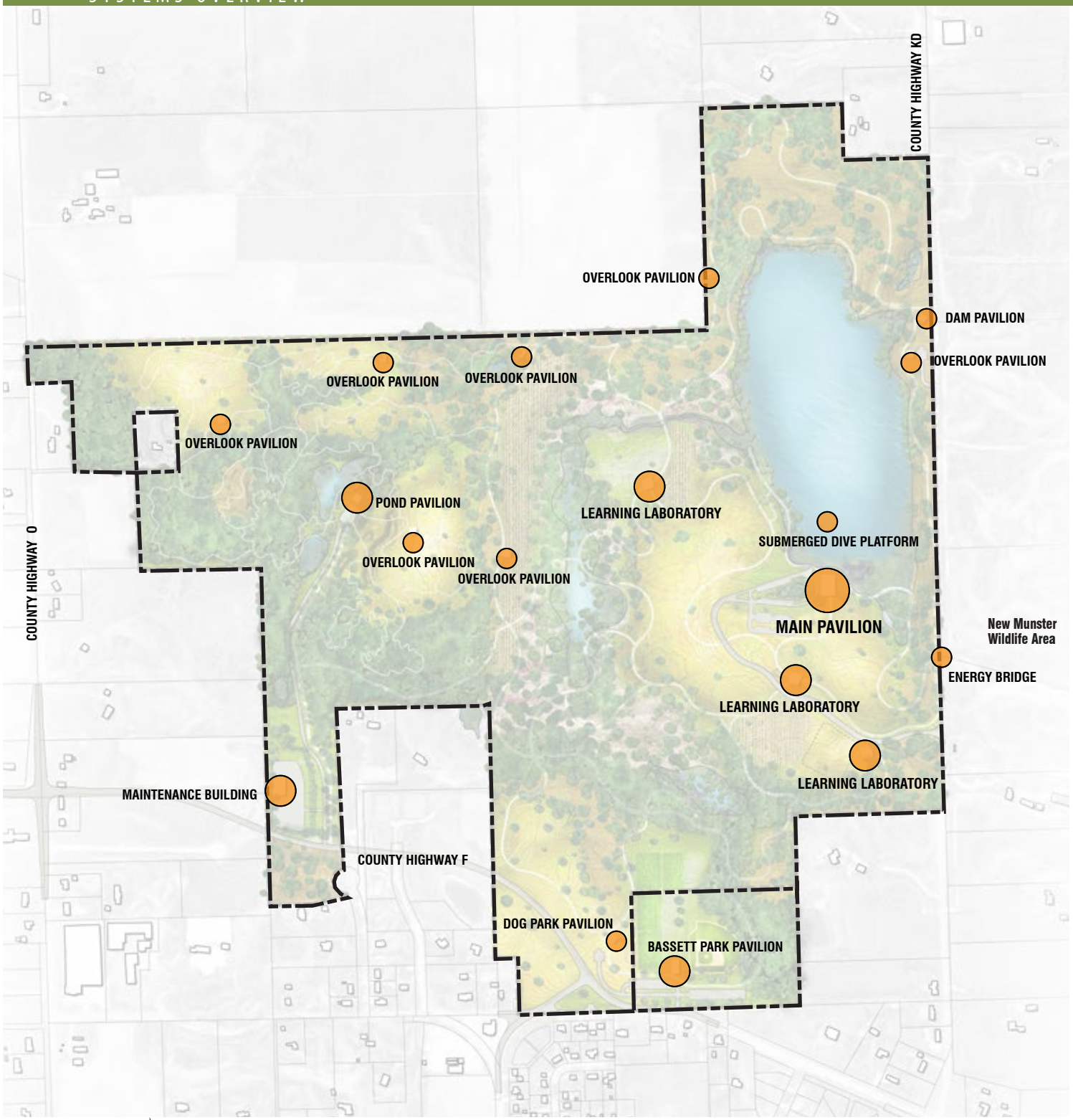
Revisions to the Existing Park Master Plan

Since the original master plan was completed in 2011, the County has begun implemenation of the recommended improvements. The updated plan reflects minor modifications in road and facility locations that were made during detailed design for the first two phases of construction.

Phase I includes construction of the new park entrance road from CTH KD. The road terminates on the south shore of the lake with a loop parking lot containing 19 stalls. A central bioswale feature within the loop treats stormwater runoff. A secondary parking lot located midway along the entrance road provides an additional 19 parking stalls. Excess material from construction of the road is used to create an overflow parking area south of the drive closer to the main entrance. This area will be maintained in prairie grass, which will be mown if additional parking is needed for large events.

The planned Phase II improvements include the addition of a boat launch off of the loop parking lot, as well as an accessible pier for fishing, kayak, and scuba diving access to the lake. Submerged dive platforms included in the original master plan may be constructed as part of Phase II in partnership with local dive shops. This phase also includes a 12-car parking lot to access trails on the east side of the lake.

To accommodate the finalized entry drive alignment from Phase I and II, the main building, learning laboratories, and bioprairie shifted slightly from their original plan locations. With this change, the zip lines connecting the facilities were also removed from the plan. Similarly, the design for the CTH F extension on the southwest corner of the park required changes to the shape of the dog park, eliminated the former solar energy / fuel crop demonstration plot, and reduced the size of the planned wind power installation in this location. The land separated from the remainder of the park by the new CTH F corridor is designated for prairie and oak savanna habitat restoration only with no public access.



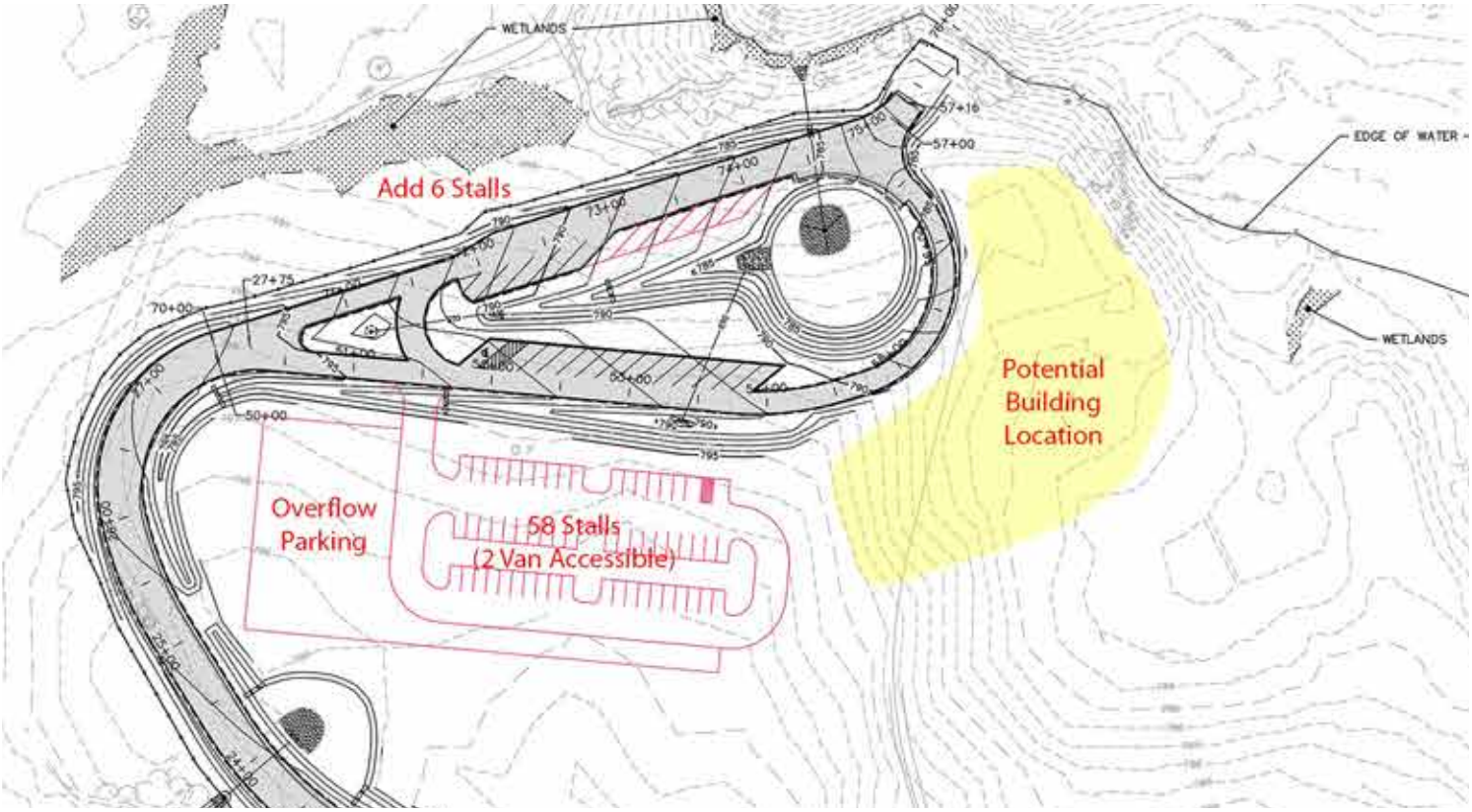
Systems Overlay Diagram - Facilities

3.2.1 Systems Overview: Facilities

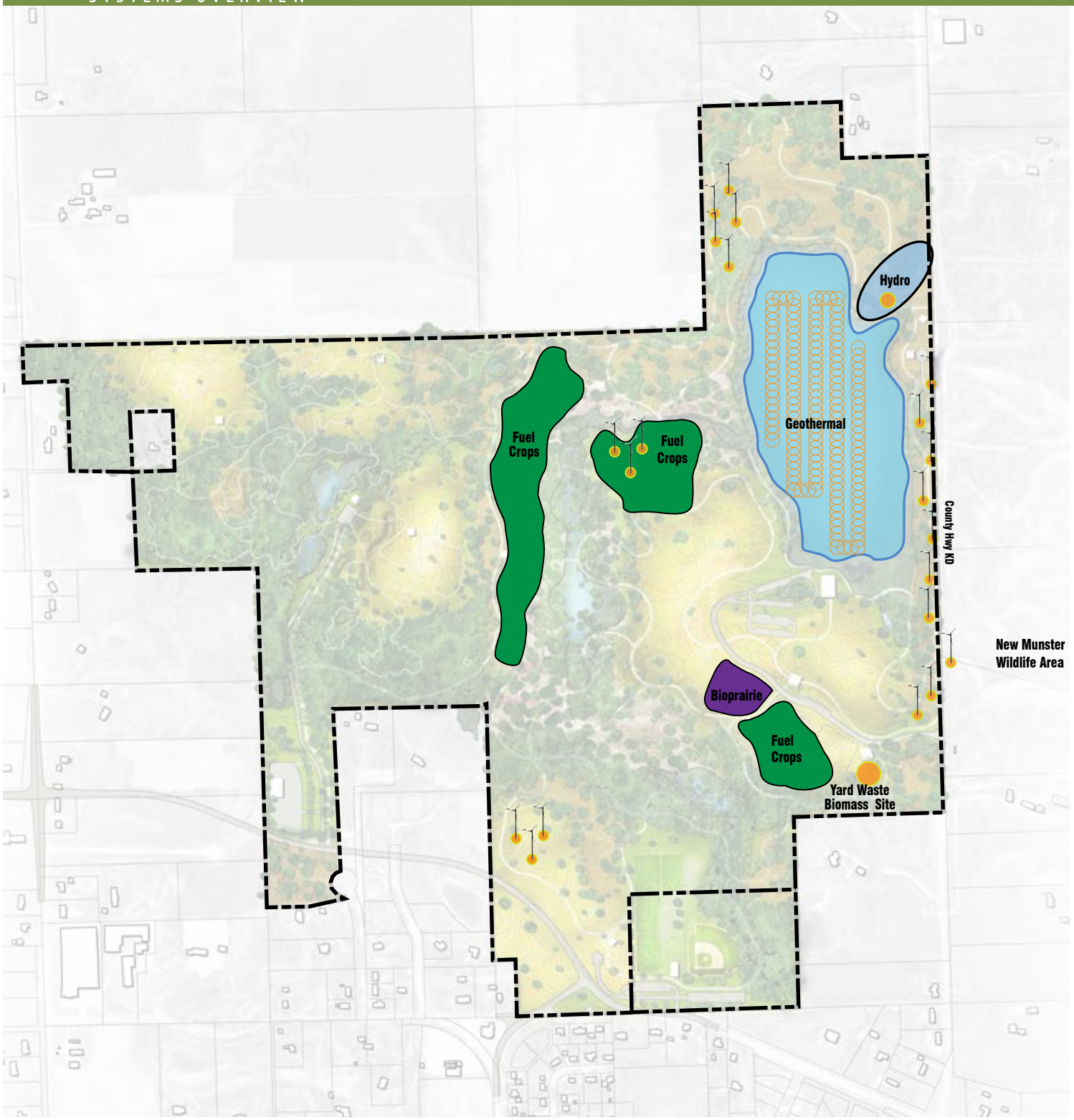
The previous master plan established a hierarchy of facilities for KD Park. The Main Pavilion on the lake edge will provide a year-round facility for visitor information, educational programming, restrooms, and a potential future retreat center. Preliminary planning is underway to implement the restroom portion of this structure, with the cability to be expanded in the future. As in the 2011 plan, the three Learning Laboratories will provide hands on demonstration activities and displays to support the park mission.

Other shelters are strategically placed throughout the site for supporting program uses and enjoying prime vistas. The 2011 plan called for an improved picnic shelter at Bassett Park. On the western parcel, a new pavlion is planned for the pond area which could accommodate a gathering of 75 to 100 people. Smaller shelters are included at the dog park and dam, as well as seven overlooks along the trail system.

The acquisition of the former Powers Lake Construction headquarters also allowed the park maintenance building to be relocated from the originally planned position next to the main entrance to take advantage of the existing structure. This large facility now supports park maintenance activities for the western half of the County. With the reconstruction of CTH F, the maintenance building should be screened from the new park entrance with dense landscaping. The County also may explore adding a secondary gated entrance directly from the maintenance parking to CTH F, although this will require another crossing of the new trail planned along the north side of the roadway.



Enlargement diagram of potential parking expansion and Main Pavilion location on Phase I construction plans

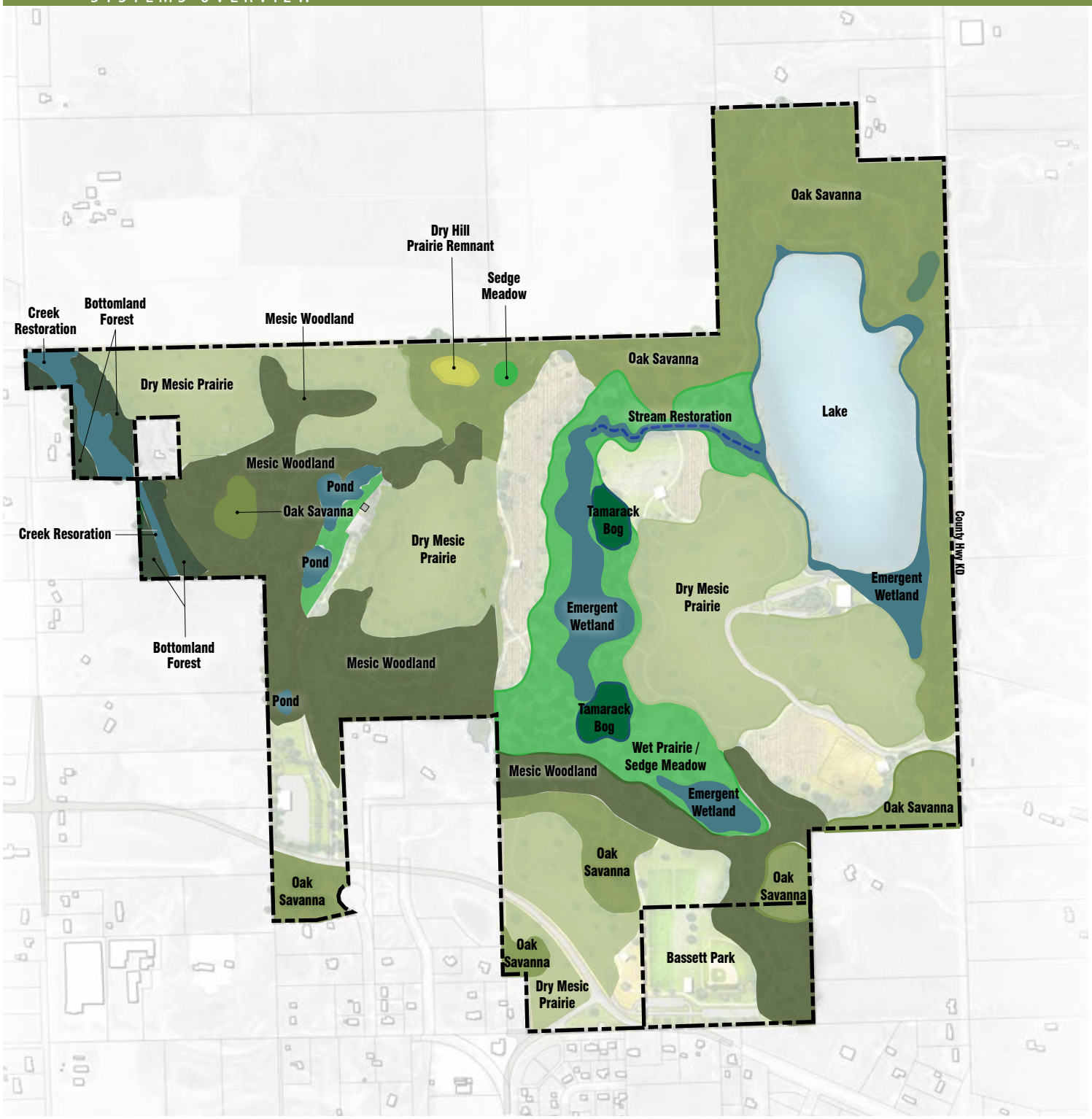


Systems Overlay Diagram - Renewable Energy and Waste Management

3.2.2 Systems Overview: Renewable Energy and Waste Management

The educational program focusing on renewable energy and waste management remains in the eastern portion of the park as shown by the 2011 master plan. As noted earlier, the only changes to the original plan include:

- The shift of the bioprairie due to the realignment of the main entrance road in Phase I implementation.
- Reduction in the size of the wind power demonstration planned for the southwest corner based on the CTH F extension.
- Elimination of the fuel crop or solar power demonstration on the southwest corner based on the CTH F extension.



Systems Overlay Diagram - Restoration

3.3.3 Systems Overview: Restoration

The long term vision for KD Park is to restore as much of the site as possible to functioning natural communities indigenous to Kenosha County, while also manipulating site hydrology to increase wetland restoration opportunities. Natural communities planned for the overall site include:

- Dry mesic prairie
- Oak savanna with pockets of dry prairie
- Mesic woodland
- Bottomland forest
- Wet prairie / sedge meadow
- Emergent wetland
- Tamarack bog

The restoration strategy for the eastern portion of the park remains generally as described in the 2011 master plan document. The only change in this plan update is a decision not to lower the water levels of the lake. Although this strategy was proposed in 2011 to create a larger emergent wetland shelf around the lake edge, the County is planning to construct the joint fishing pier and scuba dive platform in the immediate future, which requires the water level to remain at its current elevation for recreational access. The updated diagram at left shows a smaller wetland boundary only at the existing water edge.

Much of the western parcel has been heavily disturbed from natural conditions, with damaged soils, stockpiled construction materials and trash, invasive species infestations, and intensive agricultural use. The long-term restoration goals for this parcel are shown at left, and should be prioritized based on available funding and ease of potential improvements as follows:

Dry Hill Prairie - The far northeast corner of the western parcel contains a remnant dry hill prairie that could likely be improved with prescribed fire, selective woody brush removal and weed management.

Mature Woods - The mesic woodland in the southeast corner of the parcel is the highest quality community on the property. The largest threat to this area are invasive shrubs such as buckthorn and honeysuckle, which can be managed through cutting and treatment.

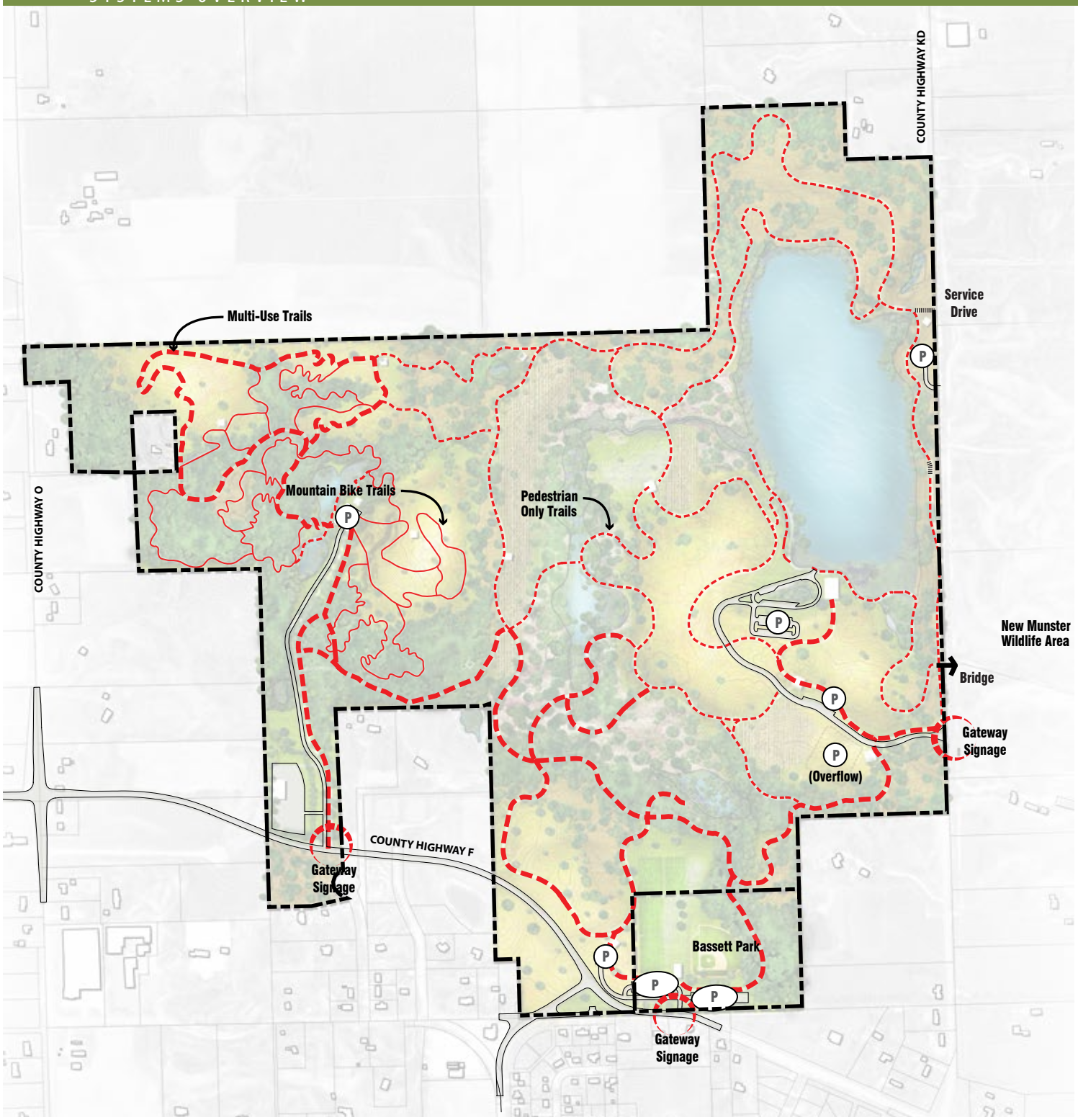
Agricultural Land - The soils of the agricultural fields on site are in poor condition due to years of sustained crop production. Although seeding these areas to prairie would be relatively easy to accomplish, it would need to be paired with control of the invasive species which dominate the fence rows between the fields. It would be beneficial to keep the fields in production to prevent the spread of weeds until funding is available to both plant and maintain the prairie restoration.

Bottomland Forest and Creek Restoration - The effort required to remove invasive reed canary grass and phragmites along the stream channel would be high, but would support other efforts to control phragmites around the lake edge. Restoration of the stream should include an assessment of the channel stability, removal of invasives, and management of the forest fringe to promote native hardwoods.

Ponds - The small ponds would likely support recreation activities in their current condition, given the observed vegetation and fish. Future habitat improvements could include excavation to create deeper water, and the creation of emergent wetland shelves along the water edge. This could be accomplished as part of a project to construct fishing access or boardwalks.

Young Woods / Upland Old Field / Scrub Shrub - These natural communities are the lowest priority due to their current state of disturbance. Although they are eventually shown by the plan to be restored as mesic woodland, oak savanna or dry mesic prairie based on their aspect and topography, this restoration would require intensive effort to produce results. For the interim, the following strategies are recommended:

- Contain invasives within these ares to prevent spread to the rest of the site. As crews are available, work from the outer edges that touch other park areas towards the center or property boundaries to push back the invasive seed source.
- Deep chisel plow to aerate the area compacted by the asphalt and concrete debris stockpiles when the material is removed for use in the CTH F construction. Seed this zone with dry mesic prairie. If topsoil is available from other sources, consider using it to improve this area.



Systems Overlay Diagram - Circulation

3.3.4 Systems Overview: Access and Circulation

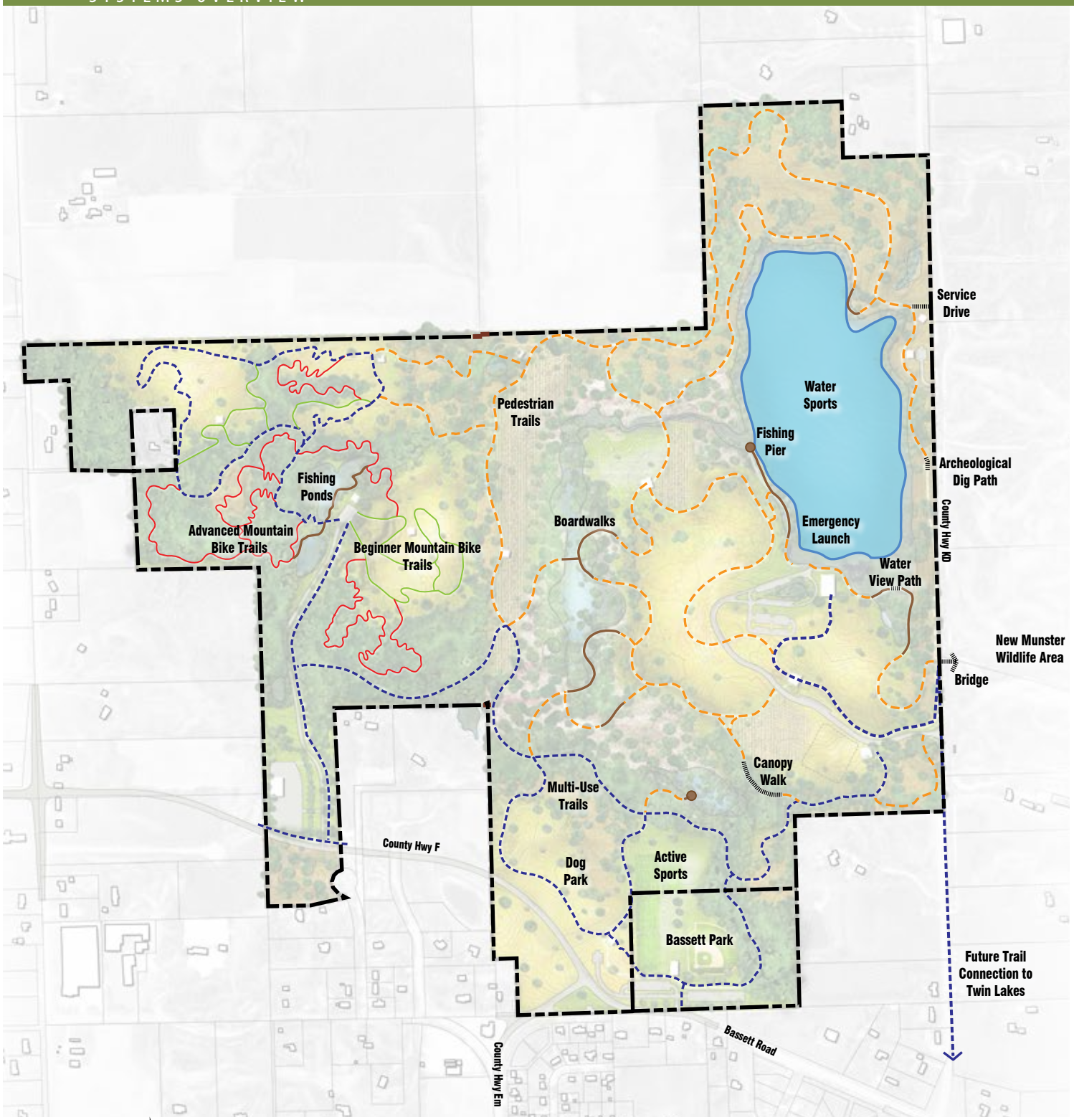
Site Circulation

As in the 2011 master plan, the entrance on Highway KD remains the primary access to the site. The intial Phase I construction provides 19 parking stalls at the lake edge. The diagram at right shows an expansion of this lot to provide a total of 83 stalls, which would accommodate a capacity of approximatley 250 users for the adjacent pavilion at a ratio of 1 car for every 3 people. Overflow parking is also available on the flat areas to the west and south of this lot to further accommodate large events.

The main access for the west parcel is from a new entrance off the CTH F corridor. A drive extends to the pavilion located near the pond and a parking lot with approximately 35 stalls.

The internal trail system connects the west and east portions of the park. A multi-use trail for shared bicycle and pedestrian use connects from the main pavilion to CTH KD and Bassett Park, as well as a loop around the dog park. This trail then extends through the mature woods on the west parcel, offering a different habitat experience. A connection to the south extends to the trail along CTH F as well as provides the ability for maintenance staff to access the main park without having to circulate out onto the exterior roadways. The north connection serves the pond picnic pavilion and provides a loop to access the mountain bike trail system.

Multi-use trails provide internal circulation for visitors and maintenance



Systems Overlay Diagram - Recreation

3.3.5 Systems Overview: Recreation

The recreational goal for KD Park is to allow for as many uses as possible without compromising the greater park mission for environmental education. To meet this objective, the following facility improvements were proposed for the site in the 2011 plan:

- Construct an extensive trail network.
- Provide multi-use trails that encourage park access by methods other than automobile.
- Increase water recreation safety with an emergency boat launch.
- Reconfigure the existing dog park boundary to respond to topography and to the CTH F extension.
- Long term goal to expand the existing Bassett Park active sports fields.

The original park master plan provided nearly 7 miles of trails, including multi-use paved trails, natural surfaced pedestrian trails and boardwalks. The west park expansion provides an additional 5.2 miles of trails for over 12 total miles. The 2011 report established the following design standards for trails:

- Pedestrian Trails - 10 feet wide to accommodate maintenance vehicles, surfaced with grass or wood chips.
- Multi-Use Trails - 10 feet wide, paved with porous asphalt or stabilized gravel. Initial trail development could also make use of recycled crushed asphalt from stockpiles on the western parcel.
- Boardwalks - 8 feet wide to accommodate small maintenance vehicles, surfaced with wood or recycled plastic decking material.

As discussed earlier, the western parcel of the park offers a unique opprortunity to expand the County's mountain bike trail system. The plan at right shows a single-track trail system served by a multi-use trail spline. These trails have been located to provide a varied of experiences through different habitats while protecting the limited sensitive areas on site. The design has a greater focus on advanced trails to complement the more beginner trail system at Silver Lake. The recreation diagram shows the proposed split between these trail types, with 2 miles of advanced trails and 1 mile for beginners. The multi-use

Single-track trails limit the impact on site ecology

Trail signage should be developed to indicate difficulty

Examples of signage used to manage hunting with other park use

paved trails accessing these trails provide an additional 2 miles of trails for bike use on the west portion of the park. The beginner trails would be 2 to 3 feet wide, while the advanced skills trails would vary in width based on terrain. The County may want to consider restricting use of these trails to mountain biking only with one way traffic for safety. All single track trails would be natural surfaced.

Given the hunting requirement of the Stewardship Grant for the western property, trail use may need to be managed during the hunting season. This can be accomplished through signage, a hunting permit system, specific trail closures and internet / social media postings.

In addition to the trail expansion, the small ponds located in the center of the western parcel provide a sheltered area for fishing that could be used when conditions are too windy on the larger lake. Families with young children may also prefer fishing access on this smaller water area. The plan shows a boardwalk located along the water's edge for fishing access.

4.0

APPENDICES

4.1 Observed Species Data

The following data records vegetation species observed on site during the June 20, 2013 project kickoff meeting.

FLORISTIC QUALITY DATA

76	NATIVE SPECIES
115	Total Species
2.8	NATIVE MEAN C
1.9	W/Adventives
24.5	NATIVE FQI
20.0	W/Adventives
0.4	NATIVE MEAN W
0.9	W/Adventives
AVG:	Faculative

Native	76	66.1%
Tree	17	14.8%
Shrub	7	6.1%
W-Vine	3	2.6%
H-Vine	0	0.0%
P-Forb	27	23.5%
B-Forb	2	1.7%
A-Forb	6	5.2%
P-Grass	6	5.2%
A-Grass	0	0.0%
P-Sedge	6	5.2%
A-Sedge	0	0.0%
Fern	2	1.7%

Adventive	39	33.9%
Tree	2	1.7%
Shrub	4	3.5%
W-Vine	0	0.0%
H-Vine	0	0.0%
P-Forb	19	16.5%
B-Forb	6	5.2%
A-Forb	3	2.6%
P-Grass	5	4.3%
A-Grass	0	0.0%
P-Sedge	0	0.0%
A-Sedge	0	0.0%

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
ACENEG	1	Acer negundo	-2	FACW-	Nt Tree	Boxelder
ACESAI	1	Acer saccharinum	-3	FACW	Nt Tree	Silver Maple
ACHMIL	0	Achillea millefolium	3	FACU	Ad P-Forb	Common Milfoil
AGRPAR	5	Agrimonia parviflora	-1	FAC+	Nt P-Forb	Swamp Agrimony
AGRALA	0	Agrostis alba	-3	FACW	Nt P-Grass	Red Top
ALIPAM	2	Alisma plantago-aquatica v. americanum	-5	OBL	Nt P-Forb	American Water Plantain
AMBART	0	Ambrosia artemisiifolia	3	FACU	Nt A-Forb	Common Ragweed
AMBTRI	0	Ambrosia trifida	-1	FAC+	Nt A-Forb	Giant Ragweed
AMMCOC	5	Ammannia coccinea	-5	OBL	Nt A-Forb	Long-Leaved Ammannia
AMOCAN	8	Amorpha canescens	5	UPL	Nt Shrub	Lead Plant
ARCMIN	0	Arctium minus	5	UPL	Ad B-Forb	Common Burdock
ARTVUL	0	Artemisia vulgaris	5	UPL	Ad P-Forb	Mugwort
ASCSYR	0	Asclepias syriaca	5	UPL	Nt P-Forb	Common Milkweed
ASPOFF	0	Asparagus officinalis	3	FACU	Ad P-Forb	Garden Asparagus
ASTPIL	0	Aster pilosus	4	FACU-	Nt P-Forb	Hairy Aster
ASTSHO	6	Aster shortii	5	UPL	Nt P-Forb	Short's Aster

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
BROINE	0	Bromus inermis	5	UPL	Ad P-Grass	Hungarian Brome
CXCEPP	3	Carex cephalophora	3	FACU	Nt P-Sedge	Short-Headed Bracted Sedge
CXPENP	5	Carex pensylvanica	5	UPL	Nt P-Sedge	Pennsylvania Oak Sedge
CXVULP	3	Carex vulpinoidea	-5	OBL	Nt P-Sedge	Brown Fox Sedge
CAROVT	4	Carya ovata	3	FACU	Nt Tree	Shagbark Hickory
CELOCC	3	Celtis occidentalis	1	FAC-	Nt Tree	Hackberry
CHEALB	0	Chenopodium album	1	FAC-	Ad A-Forb	Lamb's Quarters
CIRLUT	2	Circaea lutetiana v. canadensis	3	FACU	Nt P-Forb	Enchanter's Nightshade
CIRVUL	0	Cirsium vulgare	4	FACU-	Ad B-Forb	Bull Thistle
CONMAC	0	Conium maculatum	-3	FACW	Ad B-Forb	Poison Hemlock
CONMAJ	0	Convallaria majalis	5	UPL	Ad P-Forb	Lily-Of-The-Valley
CORAMO	10	Cornus amomum	-4	FACW+	Nt Shrub	Silky Dogwood
CORVAR	0	Coronilla varia	5	UPL	Ad P-Forb	Crown Vetch
DACGLO	0	Dactylis glomerata	3	FACU	Ad P-Grass	Orchard Grass
DAUCAR	0	Daucus carota	4	FACU-	Ad B-Forb	Queen Anne's Lace
ELEERY	3	Eleocharis erythropoda	-5	OBL	Nt P-Sedge	Red-Rooted Spike Rush
EQUARV	0	Equisetum arvense	0	FAC	Nt Fern	Common Horsetail
EQUHYE	2	Equisetum hyemale affine	-2	FACW-	Nt Fern	Tall Scouring Rush
ERIANN	1	Erigeron annuus	1	FAC-	Nt B-Forb	Annual Fleabane
EUPALT	2	Eupatorium altissimum	3	FACU	Nt P-Forb	Tall Boneset
EUPRUG	2	Eupatorium rugosum	3	FACU	Nt P-Forb	White Snakeroot
EUPCOR	3	Euphorbia corollata	5	UPL	Nt P-Forb	Flowering Spurge
EUTGRA	3	Euthamia graminifolia	-2	FACW-	Nt P-Forb	Grass-Leaved Goldenrod
FRAAMC	4	Fraxinus americana	3	FACU	Nt Tree	White Ash
FRAPES	2	Fraxinus pennsylvanica v. subintegerrima	-3	FACW	Nt Tree	Green Ash
GALAPA	0	Galium aparine	3	FACU	Nt A-Forb	Annual Bedstraw
GLEHED	0	Glechoma hederacea	3	FACU	Ad P-Forb	Ground Ivy
HACVIR	1	Hackelia virginiana	1	FAC-	Nt P-Forb	Stickseed
HELDIV	5	Helianthus divaricatus	5	UPL	Nt P-Forb	Woodland Sunflower
HESMAT	0	Hesperis matronalis	5	UPL	Ad P-Forb	Dame's Rocket
HYPPUN	3	Hypericum punctatum	-1	FAC+	Nt P-Forb	Spotted St. John's Wort
IRIPSE	0	Iris pseudacorus	-5	OBL	Ad P-Forb	Tall Yellow Iris
JUGNIG	4	Juglans nigra	3	FACU	Nt Tree	Black Walnut
JUNTEN	0	Juncus tenuis	0	FAC	Nt P-Forb	Path Rush
JUNTOR	3	Juncus torreyi	-3	FACW	Nt P-Forb	Torrey's Rush
JUNVIR	1	Juniperus virginiana	3	FACU	Nt Tree	Eastern Red Cedar

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
LEUVUL	0	Leucanthemum vulgare	5	UPL	Ad P-Forb	Ox-Eye Daisy
LONMAA	0	Lonicera maackii	5	UPL	Ad Shrub	Amur Honeysuckle
LOTCOR	0	Lotus corniculatus	1	FAC-	Ad P-Forb	Birdsfoot Trefoil
LYCAME	3	Lycopus americanus	-5	OBL	Nt P-Forb	Common Water Horehound
LYTSAL	0	Lythrum salicaria	-5	OBL	Ad P-Forb	Purple Loosestrife
MEDLUP	0	Medicago lupulina	1	FAC-	Ad A-Forb	Black Medick
MELOFC	0	Melilotus officinalis	3	FACU	Ad B-Forb	Yellow Sweet Clover
MORALB	0	Morus alba	0	FAC	Ad Tree	White Mulberry
NEPCAT	0	Nepeta cataria	1	FAC-	Ad P-Forb	Catnip
OENBIB	1	Oenothera biennis	3	FACU	Nt B-Forb	Common Evening Primrose
PANVIR	4	Panicum virgatum	-1	FAC+	Nt P-Grass	Prairie Switch Grass
PARQUI	2	Parthenocissus quinquefolia	1	FAC-	Nt W-Vine	Virginia Creeper
PENSED	2	Penthorum sedoides	-5	OBL	Nt P-Forb	Ditch Stonecrop
PHAARU	0	Phalaris arundinacea	-4	FACW+	Ad P-Grass	Reed Canary Grass
PHRAUS	1	Phragmites australis	-4	FACW+	Nt P-Grass	Common Reed
PLAMAJ	0	Plantago major	-1	FAC+	Ad P-Forb	Common Plantain
PLARUG	0	Plantago rugelii	0	FAC	Nt A-Forb	Red-Stalked Plantain
POACOM	0	Poa compressa	2	FACU+	Ad P-Grass	Canadian Blue Grass
POAPRA	0	Poa pratensis	1	FAC-	Ad P-Grass	Kentucky Blue Grass
PODPEL	4	Podophyllum peltatum	3	FACU	Nt P-Forb	May Apple
POLAMP	3	Polygonum amphibium	-5	OBL	Nt P-Forb	Water Knotweed
POPDEL	2	Populus deltoides	-1	FAC+	Nt Tree	Eastern Cottonwood
POPTRE	3	Populus tremuloides	0	FAC	Nt Tree	Quaking Aspen
POTCRI	0	Potamogeton crispus	-5	OBL	Ad P-Forb	Beginner's Pondweed
POTSIM	3	Potentilla simplex	4	FACU-	Nt P-Forb	Common Cinquefoil
PRUSER	1	Prunus serotina	3	FACU	Nt Tree	Wild Black Cherry
PRUVIR	3	Prunus virginiana	1	FAC-	Nt Shrub	Common Choke Cherry
PYCVIR	5	Pycnanthemum virginianum	-4	FACW+	Nt P-Forb	Common Mountain Mint
QUEALB	5	Quercus alba	3	FACU	Nt Tree	White Oak
QUEMAC	5	Quercus macrocarpa	1	FAC-	Nt Tree	Burr Oak
QUERUB	5	Quercus rubra	3	FACU	Nt Tree	Northern Red Oak
QUEVEL	5	Quercus velutina	5	UPL	Nt Tree	Black Oak
RHACAT	0	Rhamnus cathartica	3	FACU	Ad Shrub	Common Buckthorn
RHUGLA	1	Rhus glabra	5	UPL	Nt Shrub	Smooth Sumac
ROBPSE	1	Robinia pseudo-acacia	4	FACU-	Nt Tree	Black Locust
RORISF	4	Rorippa palustris v. Fernaldiana	-5	OBL	Nt A-Forb	Marsh Yellow Cress
ROSMUL	0	Rosa multiflora	3	FACU	Ad Shrub	Japanese Rose

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
RUBALL	2	Rubus allegheniensis	2	FACU+	Nt Shrub	Common Blackberry
RUMCRP	0	Rumex crispus	-1	FAC+	Ad P-Forb	Curly Dock
SALEXI	1	Salix exigua	-5	OBL	Nt Shrub	Sandbar Willow
SAMCAN	2	Sambucus canadensis	4	FACU-	Nt Shrub	Common Elder
SCHSCO	5	Schizachyrium scoparium	4	FACU-	Nt P-Grass	Little Bluestem
SCIATR	4	Scirpus atrovirens	-5	OBL	Nt P-Sedge	Dark Green Rush
SCITAB	4	Scirpus tabernaemontanii	-5	OBL	Nt P-Sedge	Great Bulrush
SMIRAC	4	Smilacina racemosa	3	FACU	Nt P-Forb	Feathery False Solomon Seal
SMISTE	5	Smilacina stellata	1	FAC-	Nt P-Forb	Starry False Solomon Seal
SOLCAN	1	Solidago canadensis	3	FACU	Nt P-Forb	Canada Goldenrod
SONOLE	0	Sonchus oleraceus	3	FACU	Ad A-Forb	Common Sow Thistle
SORNUT	4	Sorghastrum nutans	2	FACU+	Nt P-Grass	Indian Grass
SPOHET	9	Sporobolus heterolepis	4	FACU-	Nt P-Grass	Northern Drop Seed
TANVUL	0	Tanacetum vulgare	5	UPL	Ad P-Forb	Common Tansy
TAROFF	0	Taraxacum officinale	3	FACU	Ad P-Forb	Common Dandelion
TOXRAD	1	Toxicodendron radicans	3	FACU	Nt W-Vine	Poison Ivy
TRIPRA	0	Trifolium pratense	2	FACU+	Ad P-Forb	Red Clover
TYPLAT	1	Typha latifolia	-5	OBL	Nt P-Forb	Broad-Leaved Cattail
TYPGLA	0	Typha x glauca	-5	OBL	Ad P-Forb	Hybrid Cattail
ULMPUM	0	Ulmus pumila	5	UPL	Ad Tree	Siberian Elm
ULMRUB	3	Ulmus rubra	0	FAC	Nt Tree	Slippery Elm
VERTHA	0	Verbascum thapsus	5	UPL	Ad B-Forb	Woolly Mullein
VERHAS	3	Verbena hastata	-4	FACW+	Nt P-Forb	Blue Vervain
VIBOPU	0	Viburnum opulus	0	FAC	Ad Shrub	European High-Bush Cranberry
VIOSOR	3	Viola sororia	1	FAC-	Nt P-Forb	Woolly Blue Violet
VITRIP	2	Vitis riparia	-2	FACW-	Nt W-Vine	Rivervbank Grape