

Ecological Advocacy Committee  
Venues Parks and Arts  
City of South Bend, Indiana

October 13, 2020

Board of Park Commissioners  
City of South Bend Venues Parks and Arts  
321 East Water Street South Bend, IN 46614

Dear Commissioners,

The idea to create a VPA park at the five-acre city-owned property informally known as the “35<sup>th</sup> Street Wetlands” was proposed to the Board of Park Commissioners in December 2017. The Ecological Advocacy Committee (EAC) has supported this concept since its inception and some members have taken an active role in helping to develop this idea. In this letter, we provide a brief rationale for why we support efforts to create a park at 35<sup>th</sup> Street and we offer a set of recommended priorities for park planning and implementation.

This letter was prepared by the EAC 35<sup>th</sup> St wetlands subcommittee. The full EAC reviewed and approved this letter and the enclosed rationale and recommendations. We hope that you find this information useful.

Sincerely,



Steve Sass  
Chair, Ecological Advocacy Committee

Enclosures:

- 1) EAC rationale for a park at the 35<sup>th</sup> Street Wetlands
- 2) EAC priority considerations for park planning and implementation at 35<sup>th</sup> Street Wetlands

### **EAC Rationale for a park at the 35<sup>th</sup> Street Wetlands**

- The five-acre city-owned property is currently zoned as SF1 (Single Family and w/o Family District), which allows for public parks (active or passive).
- The establishment of a park at 35<sup>th</sup> St would be consistent with Strategic Focus Area 1 in the VPA Strategic Plan (2017 – 2021): “Major capital investments” informed by the 2014 Master Plan GRASP Index and the Trust for Public Land (TPL). The property is situated in the middle of one of the areas that the GRASP analysis and the TPL ParkServe analysis classify as a “top 3” and “very high need” area.
- A TPL ParkServe project area report indicates that a park at this location would serve approximately 3300 individuals and nearly 1400 households, which is on par with some of the larger parks in VPA’s portfolio.
- An approximately three-quarter acre persistent wetland is present and supports a diverse community of wetland plants, including rare and threatened species. The wetland is surrounded by successional shrubs and mature trees on the upland margins. The site is an “oasis” of nature in an urban setting and presents an opportunity for a unique “nature park” focus as part of the VPA portfolio.
- Having wetlands on any park property is especially valuable, considering that nearly 90% of all wetlands in the state of Indiana have been lost. Properties that contain wetlands are designated “Sensitive Areas/Properties” in the VPA NRMP.
- An open grassy area on the southern upland edge of the property provides an opportunity for interactive, nature-themed playground elements and other park amenities.
- Consistent with the VPA Natural Resource Management Plan (NRMP) “identified topics of concern,” the site presents opportunities for:
  - Balancing recreational use with environmental responsibility
  - Increased public awareness and outreach
  - Providing a site for environmental education
  - Protection of wetlands
  - Removal and control of invasive species
  - Restoration of native plant species
- A park at 35<sup>th</sup> St would be consistent with the recent trend in highlighting the natural communities and biodiversity of South Bend (e.g. Pinhook park improvements and interpretive signage, Howard Park bioswale and signage, Leeper Park river overlook).

### **EAC priority considerations for park planning and implementation at the 35<sup>th</sup> Street Wetlands**

Ecological protection and restoration are core components of the draft site plans that have been developed for the 35<sup>th</sup> Street Wetlands by Notre Dame Senior Engineering Capstone students (Spring 2020) and by VPA (Fall 2018 and Spring 2020). The EAC agrees that retaining the ecological features of the area should be a top priority in designing a park at 35<sup>th</sup> Street.

The site contains a unique assemblage of wetland flora and fauna, including plants classified as state rare or threatened species. The natural diversity and character of the 35<sup>th</sup> Street wetlands in the middle of an otherwise urban environment would be unique among VPA park properties. In addition, the comparatively young demographic of the area that would be served by a park at 35<sup>th</sup> Street, combined with the proximity to a number of local primary schools (including McKinley, Nuner, St Anthony de Padua) suggests significant opportunities for environmental education and outreach to promote “an ethic of environmental stewardship” in the city of South Bend.

Delivering on opportunities for environmental education and creating a park that protects nature and inspires people will require a proactive and intentional effort by VPA to address existing threats to the ecology and natural character of the 35<sup>th</sup> Street wetlands. Here, we briefly describe these threats and offer recommendations for ecological protection and restoration activities that should be incorporated into park planning efforts at the 35<sup>th</sup> Street park.

#### *Overview of Threats*

##### 1) Invasive plants

Invasive species are species that are non-native to a particular area and that cause harm (ecological, economic, or human health). By their very nature, invasive species tend to spread quickly and outcompete native species, which can reduce biodiversity and disrupt normal ecosystem function. While the 35<sup>th</sup> Street Wetlands contain a variety of native species indicative of a moderate to high-quality natural wetland community, various invasive species are also present and continue to spread. Species listed as “invasive” per the Indiana Invasive Species Council” that have been documented at the site include,

- Reed canary grass (*Phalaris arundinacea*)
- Wintercreeper (*Euonymus fortunei*)
- Siberian Elm (*Ulmus pumila*)
- White Mulberry (*Morus alba*)
- Japanese Honeysuckle (*Lonicera japonica*)
- Asian Bush Honeysuckle (*Lonicera maackii*)
- English Ivy (*Hedera helix*)
- Multiflora Rose (*Rosa multiflora*)
- Garlic Mustard (*Alliaria petiolata*)
- Hybrid Cattail (*Typha X glauca*)
- Tree-of-Heaven (*Ailanthus altissima*)

Some of these species are largely isolated or small in number (e.g. Siberian Elm, Multiflora Rose, Hybrid Cattail). Other species are widespread and dominate some portions of the site (e.g. Reed Canary Grass and English Ivy). Effective strategies to manage these invasive plants will vary by

species. The larger trees and shrubs (e.g. Siberian Elm, Multiflora Rose, White Mulberry) can be removed fairly easily by cutting. Effective removal of many of the herbaceous plants will likely require a long-term management strategy that integrates various chemical, physical, or mechanical treatment techniques and that includes plantings to restore native species in the disturbed areas of the wetland. Left untreated, species like Reed Canary Grass, which already covers nearly one acre of the northern portion of the site, will continue to spread and will reduce the ecological, aesthetic, and recreational values of the wetland.

## 2) Stormwater

Several stormwater sewer outfalls enter the 35<sup>th</sup> Street Wetlands. Two major outfalls are on the north and northwest edge of the site, which attach to stormwater networks draining from nearby streets and subdivisions to the north. Four other minor outfalls are on the site, draining from adjoining lots. Based on delineation of the existing tributary area of the basin using the City of South Bend's sewer atlas, the existing network drains at least 24 acres of impervious roads.

As an active stormwater retention basin, the site serves a valuable purpose by preventing stormwater runoff directly into surface waters, including the Saint Joseph River. However, the existing stormwater system funnels trash, sediment, excess nutrients, and contaminants from the surrounding area into the wetland. This situation likely exacerbates the invasive plant problem, as plants like Reed Canary Grass thrive in disturbed areas with high nutrient availability. Not coincidentally, Reed Canary Grass is most widespread and abundant in the northern end of the site nearest the largest stormwater sewer outfall. From an ecological perspective, managing stormwater influence at the site will be important to mitigate pollution, eutrophication (an excess of nutrients), and contamination in the park.

Preliminary calculations of water storage volumes for the basin fall well within the capacity of the reservoir. Standing water has been observed at the site after large storm events, but a pump station installed at the south end of the site to move stormwater from the basin into the combined sewer system has never been activated and is no longer in service. The siting of park design elements (e.g. boardwalks, overlooks, walkways) would need to take into consideration stormwater frequency and the predicted extent of water levels at the site after storm events.

## 3) Trash

In April 2019, University of Notre Dame students visited the 35<sup>th</sup> Street Wetlands for a beautification project as part of the annual Back the Bend event. Over the course of two-hours, twenty-six student volunteers collected more than thirty contractor bags full of trash. Eight tires, two plastic "kiddie pools," four mattresses, three car doors, and a bowling ball were also removed from the site. The site has been long neglected and has become a dumping ground for some people in the community. As noted above, stormwater sewer outfalls at the site also bring trash from the surrounding streets into the site.

## 4) Nuisance animals

A population of feral cats has been present on the site for at least two years. Feral cats, which are not socialized to humans and live entirely outdoors, can cause severe ecological impacts and are also vectors for diseases like rabies and toxoplasmosis. Numerous studies have documented

decreased native wildlife abundance and diversity in the presence of feral cats. In the US, feral and free-ranging domestic cats are the largest human-influenced source of mortality for birds and mammals in the country.

*EAC recommendations:*

1) Invasive plant mitigation and restoration of the native plant community

To mitigate the long-term potential for significant biodiversity loss and irreversible damage to the existing aesthetic, VPA should **hire an environmental consultant to develop an invasive species management and native species restoration plan for the 35<sup>th</sup> Street Wetlands**. The plan would likely entail a multi-phase assessment, management, and monitoring approach. An integrated management approach, including physical, chemical, and mechanical control options and subsequent planting of native species will likely be required for successful control and remediation. Treatment of underlying factors contributing to invasive species establishment and spread (including stormwater impacts, mentioned below) will also need to be addressed. The contractor should have requisite expertise and experience in managing herbaceous weeds, especially Reed Canary Grass, in sensitive wetland habitats. **Volunteer-based invasive species removal efforts will be successful for some species (e.g. garlic mustard) and should be coordinated with VPA and community member leadership.**

2) Stormwater management

Improving stormwater management at the 35<sup>th</sup> Street Wetlands will require both short term and long term planning and implementation efforts. **In the short term**, impacts of stormwater events on the ecology and aesthetic of the wetland should be mitigated by: **1) installing trash screens on stormwater outfalls, and 2) managing erosion around stormwater outfalls** (e.g. installation of rip rap armoring or vegetated filter strips and removal or re-engineering of outfalls). Installing these engineered elements or otherwise addressing impacts of stormwater inputs is most important at the largest outfalls on the north and northwest edges of the property.

**In the long term**, efforts to expand green stormwater infrastructure in the drainage basin will help to reduce the flow of trash, sediment, nutrients, and contaminants into the wetland. VPA should initiate efforts to **map and develop a green infrastructure plan for the drainage basin that will reduce stormwater inputs to the 35<sup>th</sup> Street site**. Expertise within City of South Bend Public Works or Office of Sustainability could help with these efforts, or volunteer capacity within the community could be enlisted to help with the project (e.g. Notre Dame Center for Civic Innovation). Efforts to reduce stormwater inputs and restore the natural hydrology of the site will be important for the long-term restoration of the 35<sup>th</sup> Street Wetlands ecosystem.

3) Trash mitigation

**A solid-waste management strategy should be developed for the site**. Preventing dumping of inorganic and organic wastes, reducing trash and floatables that enter with stormwater inputs, and managing trash and litter from visitors to the park will be important for retaining the aesthetic and preventing direct and indirect (chemical and biological) hazardous effects on the

environment and wildlife at the 35<sup>th</sup> Street wetlands. As mentioned above, trash screens could be installed on stormwater outfalls to prevent or reduce the amount of solid waste entering the site with stormwater. Trash receptacles should be placed on site and strategically located to discourage littering. Signs to discourage dumping or waste disposal may be required. Park improvements and use would also likely help diminish the level of illegal dumping.

4) Nuisance wildlife mitigation

**A program for feral cat population control should be developed for the site.** Meow Mission, a non-profit that practices Trap/Neuter/Return (TNR) practices in an effort to reduce free-roaming cat populations in the region, is active at the 35<sup>th</sup> Street Wetlands. However, the efficacy of TNR practices is disputed and the scientific literature indicates that TNR programs have little or no effect for population-level control of feral cats. In light of the potential impacts of a feral cat population on resident wildlife and because of the risk to public health, a humane approach to remove the feral cat population at 35<sup>th</sup> Street wetlands should be implemented.

5) Environmental Education opportunities

“Ecology” is one of five major impact drivers that VPA strives to address, and the Department rightly proclaims that “we hold ourselves accountable for ecological progress...and engaging in public ecology education.” Similarly, “increased public awareness” and “developing nature programs and events to promote city values” are identified as topics of concern in VPA’s Natural Resource Management Plan (NRMP). **VPA should strive to create a “nature park” experience at the 35<sup>th</sup> Street Wetlands that will inspire an ethic of environmental stewardship among local citizens.** Educational signage highlighting the natural features and ecology of the site and explaining restoration and protection efforts should be installed. Nature-themed design elements should be incorporated (e.g. playground equipment made of natural materials or featuring images or models of local wildlife). VPA or partner-led interpretive programs should be established to bring residents (especially students) to the site to learn about and experience the wetland.

6) Ecologically neutral site design

**Park design and siting of all park amenities should ensure that the natural features and ecological function of the property are retained or improved.** Site design and construction should be sensitive to identified topics of concern described in the VPA NRMP, including protecting the wetland, controlling erosion and restoring degraded areas, responsible “dark sky” practices for outdoor lighting, maintaining native plant diversity, controlling invasive species, preserving microhabitats that support wildlife, and maximizing biodiversity with habitat enhancements. Sensitive areas of the park should be identified and impacts from construction avoided (e.g. areas with rare or threatened plant species). Construction and walking path materials should be sustainably sourced where possible and eco-friendly. For example, aggregate that could produce fine sediment or alkaline (high pH) runoff (e.g. Limestone) that could damage the wetland should be avoided.