CITY OF SOUTH BEND
VENUES PARKS & ARTS

A NOTE FROM VENUES PARKS & ARTS ON LEEPER PARK DUCK POND

As you're likely aware, the City of South Bend's Venues Parks & Arts Department has been leading a several month process to reimagine and upgrade our riverfront parks and trails, alongside an aggressive plan to upgrade many neighborhood parks and community centers. This will set a new standard in excellence and accessibility for some of our city's most valuable resources. It's an exciting time for the park system and the community is showing extremely broad support for these long-overdue upgrades.

Despite the overwhelming enthusiasm to invest in our city's natural spaces, the conversation has recently shifted to focus on one very specific topic, the Leeper Park Duck Pond. A recently released concept for Leeper Park involves transforming the duck pond into an area that will house the historic Studebaker Fountain once it's restored. These decisions are not mutually exclusive of one another, but they do seem to complement one another. This latest concept also involves installing three decks along an enhanced Leeper Riverwalk to overlook the river, creating space for observing wildlife in its natural habitat. No ducks or geese are harmed, but returned to their native areas. Additionally, a regional waterfowl rehabilitator will be on hand to ensure successful transitions, which may also include adoption of some the domesticated animals.

This latest concept also involves installing three decks along an enhanced Leeper Riverwalk to overlook the river, creating space for observing wildlife in its natural habitat. No ducks or geese are harmed, but returned to their native areas.

This park upgrade solves a major issue that cities across the country are struggling with. Numerous studies show that duck ponds aren't healthy for the wildlife nor the environment. This isn't a case of maintenance neglect nor a need for a cleaning regiment. Overcrowding, disease, landscape degradation, hybridization, water pollution, and other issues prevail. Organizations such as zoos and aquariums have had to adjust how they think and treat animals through the years; parks systems are no different.

As a community, we must do better in our responsibility of stewardship for the local wildlife.

We recognize that residents love the duck pond because of the experiences they have created there. We understand the value of having a place where families make memories and share rituals with children and grandchildren over the years. We appreciate how people enjoy watching the changing seasons and sharing in the growing of the ducklings and goslings. We don't want to take any of that away. We are striving to create upgraded place-making for those kinds of experiences. Our plans endeavor to allow people to experience all those connections to nature and more - in a safer, healthier, more natural environment for the community and for the birds.

Additionally, we'll continue to be in consultation with the DNR, water and soil experts, zoologists, our Ecological Advocacy Committee, the Audubon society, the Historic Preservation Committee, environmentalists, and waterfowl experts. We are still several months away from a decision point in this matter and would like to stress that there is no urgency here.

We look forward to working together as a community to take care of our native animals, our natural resources, our shared spaces and shared history.

HISTORIC VALUE OF THE PARK

One of the things we've been most concerned with throughout the planning process is maintaining true to the spirit of historic plans. Some of this work is unfolding even now. As approved by Historic Preservation Commission and in conjunction with a STEAM partnership involving Memorial Hospital and Madison School, a host of historic upgrades have been completed at Leeper Park. This includes the following:

- The introduction of paths and significant landscaping features that were envisioned in early 20th century Leeper plans.
- A soon-to-open lavender labyrinth.
- Restoration of the Ziegler outdoor performing arts center just north of the Leeper rose garden.
- Support of efforts to "Resurrect the Roses", investing in the volunteer-led initiative to return the historic rose garden to its former glory.
- Refurbishing of the widely popular tennis courts, with plans to further upgrade the facility.
- Support of a community-led initiative to restore the historic Studebaker Fountain and propose to place it in Leeper Park, not far from where the Bugbee Fountain stood in the early 1900's.

There is a deep sense of history in Leeper Park and the surrounding neighborhoods that nurtures a significant amount of civic pride. This is something we never want to see fade.

*Conceptual plan for review and discussion

ANIMAL WELFARE & ENVIRONMENTAL STEWARDSHIP

Over the past several decades, society's understanding of and compassion for animals has evolved. What was once acceptable in zoos and aquariums is no longer thought to be humane. This is the same in our parks system. Across the country, cities are forgoing unnatural spaces in favor of more organic habitats. Our research on the topic of duck ponds specifically as it relates to animal and environmental welfare includes:

Malnutrition[1]

Through evolution, wildlife species have developed skills to obtain food that contains the essential nutrients needed to survive, reproduce and live a healthy life. These skills help maintain a balance between animals and their natural habitat. This balance is compromised by hand feeding, which is physically harmful to birds and is one of the primary causes of malnutrition.

It would seem that providing food for ducks and geese would make them healthier. However, this is not the case. Waterfowl at artificial feeding sites are often found to suffer from poor nutrition. In natural settings, waterfowl seek and feed on a variety of nutritious foods such as aquatic plants, natural grains, and invertebrates. Many of the items commonly used to feed waterfowl (bread, corn, popcorn, etc.) are low in protein and are very poor substitutes for natural foods. [5]

Visible symptoms of poor nutrition and advanced stages of starvation are often seen at artificial feeding sites. For example, waterfowl may have drooping wings or may lose their ability to fly.

Natural foods are also widely scattered. Ducks and geese are able to find these foods and eat them in relative seclusion. At artificial feeding sites, competition for each scrap or kernel is high. Some ducks and geese (usually the youngest) are unable to compete for handouts.

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Malnutrition leads to:

- Low energy and muscle deterioration.
- Development of deformed wings in young birds.
- Loss of flight later in life.
- Lowered ability to avoid predation.
- Decrease in successful reproduction.
- Lowered life expectancy.

Dependency[3]

Waterfowl, particularly mallards and Canada geese will congregate in areas with abundant food and space. Unfortunately, hand feeding can cause birds to become concentrated in small urban areas that are incapable of supporting large numbers of birds. The birds then become dependent upon humans for food and can become nuisance animals. Some birds can become aggressive and may need to be removed.

Geese are territorial birds and will not hesitate to protect their nest and eggs from a human or house pet they see as a threat. An aggressive adult goose can easily knock down a child or senior citizen, and geese can fly up to 50 mph. An aggressive goose will hiss at you and rear its head and then perhaps charge.

Geese will fly up and hit a human, cat or dog in the face. This is especially likely if the goose has nested in a place near human traffic, including a parking lot or shrubbery near a building.

Artificial feeding often attracts birds to human habitats, parking lots, fast-food restaurants, and retention ponds, where they are more subject to accidental death. Natural cover, which can provide protection from bad weather and predators (even dogs and cats), is often lacking at these feeding sites.

Waterfowl can rapidly become conditioned to, and dependent on, handouts. Fed ducks and geese behave differently. They become more aggressive and eventually lose their wariness of humans. Some will not survive because they can't compete. Many will lose the quality which endears them to most of us, their wildness.

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Dependence upon humans for food causes:

- Loss of their natural fear of humans, which creates aggressive behavior.
- Concentration of birds near highways and airports, potentially causing motor vehicle and airplane accidents.
- Overpopulation of small wetlands and ponds.
- Delay or halting of migration to natural wintering or nesting sites.

Disease[2]

Lowered nutrition and overpopulation allow disease to spread more quickly, potentially infecting thousand of birds with fatal diseases such as Avian Cholera, Duck Plague, Avian Influenza and Avian Botulism. Although these diseases have always existed in waterfowl populations, the risks from the diseases increase when populations become concentrated at feeding sites.

When ducks and geese feed on scattered corn or bread, they eat in the same place where they defecate. Not healthy. In addition, large concentrations of waterfowl would facilitate the spread of disease. Also not healthy. Diseases generally not transmissible in a wild setting find overcrowded and unsanitary conditions very favorable.

An infected bird may spread the disease to many other birds by infecting the water supply. When the birds are scattered over a large area this does not pose a serious problem. However, when the birds are bunched close together, their chances of contracting disease increase and the result may be disastrous.

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Canada goose feces contain disease-causing organisms which include salmonella, giardia and cryptosporidium. While there are no proven links of human illness from exposure to the droppings from Canada Geese, some dogs seem to be particularly susceptible to giardia. You should keep your dog from snacking on goose droppings while out on walks.

Most waterfowl die-offs in the past 10 years have involved artificial feeding:

- 2,000 mallards and black ducks were killed in an outbreak of Duck Virus Enteritis in Central New York.
- Another fatal disease, Aspergillus, occurs when food is scattered too liberally. It piles up and becomes moldy.
- In Cheektowaga, New York, hundreds of ducks were killed in an outbreak of Avian Botulism at a feeding site.

Environmental Degradation [2]

Waterfowl naturally congregate in wetlands, when and where natural foods are plentiful. However, when hand feeding occurs, the over-concentration of birds may ultimately cause overgrazing and degradation to the landscape.

Feeding attracts birds in unnatural numbers, beyond natural food and water supplies, and frequently in numbers beyond what people will tolerate. Over-grazed and badly-eroded lawns, golf courses, and school playing fields are often the result of overcrowding. Grassy areas such as ball fields and golf courses can become unsanitary and unusable. Some parks have been forced to close down until goose droppings could be cleaned up, which can be quite costly.

Over-grazed and badly-eroded lawns, golf courses, and school playing fields are often the result of overcrowding. Grassy areas such as ball fields and golf courses can become unsanitary and unusable.

High concentration of birds cause:

- Overgrazing of vegetation, leading to soil erosion.
- Degradation of the landscape, making it undesirable for other species and unsightly for humans.
- Unsanitary conditions due to large quantities of bird feces.

Water Pollution [1]

People will often feed Canada geese or ducks at the local pond or lakeside beach. This not only causes a nuisance situation with birds begging for and stealing food, but also contributes significantly to water pollution in the form of fecal coliform bacteria.

In areas where waterfowl congregate to feed, E-coli counts can swell to levels that make the water unsuitable for recreation or other activities.

As a direct consequence of the concentration of this organic matter, water quality suffers from the excess nitrogen that subsequently runs off the land during the usual storm events. Too many nutrients in the water then leads to an overgrowth of algae, called an "algae bloom," which blocks sunlight from entering the water and, thereby, adversely affects fish and other organisms in the aquatic environment.

Vegetation around the immediate feeding site is also impacted, because the overabundant waterfowl pull up the grass, trample the banks and otherwise damage the plants in adjacent habitat. In areas where waterfowl congregate to feed, E-coli counts can swell to levels that make the water unsuitable for recreation or other activities.

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Feeding the ducks and Canada geese can:

- Cause them to become a nuisance by begging and stealing food and garbage.
- Can cause unnatural amount of water contamination, leading to algal blooms, and the death of fish.

Increased Hybridization[1]

At many feeding sites, domestic geese have interbred with Canada geese, further compromising the wild population. Locally at the Leeper Park Duck Pond, it is evident that residents have abandoned domestic ducks at the site. This furthers the hybridization issue and creates an unnatural scenario where the animals are no longer able to able to survive in natural environments.

Delayed Migration [2]

Feeding alters normal migration patterns of waterfowl by shortening or even eliminating them. Ducks, reluctant to leave in the winter, may not survive sudden cold. If the artificial feeding is stopped in time, ducks and geese can quickly adapt to finding natural foods and will follow their companions north. In West Haven, Connecticut, 30 swans died from starvation at an artificial feeding site during the harsh winter of 93–94. Meanwhile, over 800 swans survived nearby on natural food.

If the artificial feeding is stopped in time, ducks and geese can quickly adapt to finding natural foods and will follow their companions north.

Overcrowding in Unnatural Sites[1]

Feeding attracts birds in unnatural numbers, beyond natural food and water supplies, and frequently in numbers beyond what people will tolerate. Over-grazed and badly-eroded lawns and parks. Grassy areas such as ball fields and golf courses can become unsanitary and unusable. Maintenance costs for cleaning and keeping these popular gathering areas aesthetically pleasing become high.

Artificial feeding often attracts birds to human habitats near roads and public areas where they are more subject to accidental death or disfigurement. Natural cover, which can provide protection from bad weather and predators is often lacking at these feeding sites.

Costly Management Efforts[1]

Many damage-avoidance techniques such as chemical repellents, fencing, or noise makers are costly and may even be useless once animals lose their fear of humans. At times, it is necessary to destroy nuisance waterfowl because of the damage they cause.

Artificial feeding often attracts birds to human habitats near roads and public areas where they are more subject to accidental death or disfigurement.

Devaluation[1]

From treasure to nuisance... wildlife managers recognize that the public's perception of the value of wildlife is often reduced when numbers swell. When any wildlife population exceeds the number that can be naturally supported by available habitat, this can polarize the public and exaggerate conflicts between landowners who suffer damage and those who visit the site to feed the geese and ducks.

The existence of duck ponds can no longer be considered a best practice for the environment or wildlife.

This isn't a conversation about maintenance standards or even what to feed the ducks. In places like the Leeper Park duck pond, the evolved situation is only partially solved by enhanced landscaping, additional upkeep, and new public policies. The only scenario we can condone the creation of artificial spaces to house and feed wildlife is one that is under constant supervision of trained professionals such as a zoo, aquarium, or farm. Even so, these environments must be created in a way that promotes the health and well-being of the animals in the most natural environments possible. Unless it's done in a very controlled manner, the pastime of feeding wildlife for amusement is one that must come to a stop. Despite the nutritional value of a particular feed or food product, dependency on human feeding causes migratory issues, overpopulation, overfeeding and a suite of health-related problems. Keeping the pond, in any improved or existing condition, troubles involving overcrowding, malnutrition, inbreeding, migratory patterns, and animal welfare ethics would continue to exist. This would result in the department having to implement additional, and presumably unpopular activities. These include strict enforcement of no-feeding policies, a reallocation of departmental resources away from other priorities, a reduction of the park's greenspace, and wildlife management techniques such as relocation, egg depredation, or controlled animal killings.

Keeping the pond, in any improved or existing condition, troubles involving overcrowding, malnutrition, inbreeding, migratory patterns, and animal welfare ethics would continue to exist.

FEEDBACK AND MORE INFORMATION

The concept is now available for review and commentary. We remain committed to opportunities for residents to become educated and weigh in on this topic.

One way to do so is on the website at www.riverfrontparksandtrails.com or at a public community meeting at the NNN Community Center on June 14th at 6:00 p.m. located at 109 Portage Ave.

We have already gathered a significant amount of information from these sources and would encourage people to become educated on this topic.

1. "Stop Feeding Waterfowl." Stop Feeding Waterfowl - NYS Dept. of Environmental Conservation. New York State, n.d. Web. 07 June 2017. <http://www.dec.ny.gov/animals/7001.html>.
2. McRuer, Dave, MSc, DVM, Dipl. ACVPM. Consequences of Feeding Waterfowl in Public Parks (n.d.): n. pag.Www.wildlifecenter.org. Wildlife Center. Web. <http://wildlifecenter.org/sites/default/files/Consequences-of-feeding-wild-ducks-in-public-parks.pdf>.
3. Palus, Shannon. "Don't Feed the Waterfowl." Audubon. Audubon, 14 July 2016. Web. 07 June 2017. <http://www.audubon.org/news/dont-feed-waterfowl>.
4. "Indiana Department of Natural Resources." DNR: Solutions. DNR, n.d. Web. 07 June2017. <http://www.in.gov/dnr/fishwild/3002.htm>.
5. "Please Don't Feed Waterfowl." Please Don't Feed Waterfowl — Audubon Society of Portland. Audobon Society of Portland, n.d. Web. 07 June 2017. <http://audubonportland.org/wcc/urban/waterfowl>.
6. "Don't Feed the Ducks." Mass Audubon. Mass Audobon, n.d. Web. 07 June2017.
7. <http://www.massaudubon.org/learn/nature-wildlife/birds/don-t-feed-the-ducks>

See ***Appendix A*** for additional information on water quality at Leeper Park Duck Pond.

Appendix A

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260.483.4759
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Soil Test Report

Reported To	Sample Information		Customer Information
CITY OF SOUTH BEND 321 E WALTER ST SOUTH BEND, IN 46614	Report Number	F17160-0127	LEEPER DUCK POND
	Report Date	6/13/2017	
	Lab Number	33621	
	Sample ID	OUTSIDE	
	To Be Grown	TREES	

Analysis Results

Analysis	Result	Soil Test Rating (Very Low / Low / Medium / High / Very High)
Organic Matter, %	4.7	
Phosphorus, ppm P (Bray-1 Equiv.)	51	
Potassium, ppm K	61	
Magnesium, ppm Mg	250	
Calcium, ppm Ca	2400	
Sodium, ppm Na	12	
Cation Exchange Capacity, meq/100g	14.3	
pH	7.5	
Soluble Salts (1:2), mmho/cm	0.1	
Sulfur, ppm S	9	
Zinc, ppm Zn	34.2	
Iron, ppm Fe	48	
Manganese, ppm Mn	49	
Copper, ppm Cu	4.4	
Boron, ppm B	1.8	

Annual Nutrient Requirement

Pounds per 100 Square Feet						Pounds per 1,000 Square Feet					
Lime	Nitrogen (N)	Phosphorus (P2O5)	Potassium (K2O)	Magnesium (Mg)	Sulfur (S)	Lime	Nitrogen (N)	Phosphorus (P2O5)	Potassium (K2O)	Magnesium (Mg)	Sulfur (S)
0	0.3	0.0	0.3	0.0	0.0	0	3	0	3	0	0

Suggested Fertilizer Application

	NPK Fertilizer Grade	Description	Annual Application Rate		
			lbs per 100 sq. ft.		lbs per 1,000 sq. ft.
Product	12-0-12	Phosphorus Free Fertilizer	2.5	OR	25.0
			0.0	OR	0.0

Comments

Use the fertilizer listed above or another of similar NPK analysis. Broadcast the recommended amount evenly around the drip line of the trees in the late fall or early spring. Avoid application after July 1st since late growth is more susceptible to winter injury.

The soil pH is high (alkaline). Some species such as oaks and maples may show chlorosis (yellowing) of the

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Soil Test Report

Reported To	Sample Information		Customer Information
CITY OF SOUTH BEND 321 E WALTER ST SOUTH BEND, IN 46614	**Report Number**	F17160-0127	LEEPER DUCK POND
	Report Date	6/13/2017	
	Lab Number	33621	
	Sample ID	OUTSIDE	
	To Be Grown	TREES	

leaves. This condition is difficult to correct in established trees. If trees are chlorotic, application of iron or manganese may improve color.

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Soil Test Report

Reported To	Sample Information		Customer Information
CITY OF SOUTH BEND 321 E WALTER ST SOUTH BEND, IN 46614	Report Number	F17160-0127	LEEPER DUCK POND
	Report Date	6/13/2017	
	Lab Number	33622	
	Sample ID	ISLAND	
	To Be Grown	TREES	

Analysis Results

Analysis	Result	Soil Test Rating (Very Low / Low / Medium / High / Very High)
Organic Matter, %	1.2	
Phosphorus, ppm P (Bray-1 Equiv.)	314	
Potassium, ppm K	124	
Magnesium, ppm Mg	140	
Calcium, ppm Ca	2650	
Sodium, ppm Na	22	
Cation Exchange Capacity, meq/100g	14.8	
pH	7.5	
Soluble Salts (1:2), mmho/cm	0.2	
Sulfur, ppm S	12	
Zinc, ppm Zn	38.0	
Iron, ppm Fe	81	
Manganese, ppm Mn	51	
Copper, ppm Cu	3.5	
Boron, ppm B	0.7	

Annual Nutrient Requirement

Pounds per 100 Square Feet						Pounds per 1,000 Square Feet					
Lime	Nitrogen (N)	Phosphorus (P2O5)	Potassium (K2O)	Magnesium (Mg)	Sulfur (S)	Lime	Nitrogen (N)	Phosphorus (P2O5)	Potassium (K2O)	Magnesium (Mg)	Sulfur (S)
0	0.3	0.0	0.0	0.0	0.0	0	3	0	0	0	0

Suggested Fertilizer Application

	NPK Fertilizer Grade	Description	Annual Application Rate		
			lbs per 100 sq. ft.		lbs per 1,000 sq. ft.
Product	20-0-0	Ammonium Sulfate	1.5	OR	15.0
			0.0	OR	0.0

Comments

Use the fertilizer listed above or another of similar NPK analysis. Broadcast the recommended amount evenly around the drip line of the trees in the late fall or early spring. Avoid application after July 1st since late growth is more susceptible to winter injury.

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leaves. This condition is difficult to correct in established trees. If trees are chlorotic, application of iron or manganese may improve color.