

APPENDIX E
FOREST PRESERVE DISTRICT OF COOK COUNTY EXHIBITS



Notes
 Stakeholder Meeting – Forest Preserve District of Cook County
 Western and Southwestern Stormwater Evaluation
 Village of Winnetka
 November 18, 2015

Meeting Location: Forest Preserve District HQ	Job No.: 1619.010
Meeting Purpose: Initial Stakeholder Meeting	

Discussion:

1. Introductions

<u>Name/Representing</u>	<u>Address</u>	<u>Contact Information</u>
• Eric Varela, Asst. to the Supt. Forest Preserve District of Cook Co.	536 N. Harlem Ave., River Forest, IL	erik.varela@cookcountyil.gov 312-603-8368
• Chip O’Leary, Chief Ecologist Forest Preserve District of Cook Co.	536 N. Harlem Ave., River Forest, IL	Charles.o’leary@cookcountyil.gov 708-771-1008
• John Sterenberg, Land Use Compliance, FPD of Cook Co.	536 N. Harlem Ave., River Forest, IL	john.sterenberg@cookcountyil.gov 708-771-1192
• Eric Otto, Civil Engineer Forest Preserve District of Cook Co.	536 N. Harlem Ave., River Forest, IL	eric.otto@cookcountyil.gov 708-771-1382
• Chris Slattery, Director of Planning and Devel., FPD of Cook Co.	536 N. Harlem Ave., River Forest, IL	chris.slattery@cookcountyil.gov 708-771-1572
• Rob Bahan, Village Manager Village of Winnetka	510 Green Bay Road, Winnetka	rbahan@winnetka.org 847-716-3541
• Steve Saunders, PWD and Village Engineer, Village of Winnetka	1390 Willow Road, Winnetka	ssaunders@winnetka.org 847-716-3534
• Jim Bernahl, Asst. PWD Village of Winnetka	1390 Willow Road, Winnetka	jbernahl@winnetka.org 847-716-3261
• Mike Waldron, Project Manager Strand Associates, Inc.	1170 Houbolt Road, Joliet	mike.waldron@strand.com 815-744-4200
• Mark Shubak, Project Engineer Strand Associates, Inc.	910 Wingra Drive, Madison, WI	mark.shubak@strand.com 608-251-4843
• John Lyons, Project Engineer Strand Associates, Inc.	615 Elsinore Place, Ste. 320, Cincinnati, OH	john.lyons@strand.com 513-861-5600
• Gary Wolnitzek, Project Consultant Human Nature, Inc.	990 St. Paul Drive, Cincinnati, OH	gwolnitzek@humannature.cc 513-281-2211
• Michelle Kelly, Project Consultant Upland Design, Inc.	24042 Lockport St., Ste. 200, Plainfield, IL	mkelly@uplanddesign.com 815-254-0091

2. Items of Discussion – General

- a. The Forest Preserve District representatives (FPDCC) indicated that the fisheries and recreational uses of the lagoons are the lagoons focal point.
- b. The FPDCC indicated the lagoons are a very popular location and there would be a benefit to FPDCC to draw more visitors to the site.
- c. The FPDCC cannot land swap or sell land without significant effort through the state legislature. They can do licensing of property but they are limited to the number of licenses they can issue per year.
- d. The FPDCC has no long-term capital improvement plan for the Skokie Lagoons and neighboring forest preserve lands.



- e. The FPDCC Gateway Plan is still be reviewed internally. This plan focuses mainly on signage, art, and increased visibility of the preserve access points.
- f. The Skokie Lagoons are the most popular location of gateway improvements. The FPDCC envisioned sharing the history of the Conservation Corps. in creating the lagoons.
- g. The FPDCC recognizes the need for improved parking and interpretive signage at the Willow Road access.
- h. The FPDCC had been considering campgrounds on the islands in the lagoons.
- i. There was a general discussion of the following areas:
 - i. The triangular piece in the southwest corner of the Park District and Duke Childs Field grounds.
 - ii. The piece south of Willow Road, west of Hibbard Road, and north of Winnetka Road that surrounds the Public Works buildings and landfill.
 - iii. The piece of property south of Winnetka Road in Northfield.
- j. The FPDCC was not able to comment on the condition, quality, or value of these properties but said they will have their ecologist perform a site visit to determine value and viability of the properties.
- k. We presented concepts of extending the lagoon system, creating new prairie wetland environments, and generally clearing invasive growth and improving the existing forested areas.
- l. The FPDCC did not object to these general concepts but were non-committal.
- m. The FPDCC asked for examples of prior successes in the concepts we were presenting and to provide some conceptual plans for our ideas.
- n. Further communications from the Village to the FPDCC should be taken through Eric Verella as the FPDCC key contact.

3. Potential Opportunities Identified

- a. The FPDCC did not object to the concepts presented of extending the lagoon system, creating new prairie wetland environments, and generally clearing invasive growth and improving the existing forested areas.

4. Action Items

- a. The FPDCC indicated that they will have their ecologists make a site visit to the lagoons to assess value and viability of the properties relative to the concepts we discussed in the meeting.
- b. Develop concept layout for use of the FPDCC properties and support with examples of prior project successes. It will important that we pursue this immediately to keep the ball rolling with the FPDCC and to push their field investigations.

5. Proposed Next Steps

- a. Provide concept plans for the FPDCC properties to the Village for consideration and then to FPDCC for their consideration.
- b. Follow up with Eric Verella on the FPDCC plans for field investigations.



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December 21, 2015

Mr. Arnold Randall
General Superintendent
Forest Preserve District of Cook County
536 North Harlem Avenue
River Forest, IL 60305

Dear Mr. Randall:

On behalf of the Village of Winnetka I would like to thank you and your staff for meeting with the Village of Winnetka and our stormwater management consultant, Strand Associates, to discuss potential areas of cooperation between the District and the Village of Winnetka to address pervasive flooding in the Village. The Village appreciates the open and candid discussion that occurred, and is looking forward to cooperatively exploring possible approaches to stormwater risk reduction that could benefit both the Village and the Forest Preserve District. As you may know, the Village of Winnetka has been evaluating and implementing stormwater improvements identified in our Stormwater Master Plan for the past several years. Unfortunately, some areas of western and southwestern Winnetka have proven difficult to address. A combination of hydraulic factors, limited topographic relief for overland flow, and a lack of Village-owned open spaces results in a series of significant constraints on possible stormwater storage options. Many of the prior public comments received by the Village have focused on the possibility of cooperative stormwater improvements located on existing open spaces owned by other government agencies, including the District, as part of an overall multi-faceted stormwater management program.

Strand Associates has developed some preliminary illustrative concepts that outline the type of improvements that may be considered by the Village as we evaluate how best to address our flood-reduction goals. Prior to engaging in any public discussion about possible cooperative

improvements on District owned land, we want to begin the exploratory process with the District using these illustrative concepts as a starting point. As we agreed at our meeting, the Village is providing these preliminary illustrative examples so that you and your staff can begin to consider how the Village and the District might partner with one another to develop mutually beneficial projects in keeping with the District's mission, goals and land use plans. It is important to note that these preliminary exploratory alternatives have not yet been modeled to determine their level of effectiveness towards meeting the Village's goals, nor have they been presented and discussed with the Village as a whole.

The Village would appreciate you and your staff reviewing these illustrative concepts and providing feedback and comments that might be helpful to the Strand team as we look for ways to achieve mutually beneficial possible projects. Please feel free to contact me at (847) 716-3534 or by e-mail at ssaunders@winnetka.org if you have any questions.

Sincerely,

A handwritten signature in blue ink that reads "Steven M. Saunders". The signature is written in a cursive style.

Steven M. Saunders
Director of Public Works/Village Engineer

cc: Rob Bahan, Village Manager

HISTORICAL CONTEXT

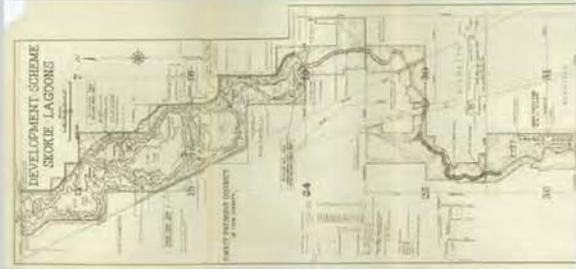
"The character of the marsh varied from season to season. During the spring and summer, water levels in the marsh ranged from a few inches to several feet deep. Cattails, swamp grasses, and other aquatic plants grew in the bog, with willow trees and bunch grasses creating small islands. White oaks and maple groves dotted the landscape, especially to the west of the marsh. Peat deposits as deep as five feet covered much of the swampland. The lush vegetation of the Skokie Marsh provided habitat for a variety of wildlife."

"As in much of the nation during the first half of the 20th century, the idea of scientific conservation won out in the Skokie Marsh. Although the area would remain a nature preserve, the landscape would be changed to meet society's needs for flood control and recreation."

"By the time the Forest Preserve District acquired the land of the Skokie Marsh in the late 1920s, conservationists agreed that the land needed to be changed to stop flooding, but preserved for recreation. Studies of the Skokie River watershed determined that engineers had two options to control floods: either significantly widen the river's channel south of Willow Road, or create a space where floodwater could be stored safely and released gradually. Engineers recommended the second option, as the Skokie Marsh naturally accumulated water on its own and the Forest Preserve District already owned the land."

When the CCC adopted the project in 1933, federal engineers drafted a plan based on the Forest Preserve's proposal. The final design included seven lagoons, four dams, large dikes around the lagoons, and two diversion ditches. This new waterway would prevent flooding by channeling the water of the Skokie River into the lagoons. Three smaller dams and one large main dam would regulate the flow of the water, and the dikes would contain floodwaters within the established 400-acre floodplain. The diversion ditches along either side of the floodplain would collect any water that flowed into the former marsh area from the east and west and carry it below the lagoons to where the Skokie River regained its channel."

SOURCE: <http://skokielagoons.com/ka.net>



CHANGES OVER TIME

Impacts on Natural Conditions of the Skokie River Lagoons and Skokie River floodplain:

- Most of Forest Preserve property historically functioned as floodplain of the Skokie River system
- Soil hydrology and frequent inundation by the river led to the development of wetlands, bogs, and sedge meadows
- The construction of the Willow Road Dam by the Civilian Conservation Corps (CCC) in the 1930s altered the hydrology of the Skokie River and its floodplain
- Above the dam, lagoons were dredged for open water pools
- Base water elevation increased, floodplains saw more frequent inundation above the dam
- Levees were constructed along the river and the lagoons to limit floodplain inundation
- Diversion channel on east side of lagoons conveys water around the lagoons and dam
- Many forest preserve areas below the dam experienced less frequent inundation
- Vegetation changed as hydrology changed
- Skokie Ditch was channeled to direct water to the River, with side berms that limit inundation of the adjacent floodplain
- Tree species were able to establish in what was once wet meadows
- In many areas tree species developed into early successional forest; including white ash, cotton wood, box elder etc., as well as climax species of oak. In many areas these tree species are the dominant species of tree
- Buckthorn and other invasive species spread through many of the natural areas
- The emerald ash borers have killed or weakened most existing ash trees
- With the change in hydrology, change in vegetation to succession forest, introduction of invasive species, many of the natural areas along the Skokie River and lagoons do not demonstrate the wetland, marsh and wet meadow plant communities that once existed.

FOREST PRESERVES OF COOK COUNTY BACKGROUND

WEST AND SOUTHWEST WINNETKA STORMWATER MANAGEMENT STUDY - DECEMBER 2015





8 SKOKIE DITCH AT PUMP STATION



9 HIGH-QUALITY OAK FOREST



7 EXISTING DECLINING FOREST (DEAD/DYING & BUCKTHORN)

EXISTING SKOKIE DITCH

EXISTING UPLAND MEADOW AREA (INVASIVE BUCKTHORN, HAWTHORN, & EARLY SUCCESSIONAL SHRUBS)



10 PREVALENCE OF INVASIVES



7 PREVALENCE OF DEAD/DYING ASH TREES



7 DECLINING ASH/INVASIVE BUCKTHORN



6 INVASIVE BUCKTHORN



5 WILLOW RD. AT SKOKIE BRIDGE



4 WILLOW RD. AT FOREST PRESERVE



1 FOREST WAY DRIVE @ LAGOON 1



2 ERODED EDGE; DIFFICULT WATER ACCESS



3 GRAVEL PULL-OFF FOR DAM ACCESS

FOREST PRESERVES OF COOK COUNTY
EXISTING CONDITIONS

WEST AND SOUTHWEST WINNETKA STORMWATER MANAGEMENT STUDY - DECEMBER 2015



SPRUCE
ELM ST
OAK
CHERRY
ASH
WILLOW

AUBURN
SUNSET

WESTVIEW
HIBBARD

EXISTING STORM SEWERS DISCHARGE FLOWS FROM 1,350 ACRES

POTENTIAL ABOVE-/BELOW-GRADE STORAGE AT DUKE CHILDS FIELD

VACANT PARCEL

ZONE A

ZONE B

ZONE C

ZONE D

ZONE E

EXISTING DIVERSION DITCH

EXPAND EXISTING OPEN WATER FEATURE

EXISTING CULVERT WITH FLAP GATE

EXISTING LEVEE TO REMAIN

EXISTING LEVEE TO REMAIN

WINNETKA

LAGOON

FORESTVIEW

INTERSTATE 94





FOREST PRESERVES OF COOK COUNTY
PRELIMINARY CONCEPT: FLOW SCHEMATIC
 WEST AND SOUTHWEST WINNETKA STORMWATER MANAGEMENT STUDY - DECEMBER 2015





FOREST PRESERVES OF COOK COUNTY
PRELIMINARY CONCEPT: ECOLOGICAL COMPONENTS
 WEST AND SOUTHWEST WINNETKA STORMWATER MANAGEMENT STUDY - DECEMBER 2015

THE VILLAGE OF
WINNETKA
 SINCE 1869

SA STRAND STRATEGIC
 MANUFACTURER
HUMAN NATURE

PROPOSED EXTENSIONS TO THE NORTH BRANCH TRAIL SYSTEM

LOCATIONS FOR INTERPRETIVE OVERLOOKS

Interpretive overlooks provide opportunities for environmental education and could cover the following topics:

- Geologic History of Skokie Lagoons
- History of CCC Project/Dam
- Wetland Habitats
- Green Infrastructure & Water Quality
- Skokie Lagoons
- Native Landscapes



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FOREST PRESERVES OF COOK COUNTY
PRELIMINARY CONCEPT: SITE ENHANCEMENTS
WEST AND SOUTHWEST WINNETKA, STORMWATER MANAGEMENT STUDY - DECEMBER 2015

ZONE A

This includes the area adjacent to and east of Lagoons 1

- Area currently receives some flow from the golf course and Duke Childs Fields
- Current drainage is directed toward a swale on the boundary with the golf course through an existing culvert with a flap gate to the diversion ditch which flows around the dam and enters the river below the dam
- Propose site grading to allow for a wet pond, lower grade to allow for more intermittent floodplain storage
- Potential stormwater storage in the Duke Childs Park. Discharge from this storage will be directed to this area, for further detention and natural stormwater cleansing through wet pond feature, wetland edges and wet meadow before slowly releasing to the Diversion Ditch then to the Skokie River
- Establish wet/sedge meadow with pockets of tree groves
- Develop new gateway parking off Forest Way Drive
- Create trail head for access to dam
- Develop interpretive signage to illustrate the history of and significance of the Skokie Lagoons

ZONE B

This includes the area south of Willow Road and east of the River

- The Forest Preserve horse trail crosses Willow Road and passes through this area on the east side of the river
- Establish open water quality pond
- Establish wet sedge meadow with forested perimeter

ZONE C

This includes the area south of Willow Road and east of Hibbard Road, which currently receives the majority of the stormwater runoff from the Village of Winnetka

- Lower area, create forebay feature to initially collect stormwater, clean stormwater, settle particulates, create manageable areas for regular maintenance
- Release stormwater to Zone D for further treatment, storage and slow release to the River

ZONE D

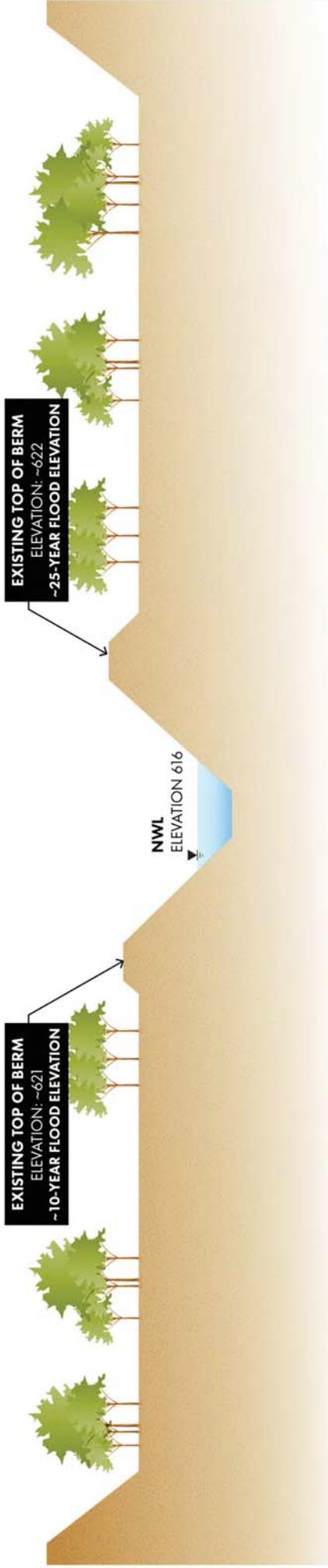
This includes Skokie Ditch, which currently conveys the majority of the Village of Winnetka's stormwater runoff to the Skokie River

- Remove elevated berms along ditch to allow water to access area
- Re-grade and lower area to re-connect stormwater to the flood plain
- Create open water pools for improved habitat and water quality
- Create open water, emergent zone, wet meadow and upland hydrologic and plant zones for habitat, water quality and flood plain function
- Create forested edges and groves to mimic historic conditions
- Create perimeter loop trail with interpretive stops and educational exhibits linked to the existing Forest Preserve Trail
- Create elevated berm with trail access for higher vantage point viewing

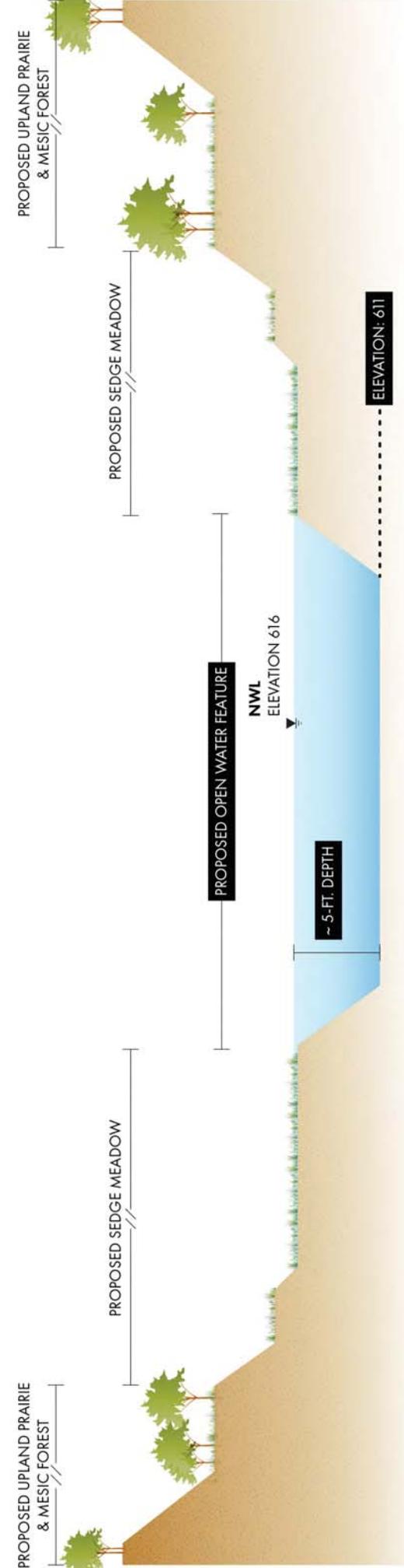
ZONE E

This includes the area south of Winnetka Road and east of the Skokie River

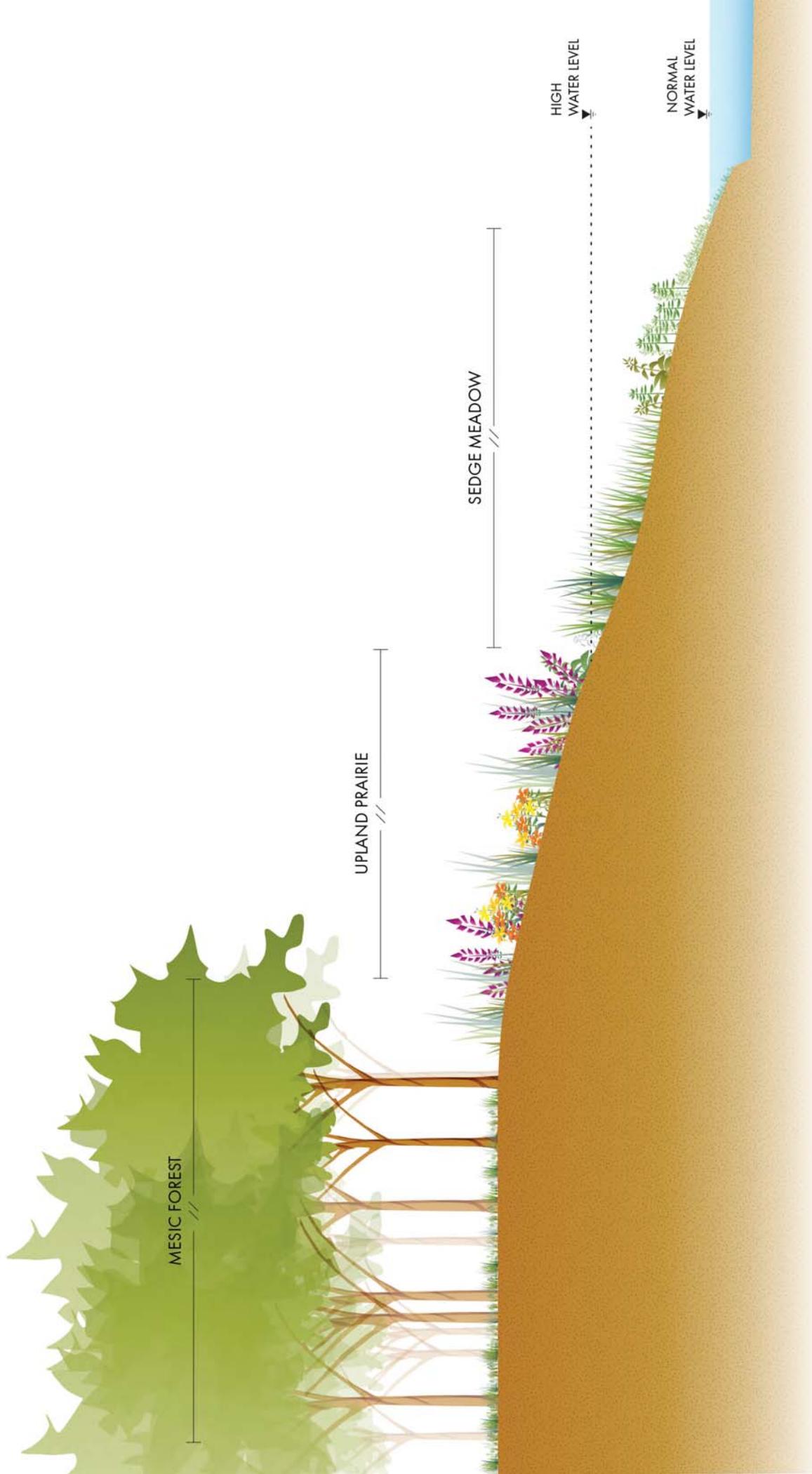
- Majority of area is early successional woody vegetation
- Northeast portion of site contains mature oak forest that should be protected
- Re-grade and lower area to re-connect storm water to the flood plain
- Create open water pool for improved habitat and water quality
- Hydraulically connect Zone D with Zone E for further stormwater treatment, storage and slow release to the river.
- Create open water, emergent zone, wet meadow and upland hydrologic and plant zones for habitat, water quality and flood plain function
- Create forested edges and grove to mimic historic conditions



SKOKIE DITCH: EXISTING CONDITION (NOT TO SCALE; SCHEMATIC IS VERTICALLY & HORIZONTALLY EXAGGERATED)



SKOKIE DITCH: PROPOSED CONDITION (NOT TO SCALE; SCHEMATIC IS VERTICALLY & HORIZONTALLY EXAGGERATED)



MESIC FOREST

UPLAND PRAIRIE

SEDGE MEADOW

HIGH WATER LEVEL

NORMAL WATER LEVEL



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April 1, 2016

Mr. Arnold Randall
General Superintendent
Forest Preserve District of Cook County
536 North Harlem Avenue
River Forest, IL 60305

Attn: Eric Otto, Civil Engineer

Dear Mr. Randall:

Thank you for your questions and comments provided in response to the Village of Winnetka's proposed concept to explore stormwater management opportunities on Forest Preserve District property. We recognize that the process of creating a plan that assists the Village in providing flood protection to its residents while benefitting the District's goals and objectives for their lands will eventually require resolution of a number of issues. We hope that our responses below will allow us to gain consensus that the Village and District can work together on this mutually beneficial project.

1) Is Winnetka prepared to fund the planning, design, construction, and maintenance of all the proposed improvements (stormwater management areas, vegetation, trails, parking lots, interpretive signage, etc.)? If not, what will be funded?

Answer: While the Village has not completed cost estimates for the improvements, the Village does plan on funding a significant portion of its stormwater improvement program through local funding via its stormwater utility. The Village may also contribute other corporate funds toward this project. In addition to local funding, the Village may seek other funding sources such as private, state, or federal grants, Phase II stormwater funding from

the MWRD, or other sources of funding. The Village is open to exploring costs and funding for a variety of enhancement concepts as part of this project.

2) Please confirm that the Village is planning to maximize the stormwater detention options on properties outside the FP. Also, the watersheds that will drain to the proposed constructed stormwater wetlands are fully developed, and as such the runoff will contain all the common urban pollutants. The FP supports the idea of water quality improvement, but the preserves should not act as a receptacle for pollutants and requests that BMP's be implemented in the watershed to capture and treat the first flush prior to discharge to the FP.

Answer: The Village's consultant is undertaking a holistic evaluation of stormwater mitigation concepts, including green infrastructure, conveyance options, and other local storage options, in areas upstream of the Forest Preserve properties. An important part of this evaluation includes providing water quality benefits throughout the watershed. Opportunities have been identified for wetland storage areas and local BMP's to be used as water quality measures prior to sending stormwater to the Forest Preserve properties. The ultimate mix of concepts in the Village's stormwater improvement program will be determined based on a variety of factors including benefits, water quality improvement, feasibility, public acceptance, and cost. The Village is currently evaluating a program with four major storage locations, three of which are located on properties owned by agencies other than the Forest Preserve District. These are shown in the attached diagram.

3) Please provide the depth, duration and limits/extents of storage, above the NWL for a variety of storm recurrence intervals at each of the proposed storage areas. How often would the sedge meadow area be inundated with water and how would this affect its persistence? The proposed design should consider soil erosion and sediment control, both during and post construction, to limit or preclude soil loss and promote the establishment and survival of vegetation.

Answer: A significant majority of the west and southwest watershed of Winnetka currently passes through the Forest Preserve property located south of Willow Road and immediately west of Hibbard Road. This area is labeled as Zones C and D in the preliminary concept plans provided to the District in December and is the Village's current focus for planning of stormwater and flood control.

The concept layout for the constructed wetland features in Zones C and D has an anticipated normal water surface elevation of 615.0. The Village's existing Winnetka Avenue pump station in combination with three existing gravity 48-inch diameter culverts will continue to be used to control the rate of discharge from the wetland feature to the receiving Skokie River. However, our initial hydrologic and hydraulic calculations assume a worst case scenario that high tailwater conditions within the Skokie River will be present during extreme rainfall events that will prevent gravity discharge through the three existing 48-inch culvert pipes. Under this condition discharge will be entirely controlled by the pump station outlet. Estimated flood elevations and depths at wet pool, storage volumes, and drawdown times for a range of return interval events are summarized in the table below:

Storm Recurrence Interval (Years)*	Flood Elev. (Ft)	Depth of Storage at Wet Pool (Ft)	Storage Volume (Ac-ft)	Drawdown Time (Hours)
1-	616.2	1.2	16.3	8.9
2-	616.7	1.7	30.4	12.5
5-	617.6	2.6	54.0	18.1
10-	618.4	3.4	77.4	23.3
25-	619.8	4.8	120.0	31.3
50-	620.9	5.9	162.1	38.7
100-	621.8	6.8	211.1	47.5

* 24-hour duration storm

Under this concept, the sedge meadow ranges from elevation 615.0 to 620.0, so half of the meadow will not experience any inundation for storms less than the 5-year recurrence interval. Upland prairie and mesic forest is generally between elevation 620.0 and 622.0 and would drain down in under 24 hours.

Please note that the concepts developed to date are very much at a preliminary stage of planning and design. As planning and design efforts are advanced, refined hydrologic and hydraulic modeling will be developed to evaluate soil erosion control strategies and to confirm long-term establishment and survival of vegetation can be achieved. Further discussion of these strategies is provided in Response No. 4 below.

4) Our experience is that despite the best efforts, the vegetation planted in these naturalized detention areas, particularly the sedge meadow zone, will revert to a few native species tolerant of high nutrient loads and urban runoff and invasive species such as common reed, cattails, and reed canary grass. What would be done to prevent this? Do you have examples of similar built systems that have been managed successfully for the diverse habitats proposed?

Answer: Planning will consider the evaluation and management of soil resources, establishing proper hydrologic regimes, and placing the right seed mixes and species in the ecologically appropriate locations. Water level manipulation is the predominant tool that can be used to facilitate successful colonization of native plantings while also allowing for long-term management and control of some invasive species.

Our planting plan would likely encompass a multi-year strategy in establishing the proper native mixes. Site management and engineering controls would include water and vegetation management techniques to minimize cattails, phragmites, reed canarygrass and potentially willow and box elder. Design efforts would consider appropriate water level control and compartmentalization. Included in this would be tile lines and macro- and micro topography contour elements to allow for the seeding, establishment, maintenance, and management of the desired vegetation type. As noted above, the existing pump system will control the drawdown time and helps in the management of these areas.

At the time of establishing the planting plan we anticipate a multi-season and aggressive native replanting effort to maximize planned habitat unit successes. Arrangements for monitoring, maintenance, and management post construction are also anticipated to promote natural system establishment and sustainability.

We understand the planning of the proposed use will require purposeful coordination with the Village, Forest Preserve, and the design team to identify options and roles in the various planting, establishment, and maintenance efforts needed for the project. At this time, we believe the four most critical elements in naturalizing the area and returning it to a more diverse landscape will be the following:

(a) Design and Plan Considerations to Allow for an 18-24 month planting and establishment contract.

(b) Specifications requiring the use of native ecotype seed mixes from regional vendors. Preliminary seed mixes could be based on site details but also include template seed mixes from places like Genesis Nursery in Tampico, IL. This is discussed further below.

(c) Strategic use of water control structures, diversions, and pools (site compartmentalization or management units), tile line installations, and other water management tools.

(d) Availability of equipment or contracts for mowing, monitoring, maintenance, and other management. Both short and long-term management plans would be recommended. The tools here and the ability to alternatively freeze, flood, and draw-down water levels will affect the vegetation the most. The consultant's design and restoration staff have experience using governmental, university, and private sector management for establishing or maintaining desired vegetation types. This experience ranges from knowledge and experience on USFWS refuge lands, university restoration projects of stormwater and upland prairies, and maintenance contracts and monitoring plans for stormwater facilities. More details or examples of proposed vegetation management controls can be provided if desired.

5) What would be the seed source for plugs and native plantings? North Branch ecotype seed source would be ideal to prevent non-local species and ecotypes from entering into the system and being washed and spread downstream; expanding habitat of local ecotypes; providing potential seed source for future collection and restoration efforts; and having the

highest probability of robust establishment and persistence. The FP could provide sources of desired species, collection sites, collection dates, and permits could be provided by Ecology section for seeds collected locally to be sent to propagators.

Answer: While the detailed designs have not been developed, the Village will incorporate District recommendations and work with District personnel during the design phase. The Village's design team will also take care to appropriately source seed and plant material. Current design consultant ideas for maximizing planting success includes the use of regional ecotype seed and careful attention to planting requirements, seasonal plant establishment, augmentation, and long-term maintenance and management plans.

Current thoughts for plugs and plantings would be regional ecotype seeds and vendors with Illinois ecotype seed. Initial seeding would be proposed from Illinois vendors of robust plants and proven seeding mixes. Future and augmentive seeding could be from harvesting or procurement from North Branch ecotype species and other Forest Preserve lands and collections or special propagation arrangement. If availability of the most desirable and local ecotype species are lacking, the project may consider an effort to request some contract growing. Otherwise outreach to the Native Plant Network may be used to help identify seed, plug, or containerized stock for enhancing initial plantings.

Close coordination with the Ecology Section of the Forest Preserve from the preliminary design stage to the post-construction vegetation management period should allow for the proper selection of material stock and management efforts to initiate a mutually beneficial habitat.

6) With the concerns above from urban runoff (high nutrients from lawn treatments, road salt, sediment, etc) there is the high probability of invasive species being a continual issue that will need to be addressed long term. Besides the concerns on these sites, invasive seed will wash downstream into other preserves so invasive species need to be controlled here. Annual assessments and control treatments will need to be made. This would be an ongoing effort. Is Winnetka prepared to do maintenance of the restoration, particularly invasive control for the long term?

Answer: The Village is anticipating having a major role in short-term and long-term maintenance of the proposed improvements, and will develop a maintenance and invasive control program subject to District evaluation and approval.

We anticipate that the restoration seeding and establishment effort would include between a 18 to 24 month construction contract for the detention facility. Similarly, from that point a 5 year ongoing management plan would need to maintain the desired and designated habitat of the project.

Designers advocate the use of a long-term management program with quarterly inspections to detention facilities. Some recent work by the design consultant has included the recommendation and use of stormwater facility management reports. An example of the reports is attached.

7) It appears that there is no change to the Skokie Lagoons proper. Can you confirm that this proposed work will not affect water quality or levels or in the Lagoons?

Answer: At this time, although the Village has evaluated the possibility of using the lagoon system for stormwater storage, this possibility is not being pursued.

8) How will the project be funded, local, federal or grant \$? Would the Village be willing to support priority restoration efforts at sites nearby such as Somme Woods or Harms Woods as mitigation for this project?

Answer: The Village will be funding a significant portion of its stormwater improvement program through local funding via its stormwater utility. The Village may also contribute other corporate funds toward this project. In addition to local funding, the Village may seek other funding sources such as private, state, or federal grants, Phase II stormwater funding from the MWRD, or other sources of funding. The Village is open to exploring offsite mitigation concepts as part of this project.

9) Can the large cottonwood, over 77" DBH, the largest measured in the North Branch region perhaps the county, be preserved?

Answer: The concepts developed to date have included many "islands" of hardwood trees. We can be flexible in grading such that the cottonwood could be preserved. As design activities progress, the Village will work to accommodate preserving this tree.

The Village appreciates the time that you and your staff have devoted to reviewing these illustrative concepts and providing feedback and comments to the Village thus far. Please feel free to contact me at (847) 716-3534 or by e-mail at ssaunders@winnetka.org if you have any questions.

Sincerely,



Steven M. Saunders
Director of Public Works/Village Engineer

cc: Rob Bahan, Village Manager
Mike Waldron, Strand Associates

