

DeCola Ponds B & C Improvement Project 90% Design

Bassett Creek Watershed Management Commission Meeting

April 18, 2019

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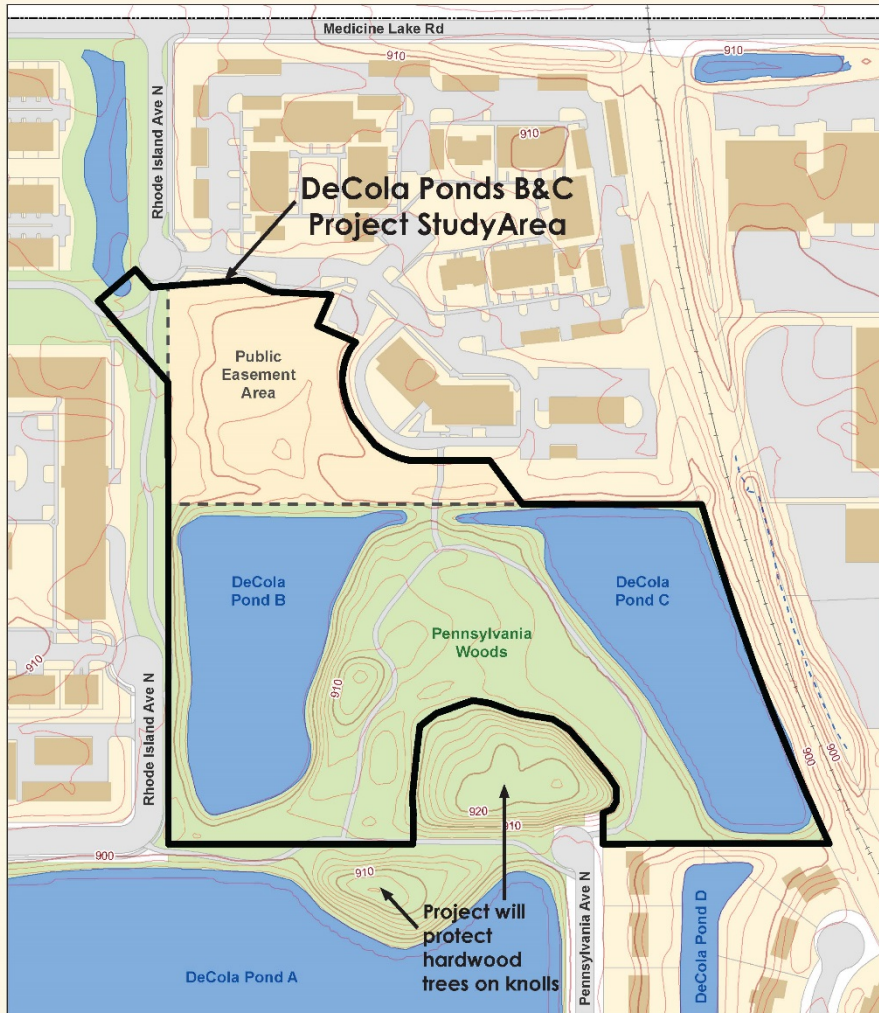
Outline

- Brief project overview - goals & recommendations from feasibility study
- Review funding sources
- Present 90% design
- Permitting update
- Final design and construction timeline

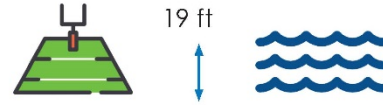


The DeCola Ponds B and C Improvement Project

Project study area:



Project goals:



Reduce damages and improve public safety by developing 20–25 acre-feet of flood storage—that’s 19 feet of water over an entire football field!



Water quality improvement, outlet modifications, sediment removal, and habitat restoration.

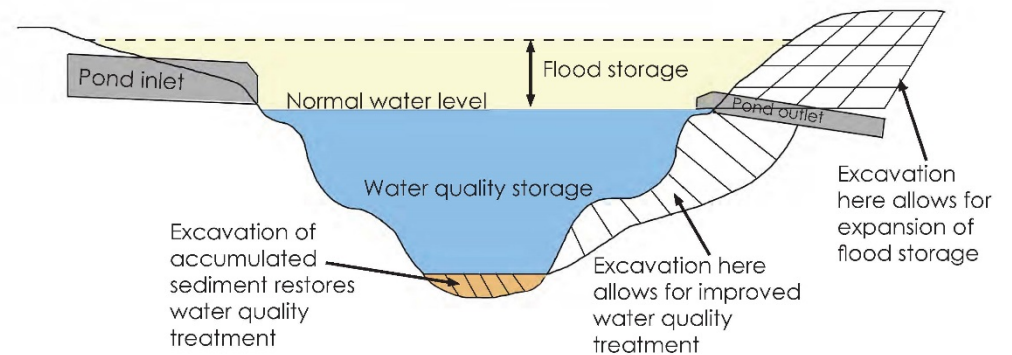


Preserve recreational use and improve park user experience.



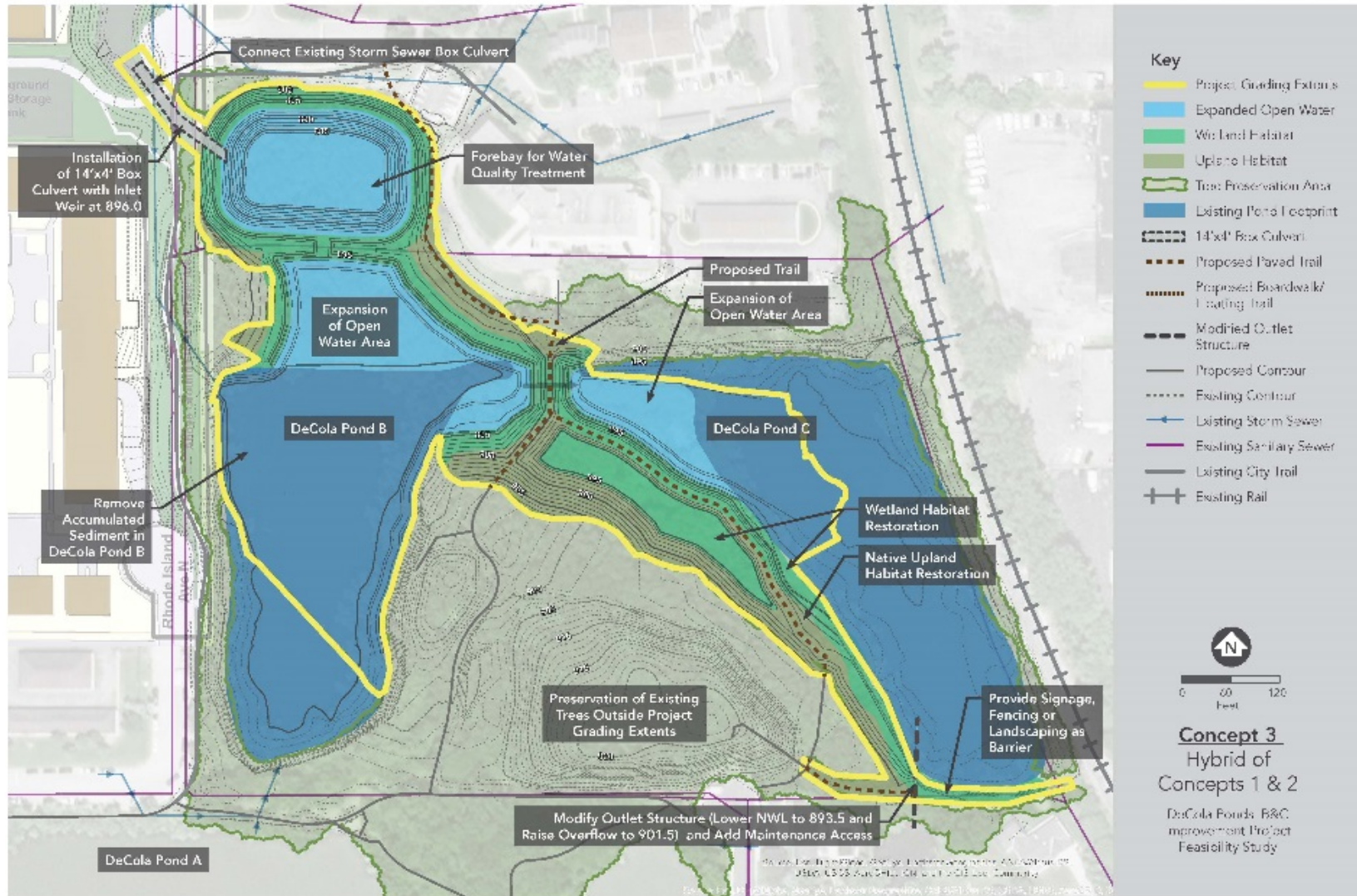
Tree removal will be required to achieve flood storage and water quality improvements; but, the goal is to preserve significant hardwoods in the area and restore vegetation.

How do you create flood and water quality storage?



Concept 3: Hybrid of Concepts 1 & 2

Estimated Cost (-20%/+30%) = \$3.8 Million



Concept Summary

 **Flood Mitigation Volume:**
22 acre-ft

 **Open Water Expansion:**
1.9 Acres

 **Increase in Phosphorus Removal:**
9.0 lbs/year

 **Restored Wetland & Upland:**
2.7 acres

 **Medicine Lake Road 100-Year Flood Depth:**
1.8 Feet

 **Reduction of Flood Level on Ponds**

DeCola Pond	Feet
A,B,C	- 0.5'
D	- 0.5'
E,F	- 0.1'

Concept 3
Hybrid of
Concepts 1 & 2

DeCola Ponds B&C
Improvement Project
Feasibility Study

Project Funding Sources

- BCWMC CIP: \$1.6 million
(over 2 years 2019/2020)
- MnDNR Flood Damage Reduction Grant: \$2.3 million
- Hennepin County/Golden Valley: \$700,000
- Total = \$4.6 million

Project Comparisons from 50% Design

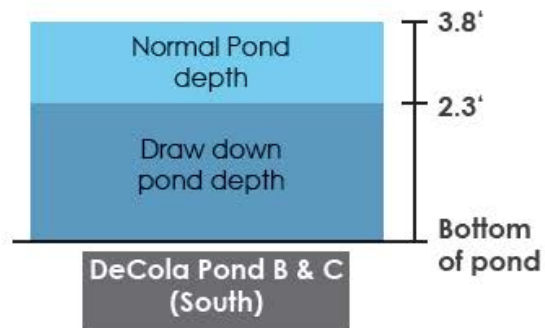
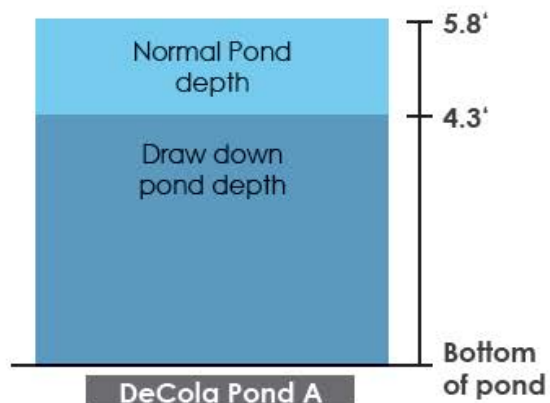
- Additional flood storage volume remained the same – 24 ac-ft
- Medicine Lake Road flood depth reduction remained the same – 1.3 ft
 - (Phase 1 reduced MLR flood level approx 2 ft, total = 3.3 ft)
- Reduction of pond flood levels remained the same
 - Pond A, B, C = down 0.5 ft
 - Pond D = down 0.5 ft
 - Pond E and F = down 0.1 ft

Project Comparisons from 50% Design

- Open Water Expansion area remained the same – 2.0 acres
- Restored wetland and upland habitat remained the same – 3.0 acres
- Phosphorus removal remained the same - 10.8 lb/yr
- Estimated construction cost remained the same @ \$4.1 million
- Added 2 benches
- Straightened the box culvert
- Completed detailed dewatering plan

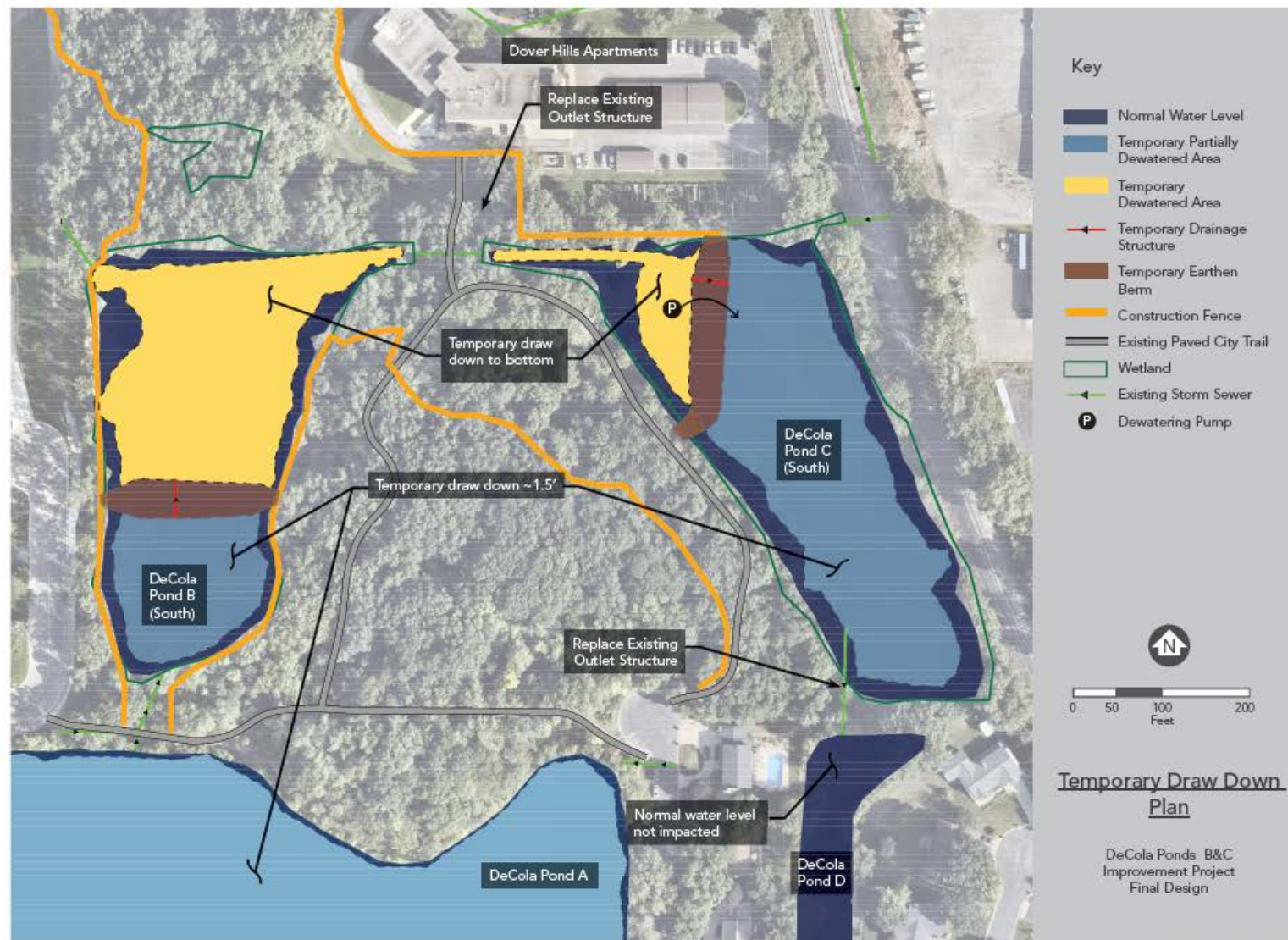
Temporary Draw Down Details for DeCola Ponds A, B, and C

Draw Down Level



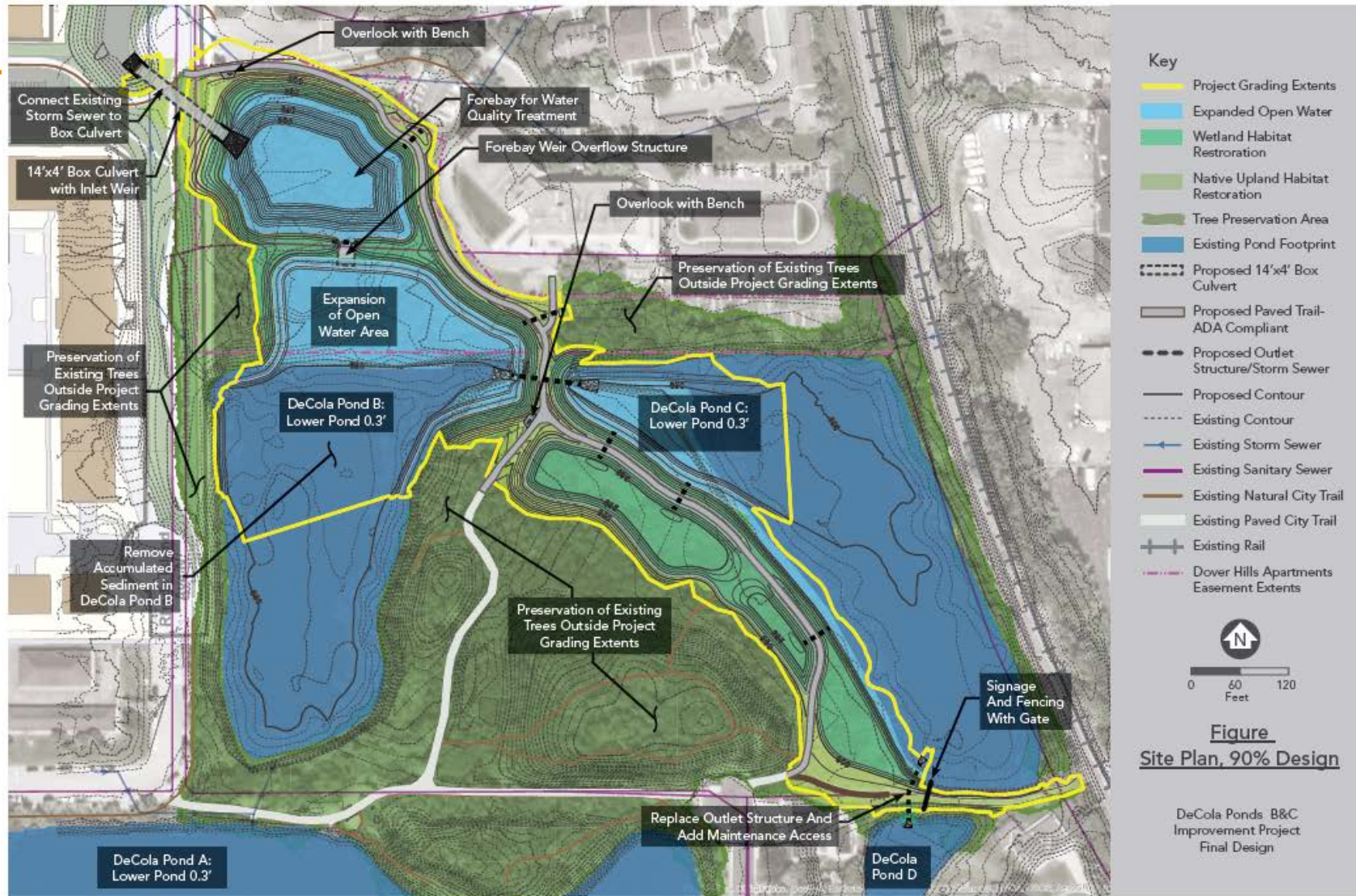
Draw Down Schedule

-  Temporary draw down begins September 2019
-  and ends Early Spring 2020



Site Plan, 90% Design

Estimated Cost (-10%/+20%) = \$4.1 Million



- Key**
- ▬ Project Grading Extents
 - ▬ Expanded Open Water
 - ▬ Wetland Habitat Restoration
 - ▬ Native Upland Habitat Restoration
 - ▬ Tree Preservation Area
 - ▬ Existing Pond Footprint
 - ▬ Proposed 14'x4' Box Culvert
 - ▬ Proposed Paved Trail-ADA Compliant
 - ▬ Proposed Outlet Structure/Storm Sewer
 - ▬ Proposed Contour
 - ▬ Existing Contour
 - ▬ Existing Storm Sewer
 - ▬ Existing Sanitary Sewer
 - ▬ Existing Natural City Trail
 - ▬ Existing Paved City Trail
 - + Existing Rail
 - ▬ Dover Hills Apartments Easement Extents



Figure
Site Plan, 90% Design
DeCola Ponds B&C Improvement Project Final Design

Concept Summary

- ▬ **Additional Flood Storage Created:**
24.0 acre-feet
- ▬ **Open Water Expansion:**
2.0 acres
- ▬ **Improved Water Quality:**
Additional 10.8 lbs/yr phosphorus removed
- ▬ **Restored Wetland and Upland habitat:**
2.9 acres total
- ▬ **Medicine Lake Road 100-Year Flood Depth Reduced from 3.1 ft to less than 2 ft**
- ▬ **Reduction of Flood Level on Ponds:**

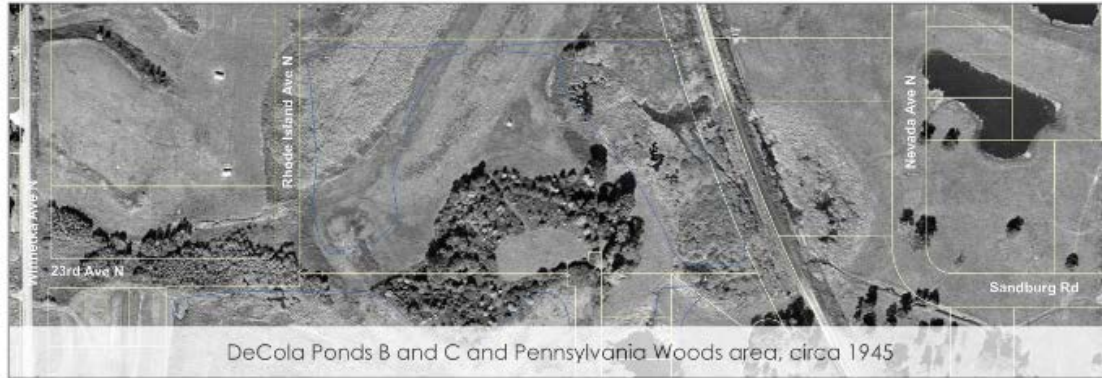
DeCola Pond	Feet
A, B, C	- 0.5'
D	- 0.5'
E, F	- 0.1'

Trail Options Evaluated

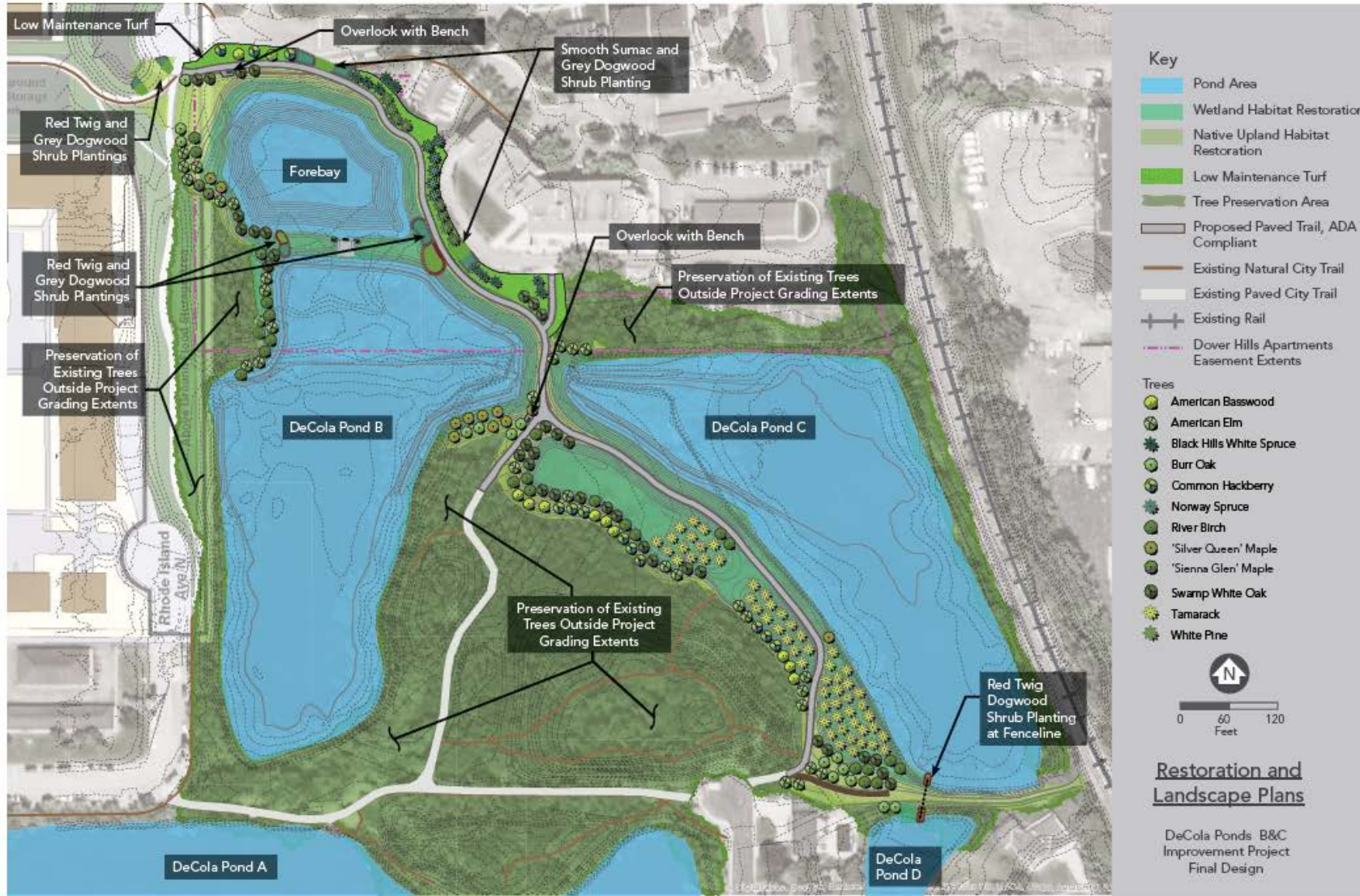
The following trail materials were evaluated for cost, durability, impacts due to snow removal, ADA compliance, routine maintenance needs, and permeability:

- Bituminous Asphalt
- Permeable Pavers
- Decomposed Granite
- Decomposed Granite with stabilizer
- Crushed Lime Rock

Working Through the Restoration Plan



- Feedback received from Dover Hill Apartments management and maintenance staff regarding restoration
- Public comments – primarily from residents on Pond D (4/16/19)
- Will include a mix of native trees, shrubs, grasses, and forbs
- Restoration vegetation selection will also consider the proposed hydrology – peak elevations, frequency, duration



Park Amenities

Native Trees Planted
Coniferous and Deciduous Species

Native Shrubs Planted
Red Twig/Grey Dogwood and Smooth Sumac

Restored Wetland and Upland habitat (native grasses/wildflowers):
3.0 acres total

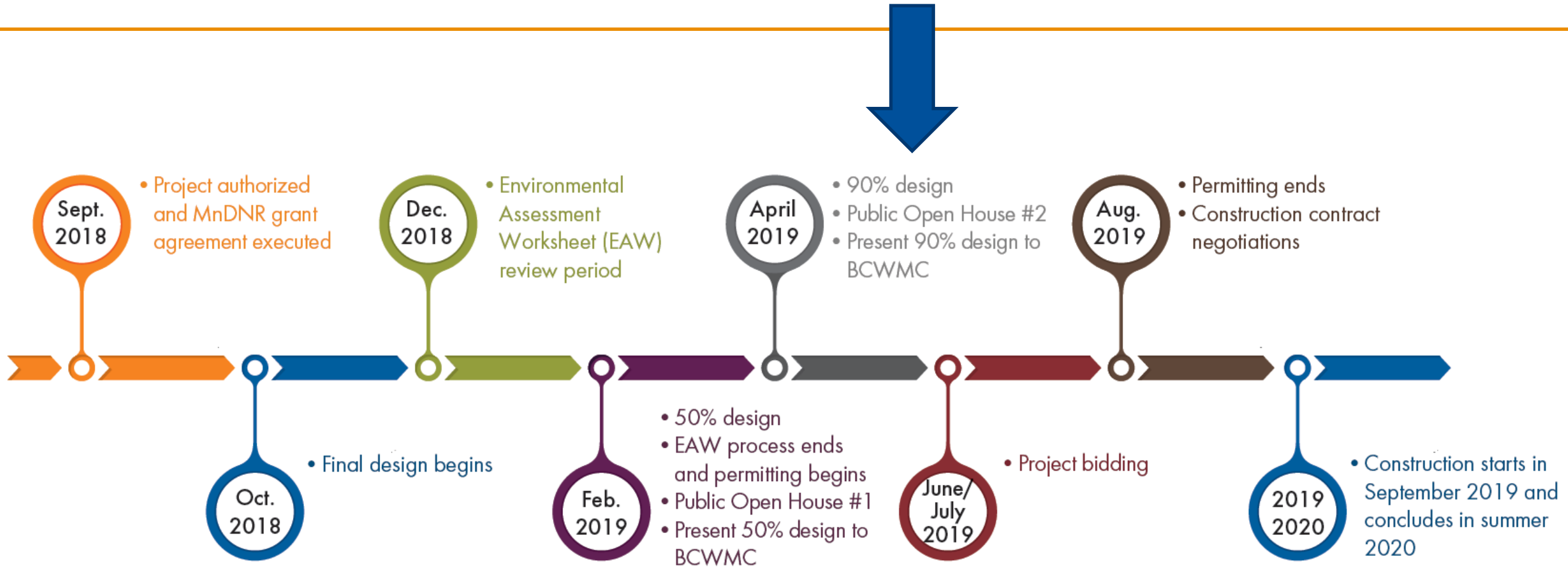
Pond Overlooks
Two ADA accessible seating areas overlooking the ponds.

Paved Trail Loop
ADA accessible trails

Permitting & Coordination

- Submitted State and Federal permit applications mid February, expect response within 6 months
- Coordination with utilities ongoing (MCES, private, and railroad)
- Continue working with residents & landowners (Dover Hill, residents on north end of DeCola Pond D)

Final Design Process



Any Questions?

