

# Pine St./S. Oriole Trail Stormwater Project

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City of Crystal Lake  
Public Works and Engineering

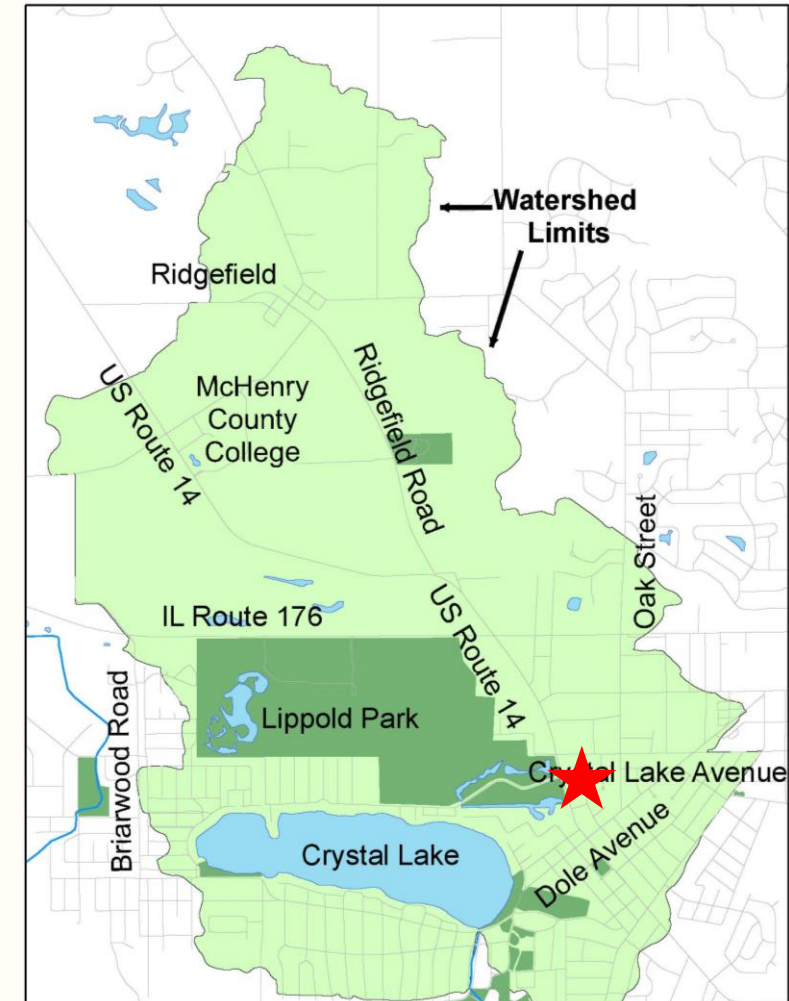
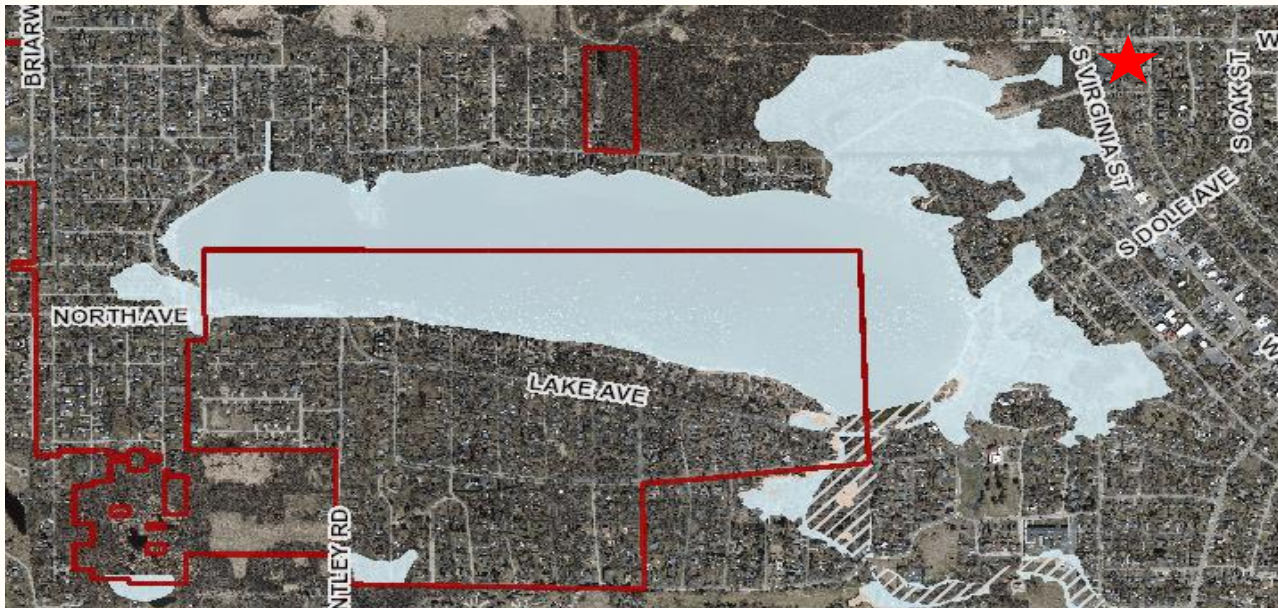
# Agenda

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- Existing Conditions
- Project History and Status
- Proposed Grading and Landscaping
- Future Maintenance
- Anticipated Schedule
- Questions or Comments

# Existing Conditions

- Neighborhood is part of Crystal Lake Watershed
- Crystal Lake weir elevation = 890.8 (water = 890.9)
- Floodplain elevation surrounding the Lake is 893.



# Existing Conditions

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- Crystal Lake weir elevation = 890.8 (water = 890.9)
- Floodplain elevation surrounding the Lake is 893.
- Existing low spots in back yards (891.7) is about 10 inches above normal Lake elevation
- **Surface water** impacts several homes-water flowing into lower levels/basements
- No reasonable or feasible way to drain this area during a flood event.



# Project History and Status

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- Public Meeting held in 2017. There was consensus to move forward with the acquisition of five properties
- City applied to IEMA and FEMA for grant funding in 2018, 2019 to acquire flood-impacted properties and was not successful.
- City applied for, and received an IDNR grant to acquire and demolish flood-impacted homes in 2020 (\$1.2 million).



# Project History and Status

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- Grant mandates **Voluntary** acquisition  
(no condemnation)
- Grant mandates the City worked **cooperatively** with property owners to meeting their needs for closing dates.
- 4 of the 5 properties have been acquired. Closing date on 5<sup>th</sup> property is tentatively scheduled for end of August



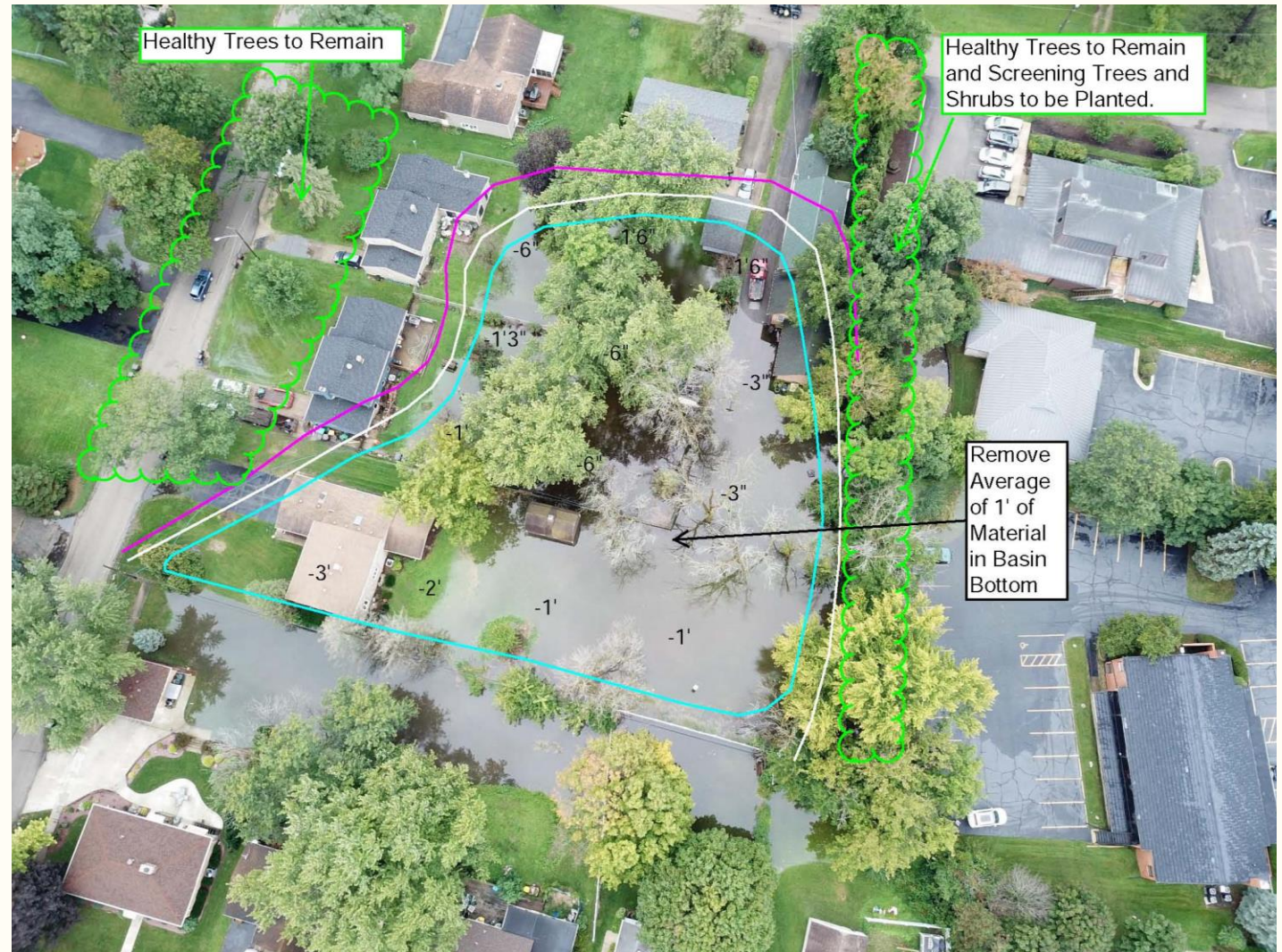
# Proposed Project Scope

- Demolish homes and remove impervious areas (driveways, patios, etc.)
- Remove some of the fill brought in when the homes were constructed
- Landscape with trees, native plants and turf grass.
- Grant **requires** property to be maintained as open space **in perpetuity**.



# Proposed Project Scope

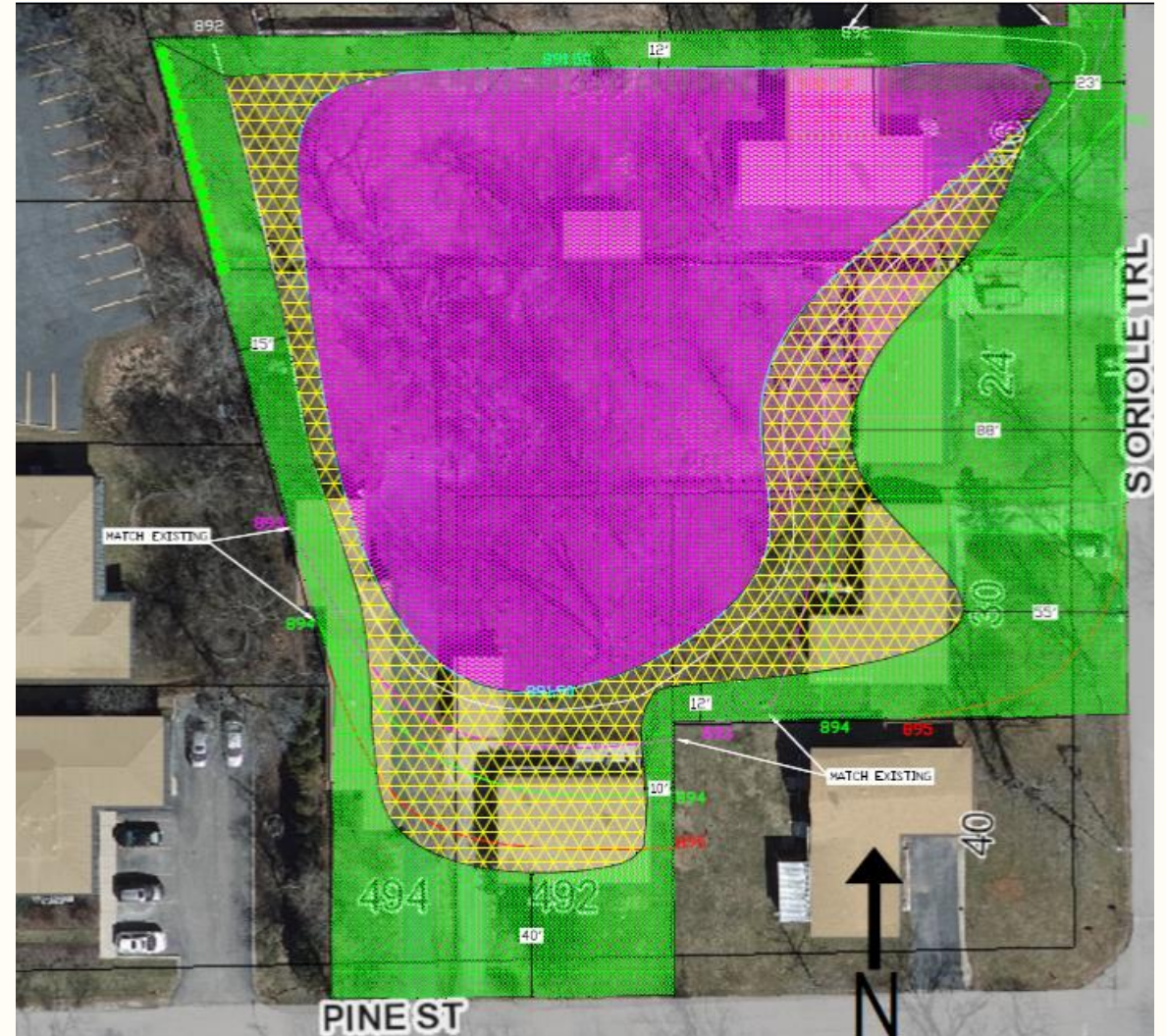
- Bottom of retention area will be above typical groundwater
- Grading will transition to existing property lines. (max. 4:1 slope)
- Create over 170,000 gallons of storage area
- Future – install dewatering well (sump pump) to pump groundwater in non-storm events.





# Proposed Project Scope

- Retain majority of front yards with turf grass (lawn)
- Provide a turf grass buffer around entire property (12 ft. on north, 15 feet on west) for maintenance and walking
- Maintain existing, healthy landscape screening
- Provide new screening where none exists (northwest property line).
- Provide tiered landscaping in retention areas



# Proposed Project Scope

SHORT SEDGE MEADOW SEED MIX

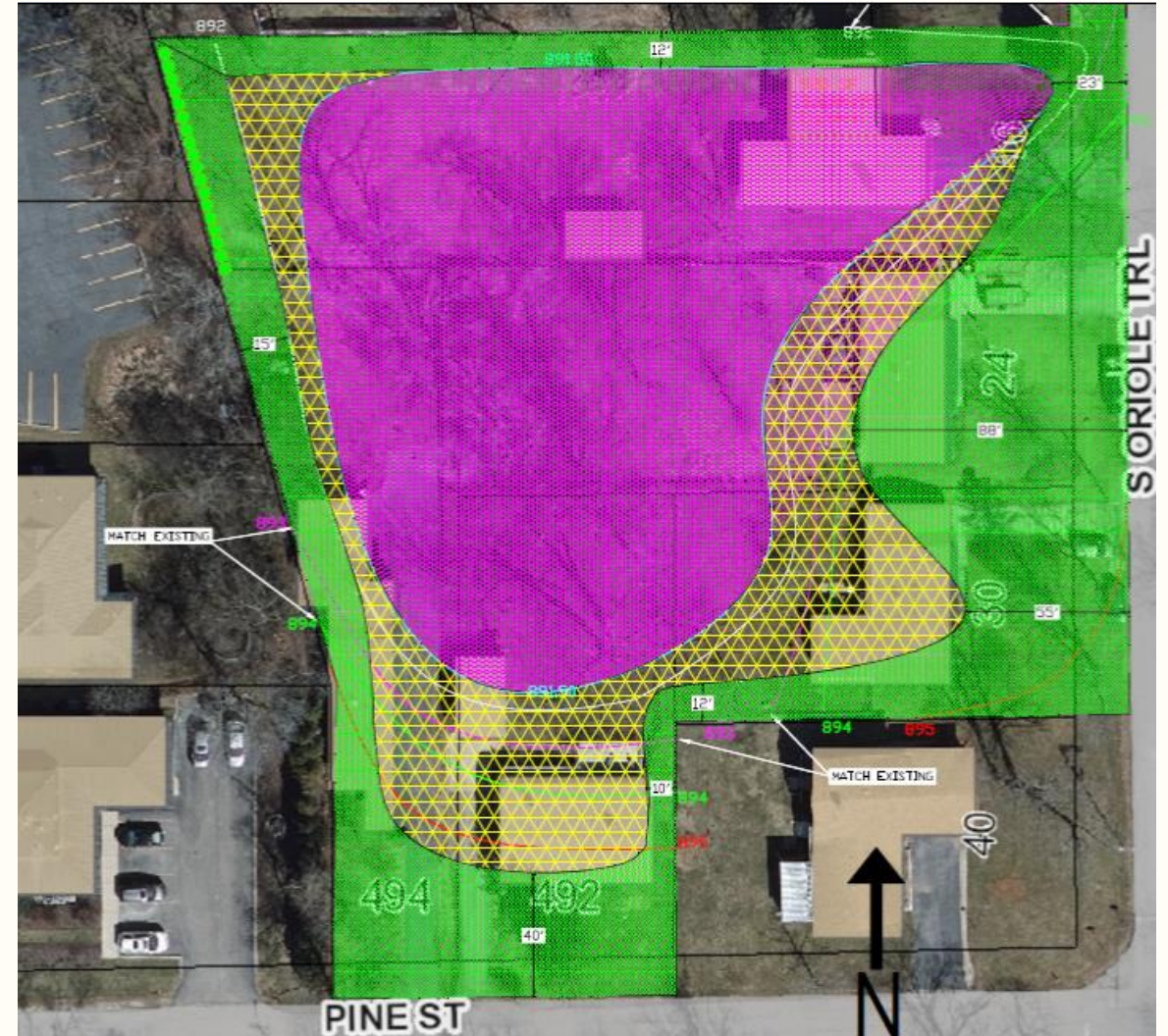


**Description:** Perfect for soils with an abundance of moisture or prolonged wet conditions. But, even a naturally wet area can dry out in summer's heat. A medium-wet soil (also called wet-mesk) is classified as one that is excessively wet in spring and after heavy rains but often dries out in summer. The meadow will explode with color and texture in June and July with Rose Milkweed, Mountain Mint, Bunch Flower, Iris, Sedges & Rushes, and many more.

DETENTION BASIN SEED MIX

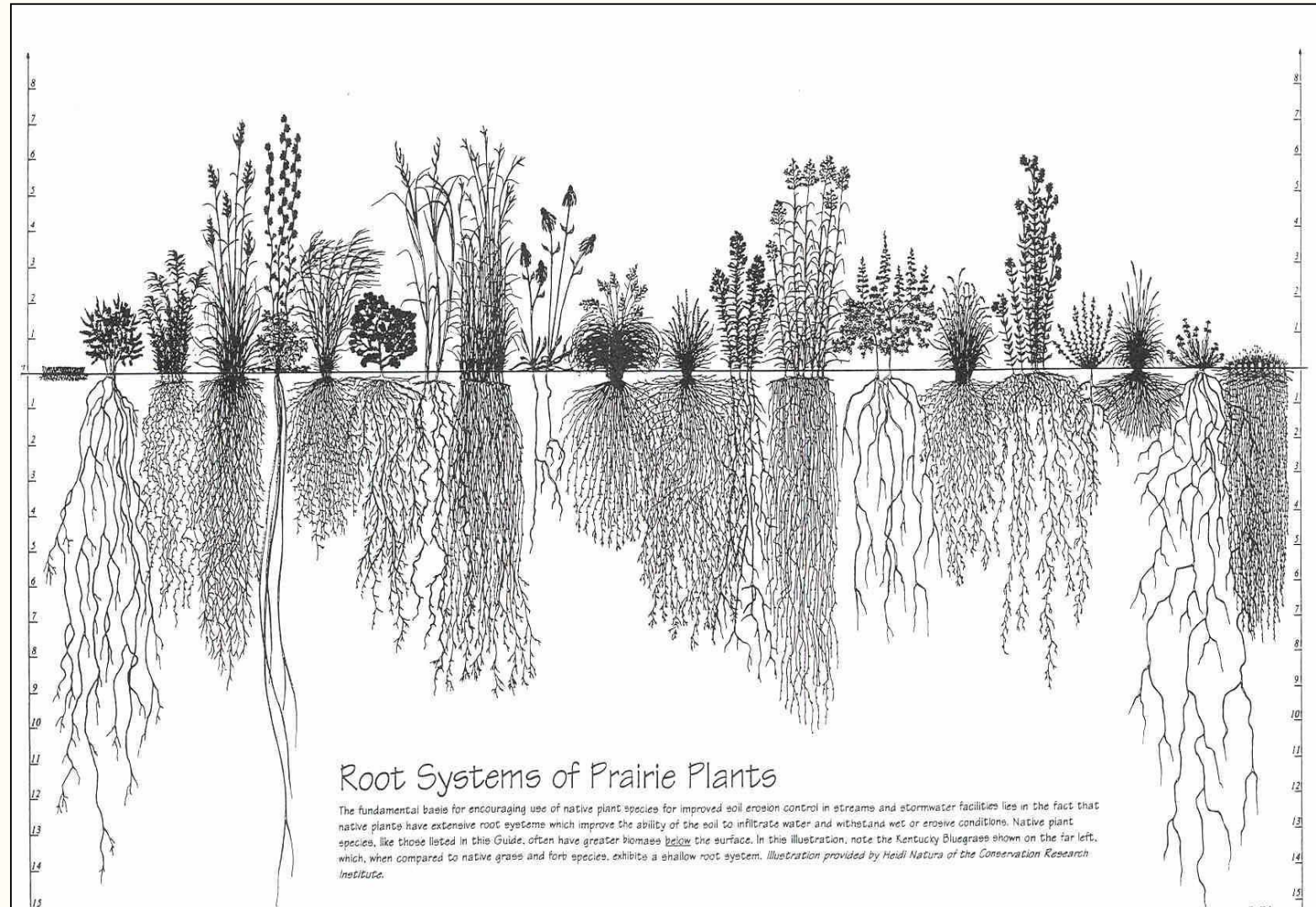


**Description:** This mix is designed for rainwater runoff detention basins containing a selection of species that tolerate fluctuating water levels. High diversity allows changes in species composition from the wetter bottom area to the dryer slope. Also, species composition can successfully change with a series of wet or dry years.



# Proposed Project Scope

- Native Prairie Plants have root structures that will extend down into groundwater (10 – 15 feet)
- Native plants create habitat for birds (mosquito predators) and pollinators
- Once established, require little maintenance
- Can withstand water and drought



# Future Maintenance

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- Area will flood during large storm events
- ***3-5 years to establish native plantings***
- Native areas to be managed by ecological contractor (same as other City properties)
- City to maintain turf areas (same as other City properties)
- City will treat for mosquitos if necessary
- Use by neighborhood after vegetation is stable

# Anticipated Schedule

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- Disconnect utilities and remove hazards (ongoing as properties are acquired)
- Submit to IDNR for review and approval after public meeting
- Anticipate closing on last property end of August
- Advertise for bids in early September (IDNR review and approval)
- Award Contract in October (IDNR review and approval)
- Demolition and construction November
- Final landscaping (weather dependent – late fall/early spring)

Thank You

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Questions?

