CITY OF CRYSTAL LAKE, ILLINOIS · INCORPORATED SEPTEMBER, 1914 ·

CITY OF Crystal Lake ILLINOIS

North Shore Study Area 9/21/2017

Stormwater Solutions & Stakeholder Engagement

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Agenda

- Summarize Pertinent Efforts and Meetings
- Follow Up on Questions
- Improvement Concepts: **NEED CONSENSUS!!!!**
- Staff Working on Enhanced Development Requirements
- Sanitary Sewer Initiatives
- Next Step: Workshop Meeting
- Final Report – Prioritized list for consideration

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Efforts and Meetings to Date

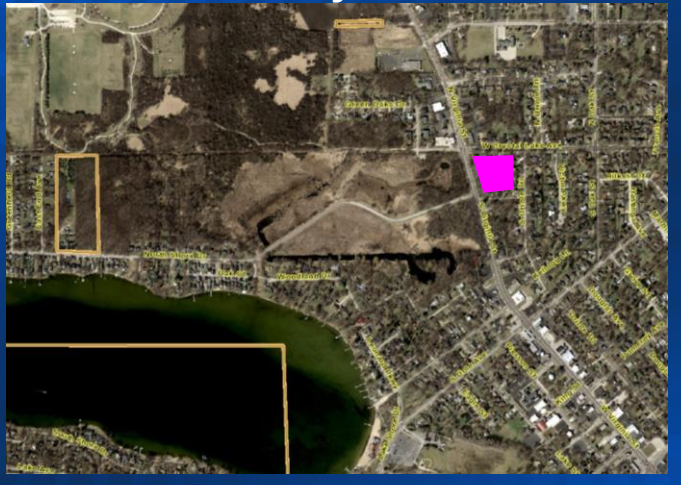


- 9 Study Areas: 16 meetings/presentations since 7/18

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Pine/Oriole Study Area



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Pine/Oriole Study Area

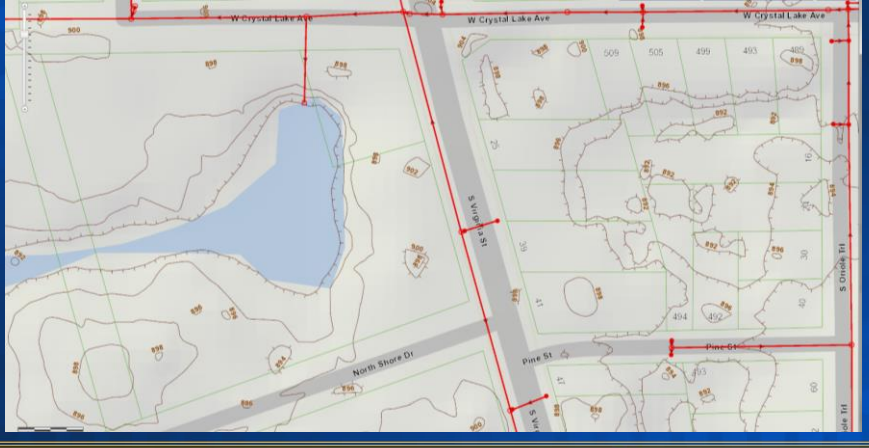


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Pine/Oriole Study Area

Tributary to Crystal Lake Ave. Storm Sewer that outlets to Cove Pond



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Green Oaks Study Area

Condition of drain tile. Create storage on City property.



Six (6) other study areas

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Woodland Drive

Connection, disconnection and future reconnection to Cove Pond Storm Sewer.



Update on Questions

- **When was the "creek" filled in?**

  The outlet pipe from Cove Pond to the Lake was constructed around 1968 (design plans dated 1968).

  "Dog Lake" (before Cove Pond) does not appear on 1962 aerials. Woodland Drive and the channel does. None of these features show in the 1953 aerial.

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Update on Questions

- **What was the scope of the 1999 Cove Pond Project?**

  The 1999 Cove Pond Project added storage and improved water quality by decreasing the depth of the pond, but spreading it out over a wider area to improve water quality.

- **What is the capacity today?**

  Good question! We need to find out.

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Update on Questions

- **When was the lake spillway put in?**



FIGURE 8
CRYSTAL LAKE DAM AND SPILLWAY

DAM

The original dam across the southeast corner of the lake was constructed prior to 1915. This was a masonry dam and was maintained by the Knickerbocker Ice Company. The top elevation was approximately 889 feet above sea level. The present concrete structure was built in 1921 (Fig. 8). The crest elevation is 890.81 feet above mean sea level, the length is 24 feet, and the spillway discharges through a 2.5 by 3 foot concrete culvert under Lake Avenue.

URBAN DEVELOPMENT

The City of Crystal Lake, adjacent to the lake on the east, and the Village of Lakewood, bordering the lake on the south, cover approximately 1.2 square miles of the watershed of the lake. Suburban residential development, adjacent to the north and west shores of the lake, covers another 0.7 square miles of the lake's watershed. The remaining 2.9 square miles of the watershed is in general farm land.

The population of the City of Crystal Lake and the Village of Lakewood is estimated at approximately 6660. The suburban population is estimated at approximately 1450. Most of this suburban development has occurred since about 1945.

Source: Sasman, Robert T., "The Water Level Problem at Crystal Lake, McHenry County", Illinois State Water Survey, Report of Investigation 32, Illinois State Water Survey, Department of Registration and Education, State of Illinois, 1957.

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Update on Questions

- **How is the City dealing with vacant/ foreclosed homes?**

Properties are inspected, owners researched and violations notices issued. Aside from lawn maintenance issues, banks cannot proceed with repairs until the foreclosure is final and they take possession. Violations issued to the owner during this period can be voided by the judicial process. As soon as the bank/new owner takes possession, enforcement actions cannot be voided.

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Concepts & Enhancements

PRELIMINARY

Any concept, idea, project needs to be vetted further, costs estimated, priorities identified and presented to City Council.

Looking at short-term, mid-term and long-term solutions.

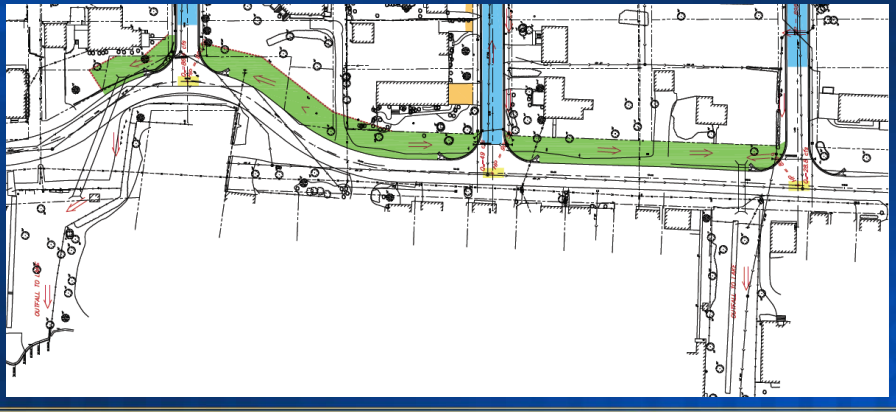
Larger projects may be phased in over time.

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Improvement Concepts

- **Storm Sewer Improvements (2010)**



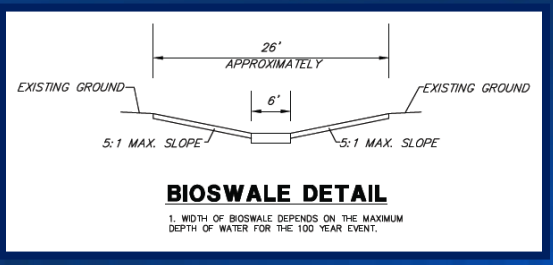
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Improvement Concepts

- Storm Sewer Improvements (2010)





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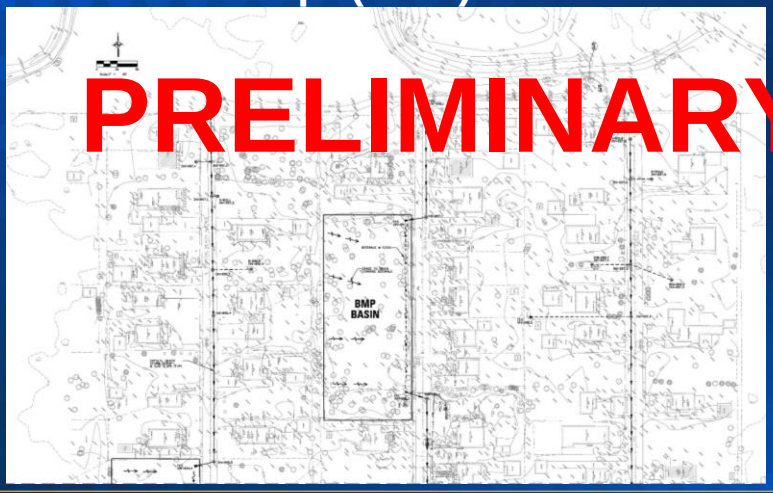
Refined Concept (2017)

- Storm Sewer with BMP basins (vacant lots)
- Trunk line down streets with strategically placed laterals to rear yard low spots
- Replace storm sewer down mooring beach and swim beach with new pipe *under sidewalks*.
- LESS capacity than 2010 concept
- LESS impacts to neighborhood

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Refined Concept (2017)

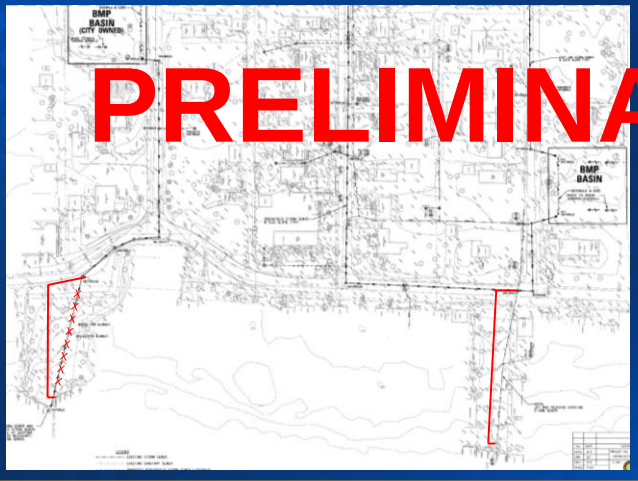


PRELIMINARY

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Refined Concept (2017)



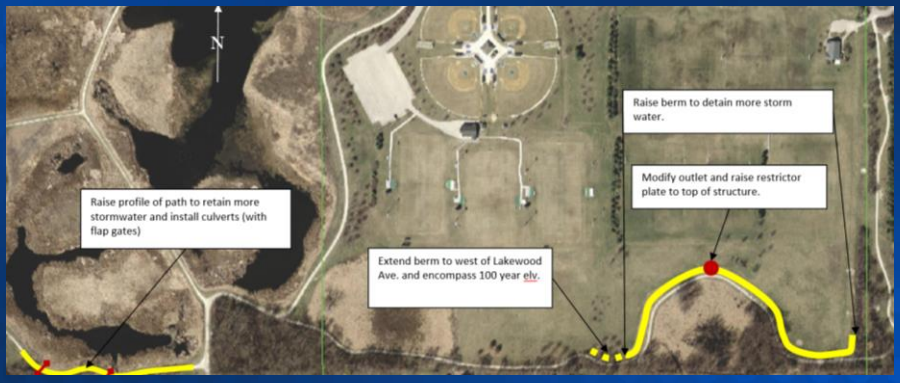
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Park District Concepts

- **Raise Berm, Extend Berm, Modify Outlet Structure**



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CONSENSUS?

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- Enhanced Development Requirements
  (requires City Council approval)
- Tree and shrub clearing behind North Shore
  (City property: east end- 30 ft. wide (need everybody's approval – letters out soon).
- Low flow storm sewer adjustments (North Shore near Baldwin/Crandall, east end)

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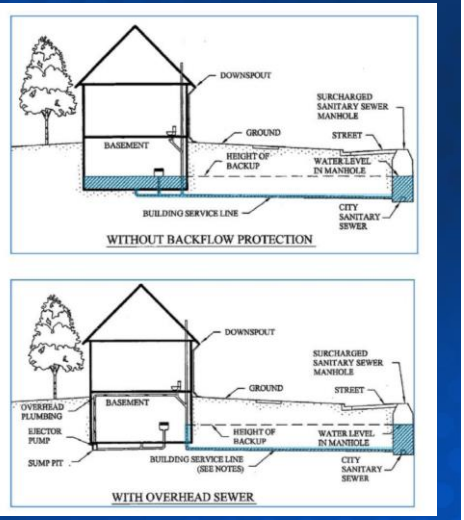
- Sanitary Sewer Issues
  - The sewer east of Oak Ct. to the lift station has been lined.
  - The sanitary sewer main is 10-12 feet deep along North Shore in the vicinity of Oak Ct./ East St.
  - Public Works staff is identifying manholes and sewer lines for lining and grouting in next year's budget (FY starts May 2018). ***Multi-year effort.***

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Sanitary Sewer Issues

- ***Researching*** Overhead Sewer Cost Sharing Program.
- ***Will requires legal review, CRITERIA, funding, prioritization and Council approval.***



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