



MWRD Stormwater Management
July 10, 2014
West Fork North Branch Chicago River
Flood Mitigation Project
Tall Trees Neighborhood



Meeting Agenda

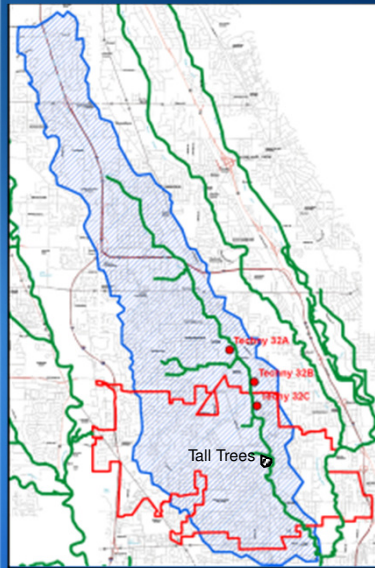
- Introductions/Objective
- Project Background
 - WFNBCR Flood Mitigation Efforts
 - Alternative Evaluation
 - Basis for Project Development
- Tall Trees Project Description
 - Tall Trees Flooding Issues
 - Tall Trees Project Description
- Next Steps
- Questions/Discussion





Meeting Objective

Provide supplemental background and information regarding the flood mitigation alternative being considered for the Tall Trees neighborhood.



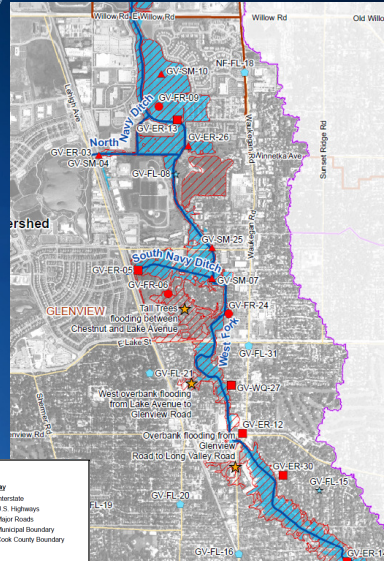
West Fork of the North Branch of the Chicago River (WFNBCF)

Location	Tributary Area (Square Miles)
U/S of Techny 32C	21.0
U/S of S. Navy Ditch	23.8
U/S of Central Rd	27.6
U/S Confluence with NBCR	28.4



Glenview WFNBCR Flooding

- Occurs when flow in the river exceeds channel capacity
- Excess flow can come from:
 - Runoff from upstream areas
 - Runoff from Glenview
 - Runoff from rain events over the entire area

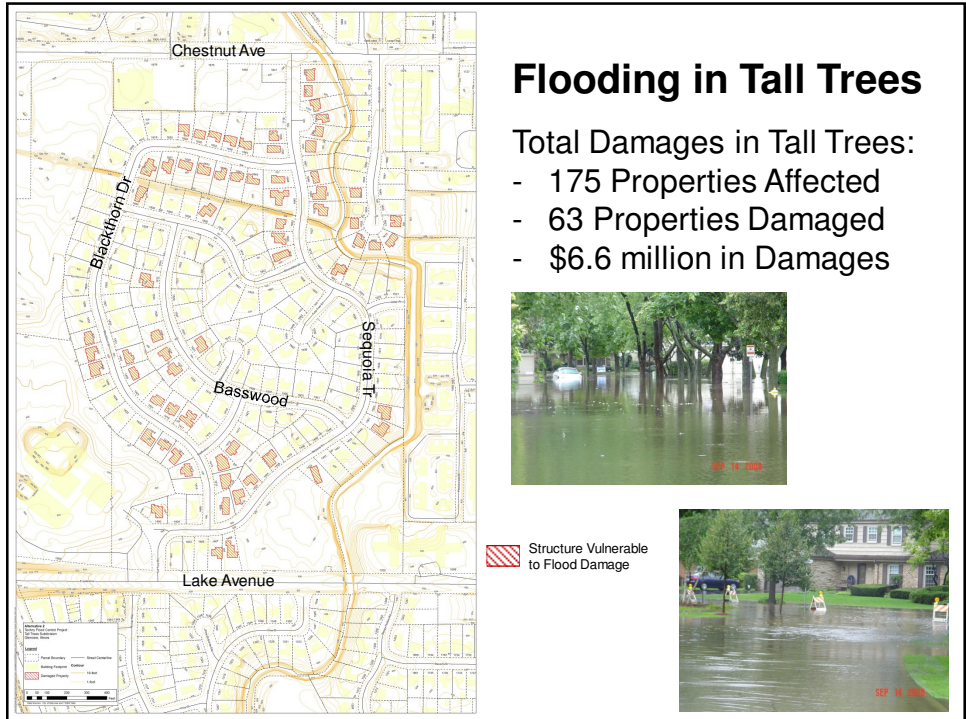



LEGEND		Problem Type	
Regional	Local	Problem Area Identified Through Modeling	FEMA Floodplain
Bank Erosion	Bank Erosion	Project Alternative Location	ZONE A, AI, and AO
Maintenance	Subsidence Flooding	DWP 100-year Inundation Area	ZONE AE
Overbank Flooding	Maintenance		North Branch Chicago River
Pavement Flooding	Overbank Flooding		Watershed Boundary
Storm Sewer Flow Restriction	Pavement Flooding		Subwatershed Boundary
	Ponding		River/Stream
	Storm Sewer Flow Restriction		
			Roadway
			Interstate
			U.S. Highways
			Major Roads
			Municipal Boundary
			Cook County Boundary



Watershed Analysis Efforts

- Data Collection
- Watershed Modeling
- Problem Identification
- Alternative Development
- Alternative Evaluation
- Low Entry Surveys
- Benefit-Cost Analysis

Computing Damages and Benefits

1. Estimate Damages for each Storm (2-yr through 100-yr)
2. Compute Average Annual Damages (AAD)
3. Include Additional Costs (generally 15% of AAD)
4. Present Value = $AAD \cdot 18.61$ (50 years at 4.875%)
 - = \$6,600,000 in total damages
 - = \$6,600,000 in potential benefits



Resident Concerns from Summer 2013

- Failure to Consider Other Options
 - Techny Reservoir Expansion
 - Active Control
 - Modified Floodwall
- Impacts on Property Owners
 - Visual impact
 - Impact on landscaping
 - Property impacts
- Reliability
 - Level of Protection



Alternative Evaluation



Regional Storage



Active Control



Channel Modifications



Flood Protection



Buy-outs



Master List of Alternatives Considered

- STS Alternative Evaluation (Village of Glenview)
 - 8 alternatives evaluated
- Detailed Watershed Plan (MWRDGC)
 - 15 alternatives evaluated
- WFNBCR Preliminary Design (MWRDGC)
 - 16 alternatives evaluated

39 alternatives evaluated
by three consultants



Basis for Project Development

- Provide significant reduction in flooding risk and damages
- Achieve reasonable balance between cost and benefits
- Consider individual area projects
- Manage adverse impacts to stakeholders

Revised Tall Trees Flood Mitigation



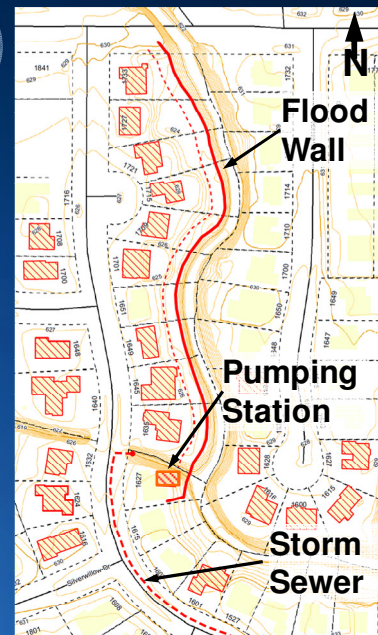
- Floodwall
 - Length: Approx. 950 feet
 - Average Height: 5 feet
- Pumping Station
 - 100 cubic feet per second
 - Backup power
- Storm Sewer
 - 1250 feet, 48-inch diameter
- Select Dry Flood Proofing
- Compensatory Storage
 - 80 acre-ft at Reservoir 32C

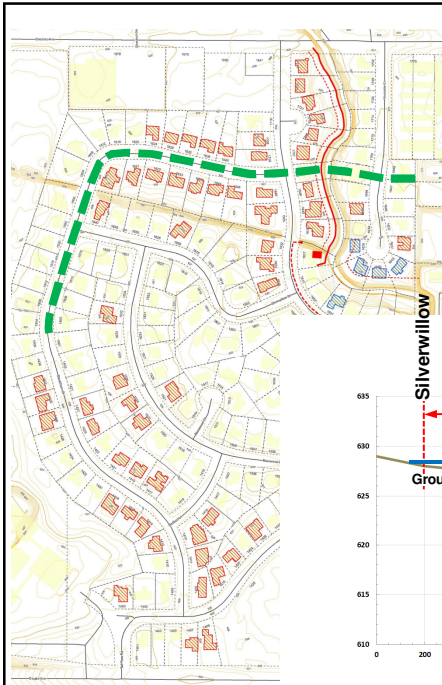


Revised Tall Trees Flood Mitigation



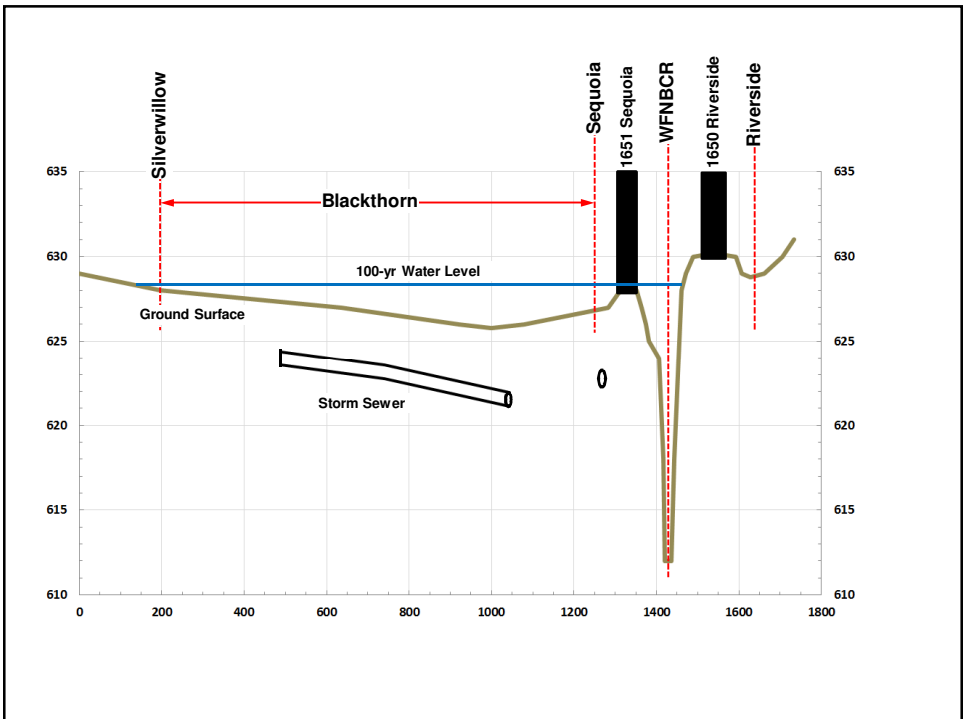
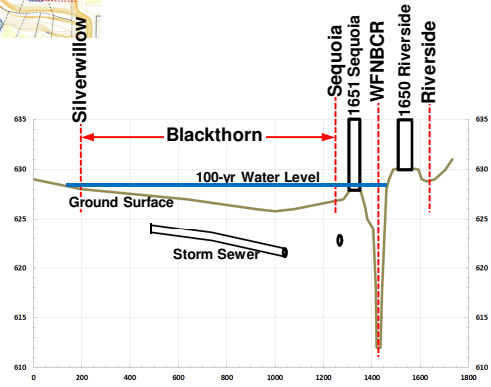
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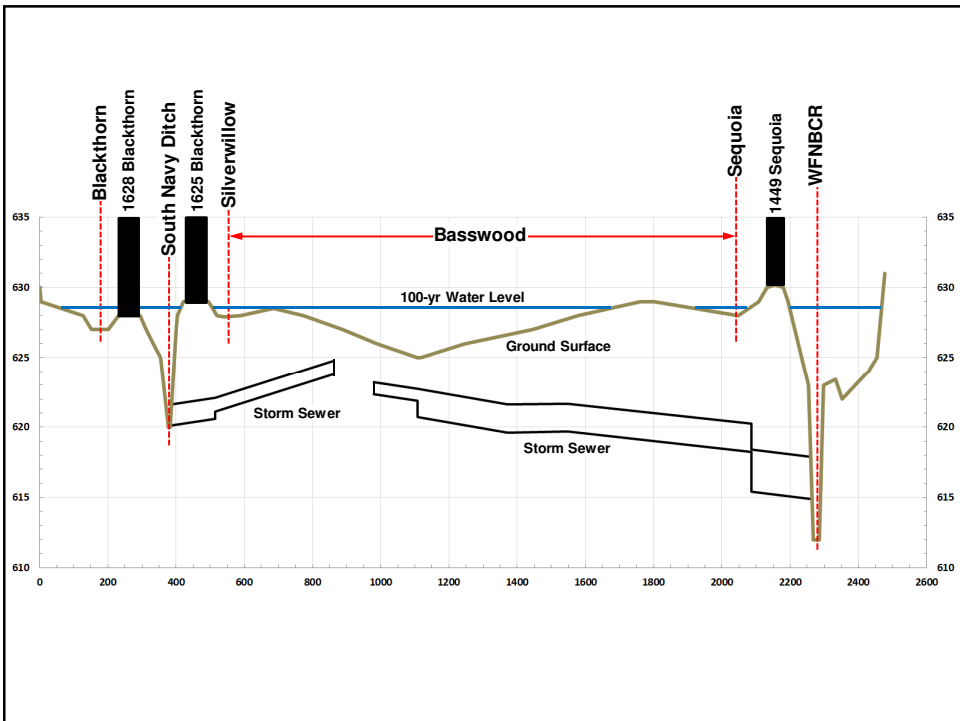
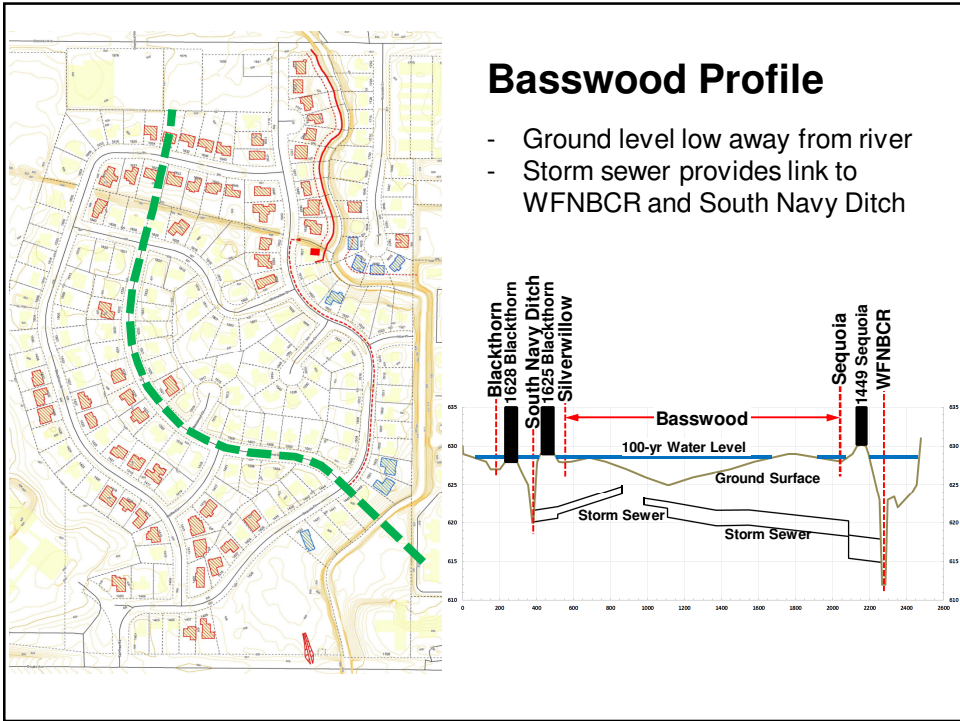




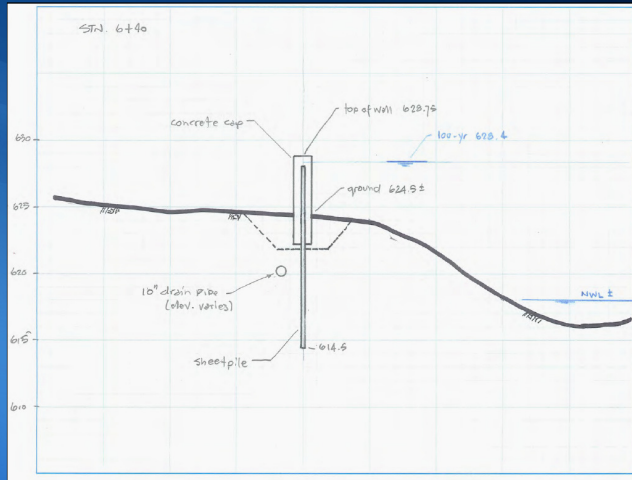
Blackthorn Profile

- Ground level drops away from river
- Riverside drive is above flood level
- South Navy Ditch provides link to WFNBCR





Conceptual Floodwall Section



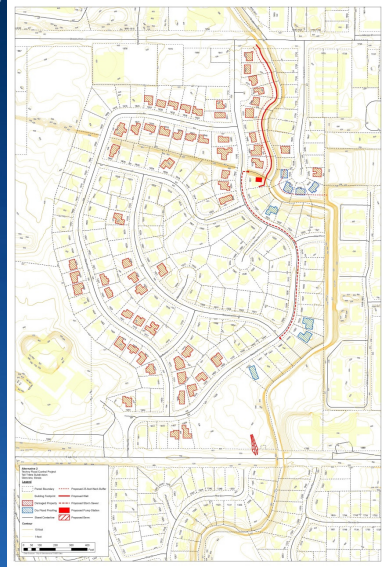
1645 Sequoia Trail



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Next Steps





Summary

- **Goal:** Seek consensus regarding the proposed project
- **Objective:** Physical protection up to the 100-yr flood level
- **Benefits:** All 175 homes in Tall Trees, including 63 homes vulnerable to direct overbank flooding damage



QUESTIONS