



WINNETKA STORMWATER MASTER PLAN

Project Report

- Initial Tasks (July-Aug 2012)
 - Launch Project Website
 - Initiate Water Quality Sampling
- Additional Study Areas (Sept-Dec 2012)
- Draft Master Plan (Jan-July 2013)



www.winnetkastormwaterplan.com



WINNETKA STORMWATER MASTER PLAN



Stormwater Master Plan

- A vision for the Village's stormwater program with actionable goals and objectives
 - Comprehensive
 - Protects and enhances property values
 - Promotes a thriving and sustainable community



WINNETKA STORMWATER MASTER PLAN



Stormwater Master Plan

- To improve its stormwater management system and the quality of its stormwater runoff, the Village will...



WINNETKA STORMWATER MASTER PLAN



Stormwater Master Plan

- **Goal 1/Section 3:** The Village will reduce the risk of flooding with improvements to stormwater infrastructure.



WINNETKA STORMWATER MASTER PLAN



Stormwater Master Plan

Village of Winnetka Stormwater Master Plan		Implementation Plan																					
		13	2014				2015				2016				2017				2018				2019
		Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	and Beyond
Stormwater Capital Improvements																							
1	Complete design of Winnetka PS, Lloyd Park Outlet, Tower/Foxdale, NW Winnetka/Forest Glen																						
1	Complete construction of Winnetka PS, Lloyd Park Outlet, Tower/Foxdale, NW Winnetka/Forest Glen																						
1	Complete design of Willow Road Tunnel																						
1	Complete construction of Willow Road Tunnel																						
2	Complete detailed topographic survey of Area N																						
3	Evaluate the the feasibility of additional capital improvements																						



Stormwater Master Plan

- **Goal 2/Section 4:** The Village will reduce basement back-ups and sanitary sewer overflows by reducing the amount of inflow and infiltration into the sanitary sewer system.



Stormwater Master Plan

Village of Winnetka Stormwater Master Plan		Implementation Plan																					
		13	2014				2015				2016				2017				2018				2019
		Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	and Beyond
Inflow and Infiltration																							
1	Complete SSES - Phase 1																						
1	Complete SSES - Phase 2																						
1	Complete SSES - Phase 3																						
2	Complete building-to-building canvassing																						
3	Smoke test streets prior to capital improvements																						
4	Implement a cost-sharing program for disconnection of sump pumps and foundation drains																						



Stormwater Master Plan

- **Goal 3/Section 5:** The Village will maintain participation and good standing in the National Flood Insurance Program and improve floodplain management practices to minimize flood damages and reduce flood insurance premiums for property owners.



WINNETKA STORMWATER MASTER PLAN



Stormwater Master Plan

- **Goal 4/Section 6:** The Village will protect and enhance the quality of water in Lake Michigan and the Skokie River.

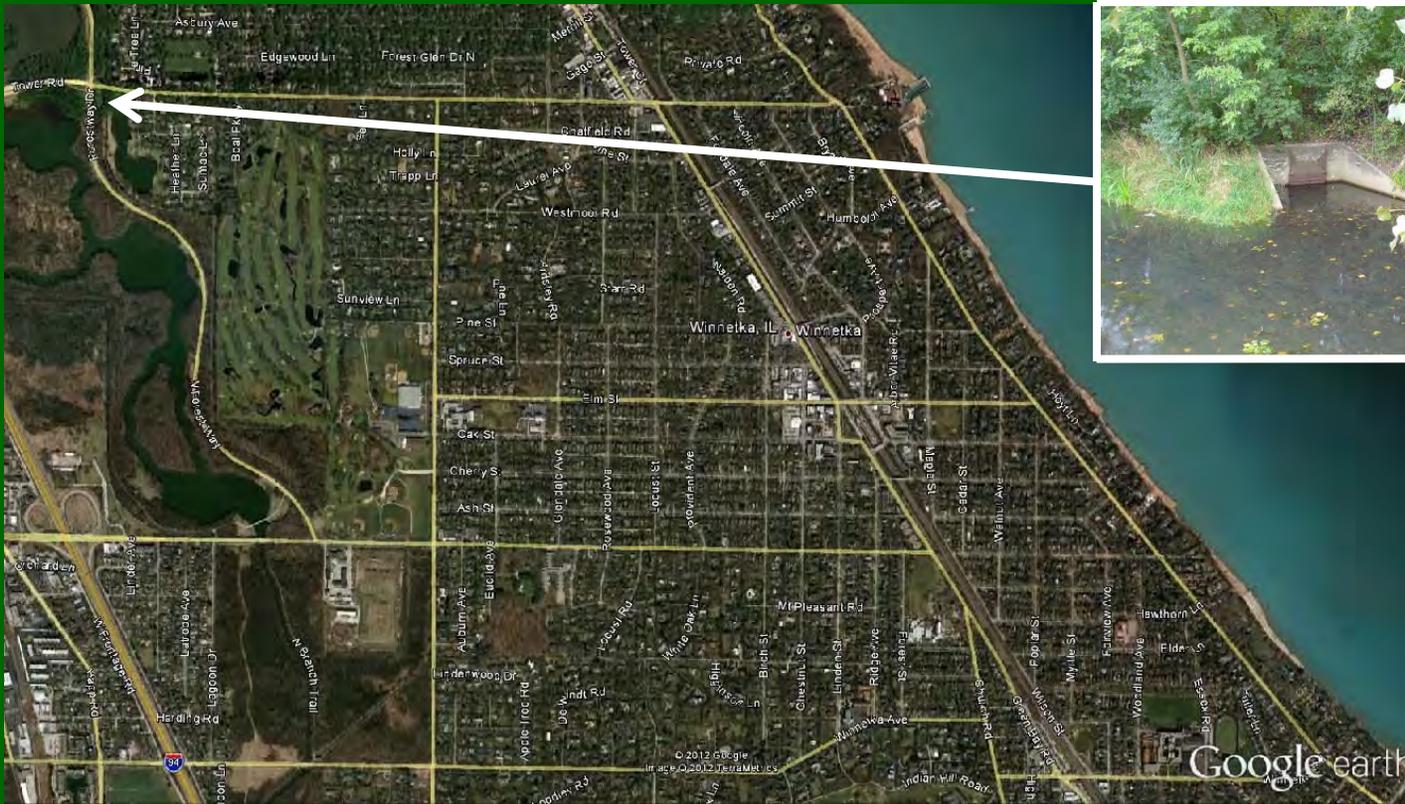


Water Quality Sampling

- 5 Sampling Points
- Wet and Dry Weather
- September-April
- Wide Range of Parameters



Water Quality Sampling



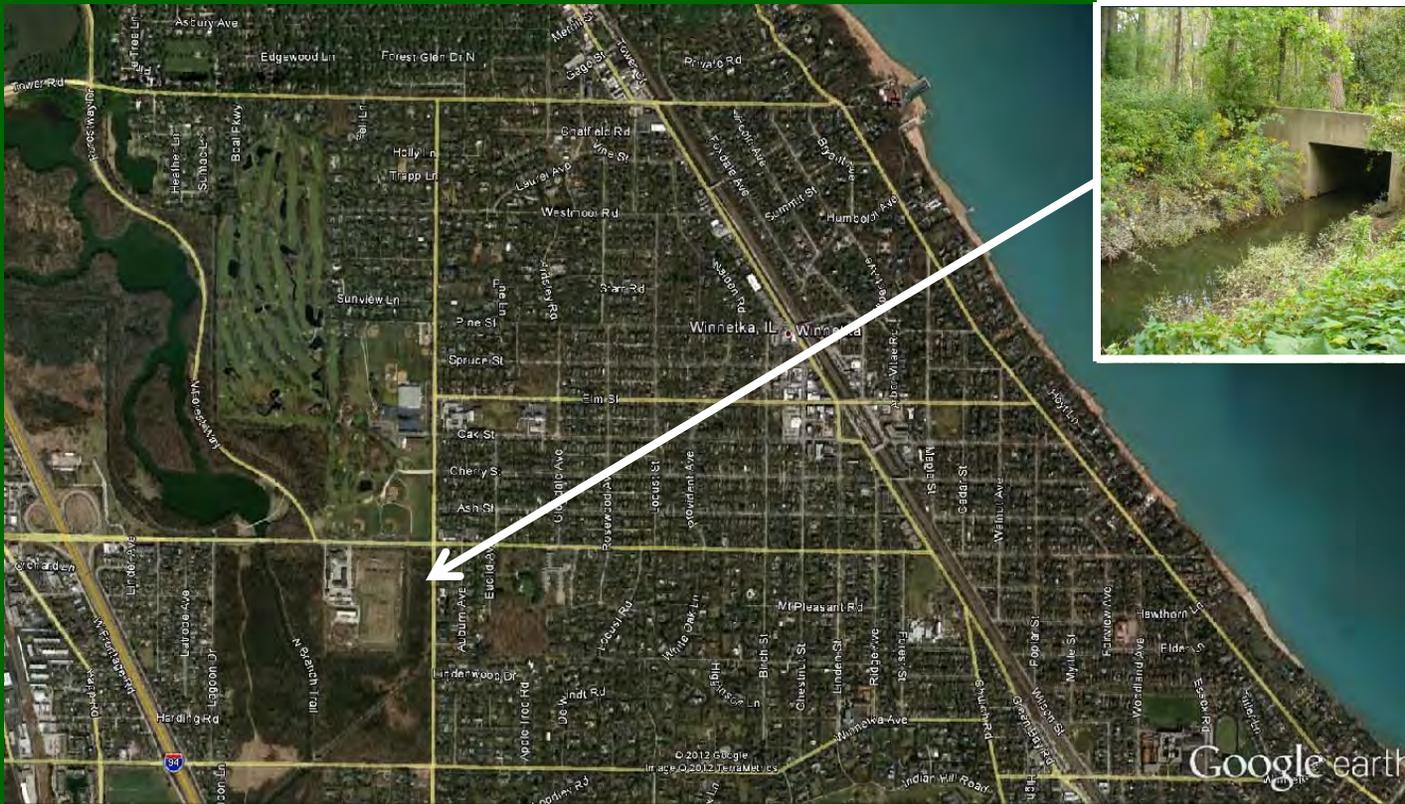
Location 1 – Tower Road and Forestway Drive



WINNETKA STORMWATER MASTER PLAN



Water Quality Sampling



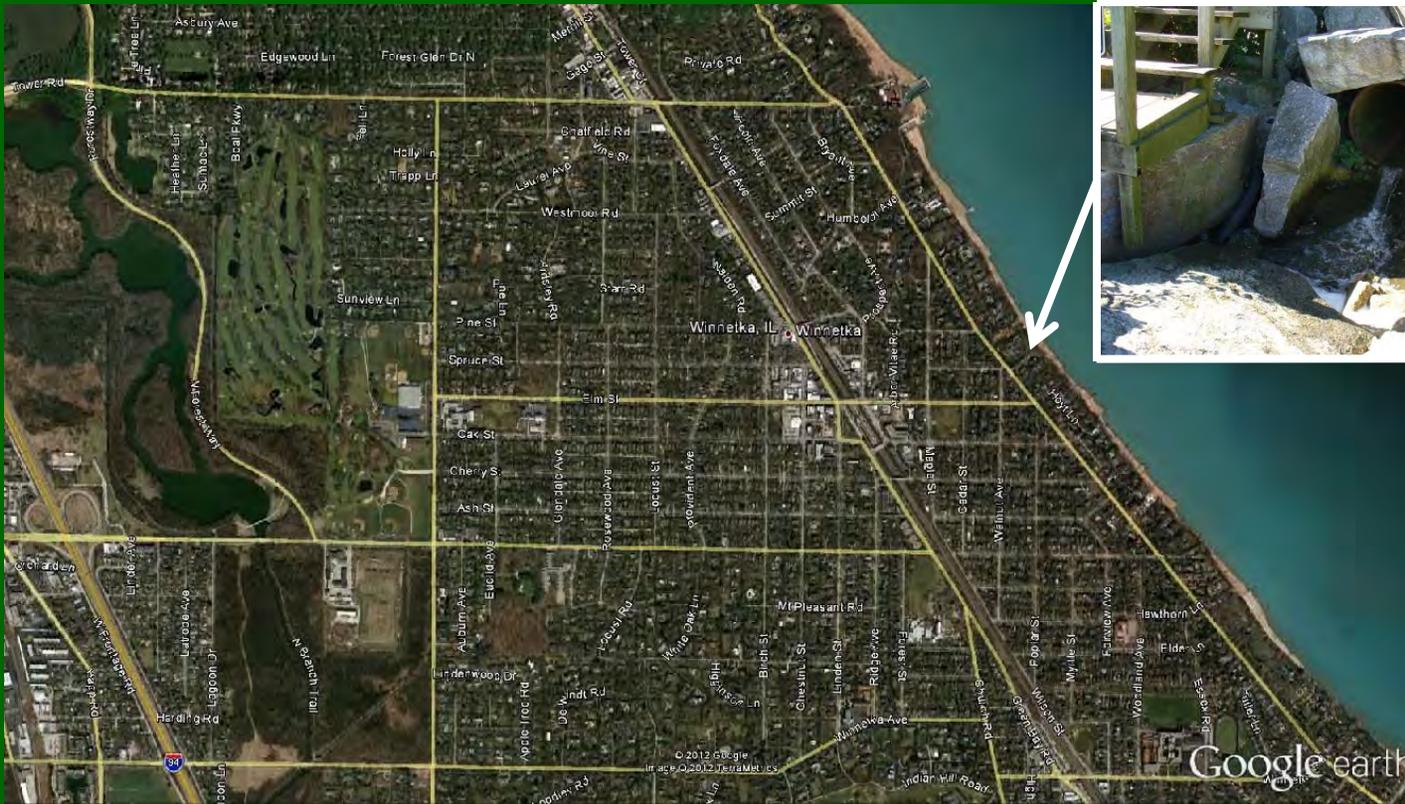
Location 2 – Willow Road and Hibbard Road



WINNETKA STORMWATER MASTER PLAN



Water Quality Sampling



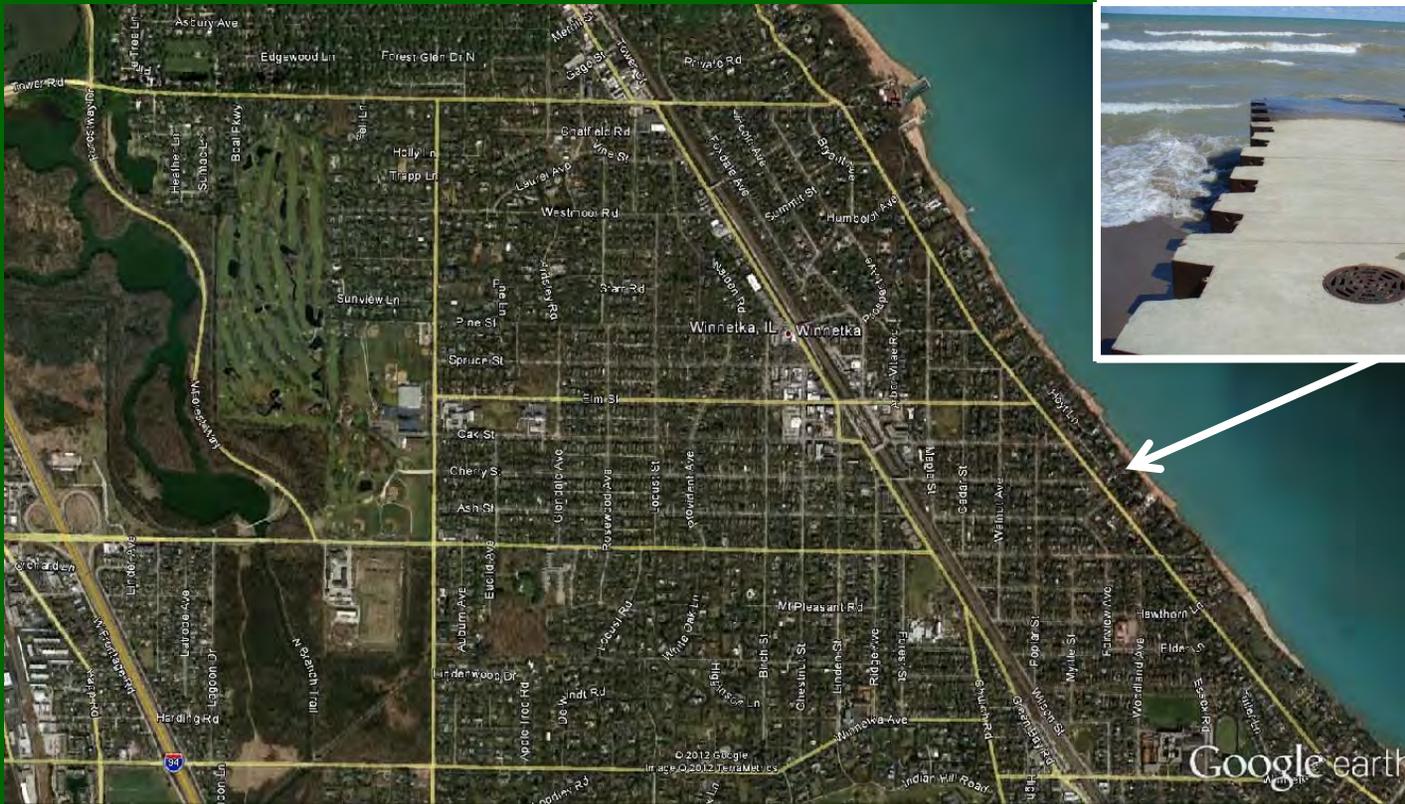
Location 3 – Spruce Street and Lake Michigan



WINNETKA STORMWATER MASTER PLAN



Water Quality Sampling



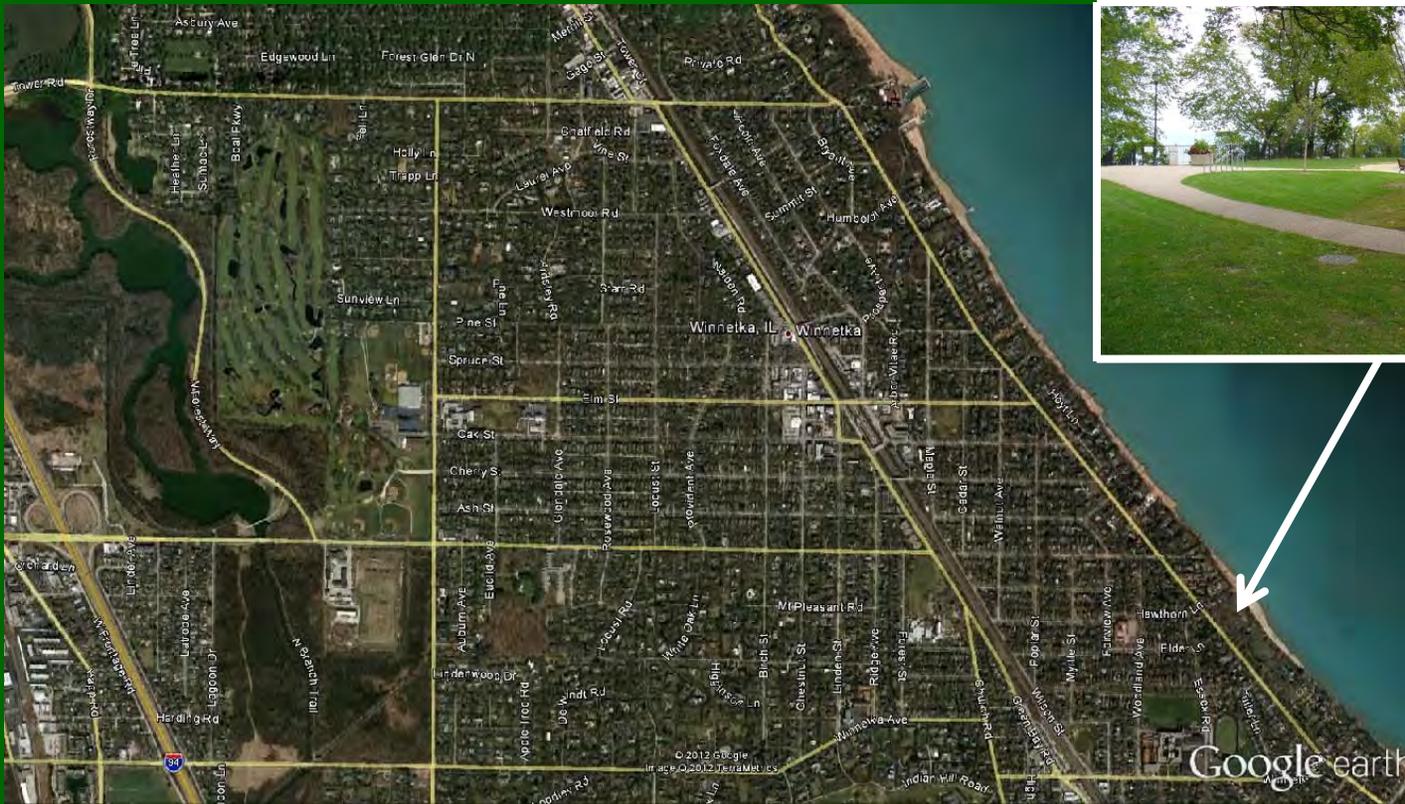
Location 4 – Cherry Street and Lake Michigan



WINNETKA STORMWATER MASTER PLAN



Water Quality Sampling



Location 5 – Elder Lane and Lake Michigan



WINNETKA STORMWATER MASTER PLAN



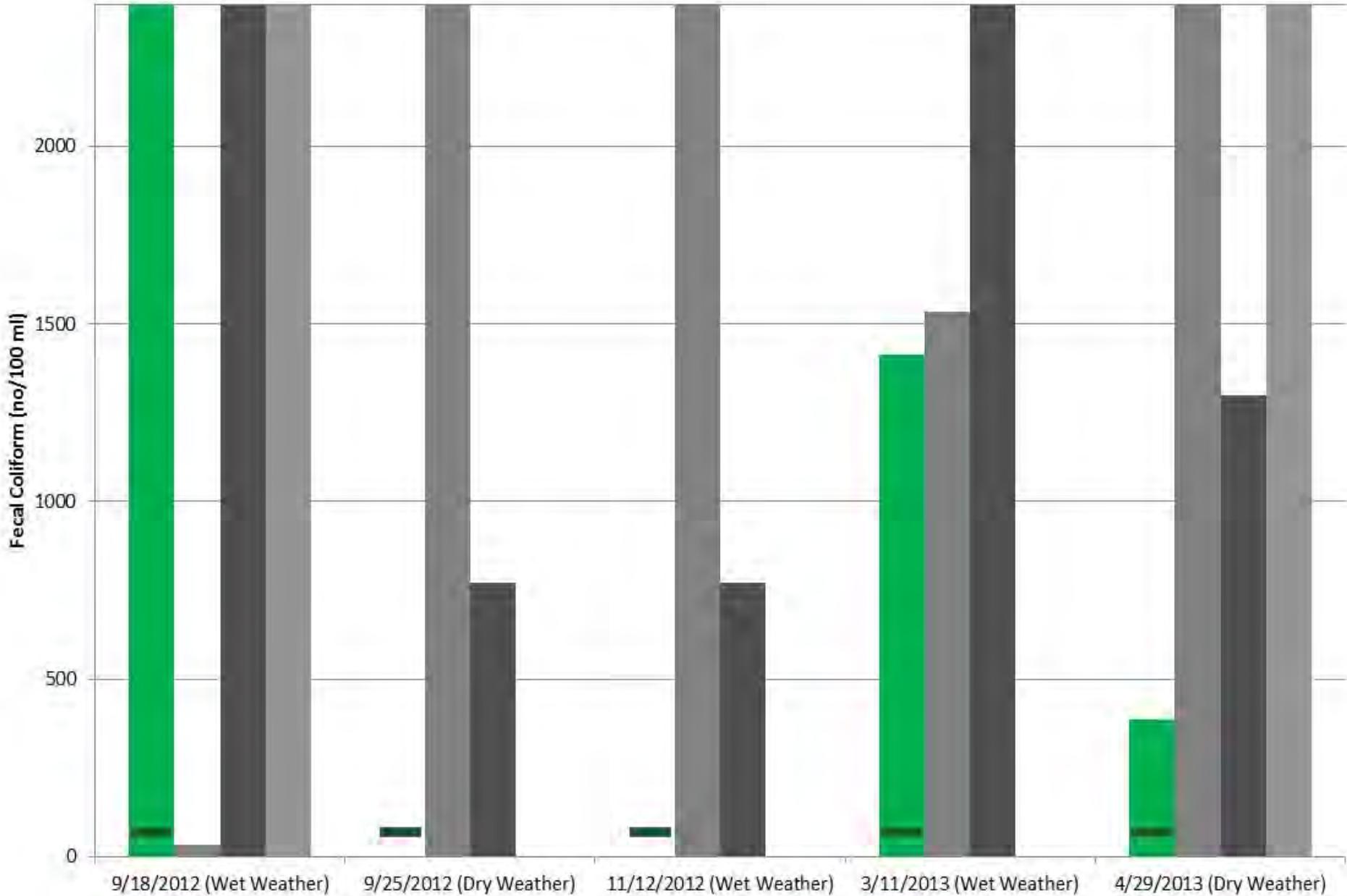
Water Quality Sampling

- Results Show Elevated Levels of:
 - Fecal Coliform
 - Nutrients (Nitrogen and Phosphorus)
 - Total Dissolved Solids
 - Total Suspended Solids
- Typical for Urban Stormwater Runoff



Fecal Coliform vs. Time

■ 2 ■ 3 ■ 4 ■ 5



Stormwater Master Plan

Village of Winnetka Stormwater Master Plan		Implementation Plan																								
		2013				2014				2015				2016				2017				2018				2019
		Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	and Beyond			
Water Quality																										
1	Continue to implement current NPDES Phase II program																									
2	Incorporate a stormwater pollution prevention webpage into the redesign of the Village's website																									
3	Develop a Stormwater Pollution Prevention Plan for the Public Works Facility and Village parks																									
4	Incorporate stormwater pollution prevention training into Public Works employee training																									
5	Implement a water quality monitoring program																									
6	Participate in the TMDL development process for the Lake Michigan and Skokie River watersheds																									



Stormwater Master Plan

- **Goal 5/Section 7:** The Village will encourage the use of stormwater best management practices to reduce runoff volumes and improve the quality of stormwater runoff.



Stormwater Master Plan

Village of Winnetka Stormwater Master Plan		Implementation Plan																					
		13	2014				2015				2016				2017				2018				2019
		Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	and Beyond
Stormwater BMPs																							
1	Implement an award or recognition program for BMPs installed on private property																						
2	Participate with the MWRDGC to distribute rain barrels to interested residents																						
3	Implement a formal process to incorporate stormwater BMPs in public improvements																						
4	Implement a stormwater fee credit program and a stormwater incentive program																						



Stormwater Master Plan

- **Goal 6/Section 8:** The Village will establish development regulations which are state of the art with regard to stormwater management.



WINNETKA STORMWATER MASTER PLAN



Stormwater Master Plan

- **Goal 7/Section 9:** The Village will effectively maintain the storm and sanitary sewer systems to promote optimum performance.



WINNETKA STORMWATER MASTER PLAN



Stormwater Master Plan

Village of Winnetka Stormwater Master Plan		Implementation Plan																					
		13	2014				2015				2016				2017				2018				2019
		Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	and Beyond
Operations and Maintenance																							
1	Clean and maintain 1/7 of the sanitary sewer system																						
2	Clean and maintain 1/7 of the storm sewer system																						
3	Inventory stormwater BMPs and develop a plan for regular BMP maintenance																						



Next Steps

- Refine Goals, Objectives, and Recommendations
- Open Houses (October-November)
 - Floodplain Management
 - Water Quality/Stormwater BMPs
 - Inflow and Infiltration
- Development Regulations Study Session



Next Steps

- Refine Goals, Objectives, and Recommendations
- Adopt Stormwater Master Plan (December)



WINNETKA STORMWATER MASTER PLAN



Policy Direction

- Move forward with recommendation to conduct building-to-building canvassing?
- Move forward with recommendation for a cost-sharing program to disconnect sump pumps and foundation drains from sanitary sewer?



Policy Direction

- Move forward with recommendation to implement an award or recognition program for BMPs and a distribution program for rain barrels?
- Move forward with recommendation to implement a stormwater fee credit program and a stormwater incentive program (if a stormwater utility is adopted)?



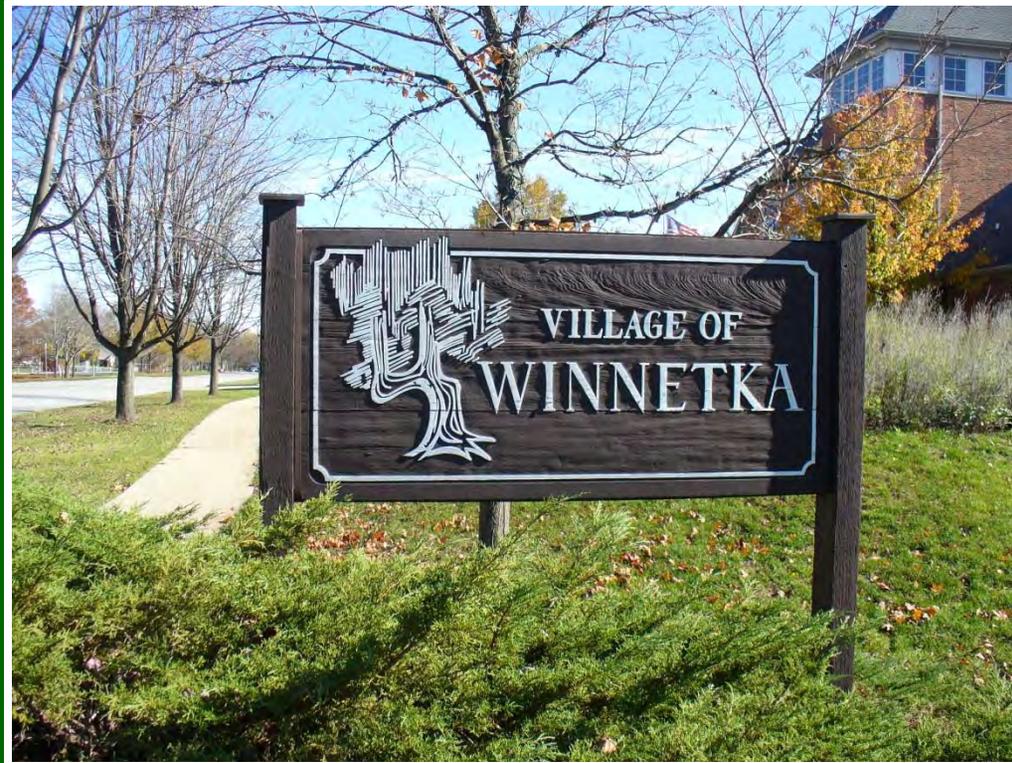
Policy Direction

- Move forward with Open Houses?



WINNETKA STORMWATER MASTER PLAN





Questions?



WINNETKA STORMWATER MASTER PLAN

