



DUPAGECOUNTY

STORMWATER MANAGEMENT



Establishing a Stormwater Basin & BMP Inventory for DuPage County

Background

DuPage County, IL

- Located just west of Chicago/ Cook County
- Population: 926,000 (2nd most populous in IL)
- 336 square miles



Who Are We?



Stormwater Management in DuPage County

- Countywide program established in 1989
- Guided by the Stormwater Management Planning Committee & Plan
- Enforce the Countywide Stormwater Management & Floodplain Ordinance
- Flood Control Facilities have a floodwater capacity of nearly 6 billion gallons

Programs

- Watershed Management
- Water Quality
- Floodplain Mapping
- Regulatory Services
- Flood Control Operations & Maintenance

Countywide NPDES Partnership

Over 40 MS4s in DuPage County

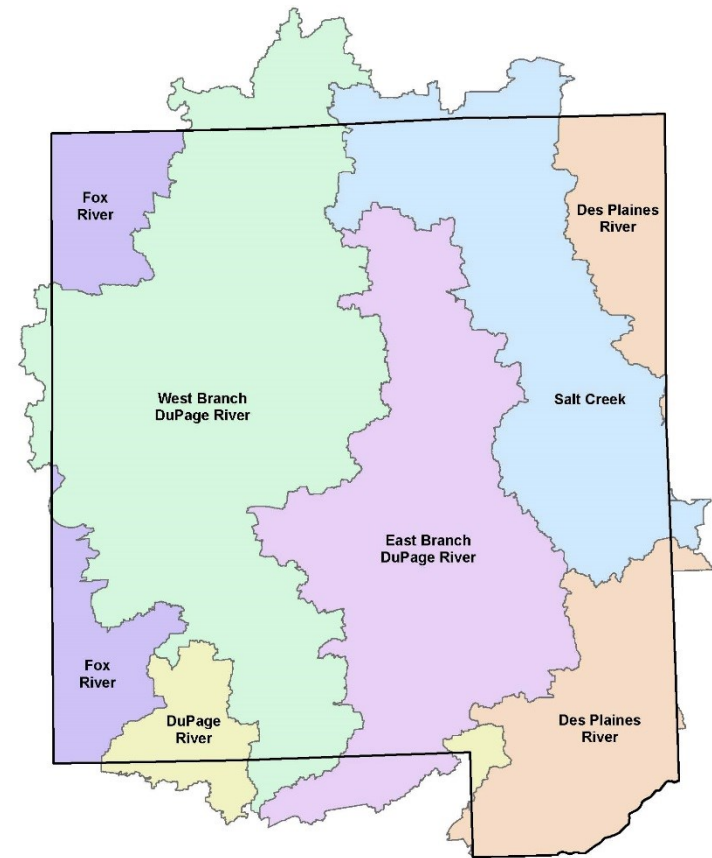
- Municipalities, Townships, County

Major Watersheds

- East Branch DuPage River
- West Branch DuPage River
- Salt Creek

Partial Watersheds

- Des Plaines River, Fox River, DuPage River mainstem



Watershed Planning

Watershed Plan Development for Impaired Waterways

- Klein Creek, Kress Creek, Winfield Creek, Sawmill Creek, St. Joseph Creek
- Lower Salt Creek Watershed Plan with Chicago Metropolitan Agency for Planning
- Lots of outreach and stakeholder meetings



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St. Joseph Creek
Watershed-Based Plan

August 2017



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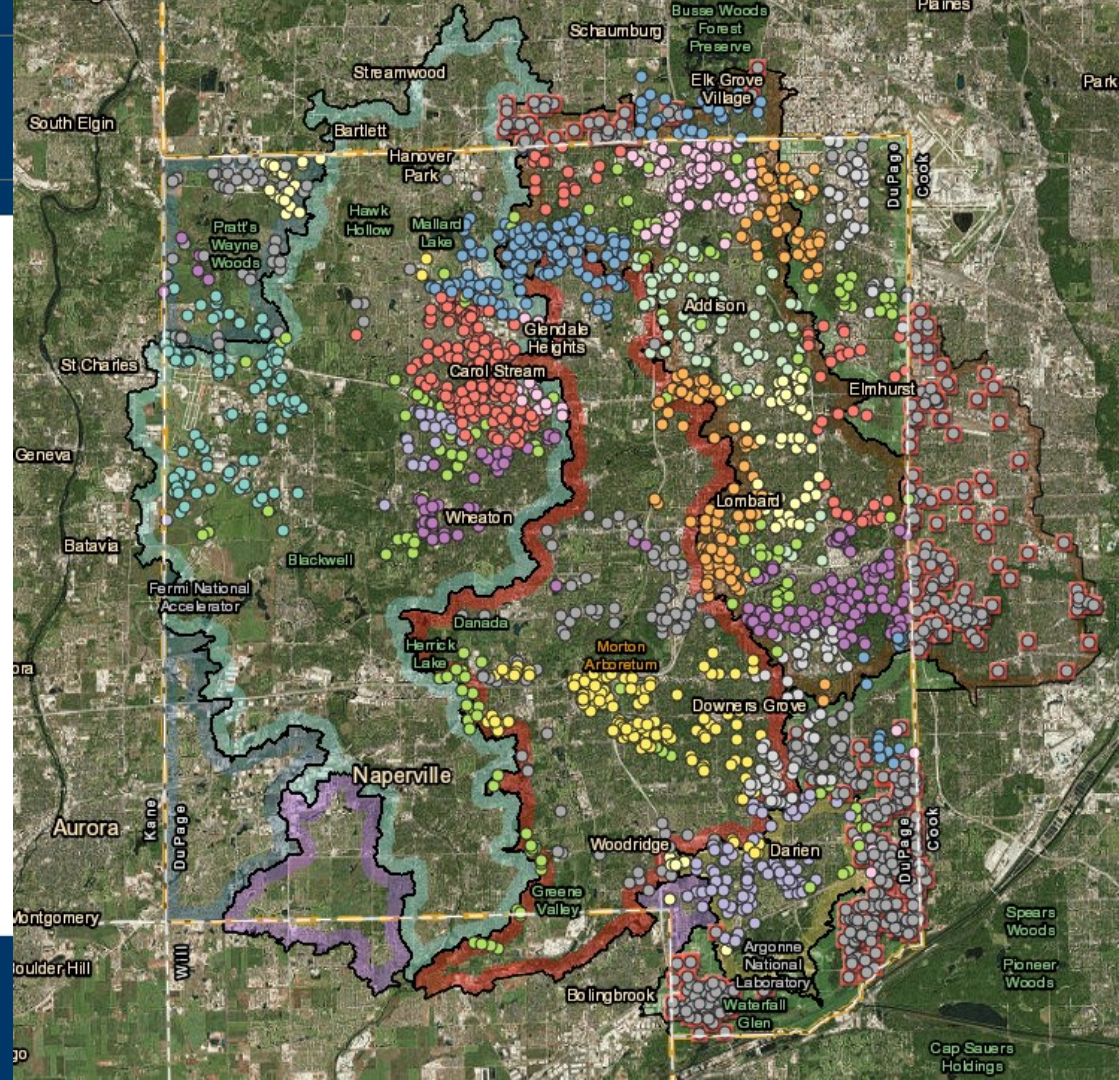


STORMWATER MANAGEMENT

Watershed Planning

Detention Basin Assessments

- Over 2,400 basins within the completed watersheds
- Engaged stakeholders to assist



Watershed Planning



Detention Basin Reconnaissance

- Evaluate detention ponds for water quality benefit
- Good, Fair, Poor Rating

Salt Creek Watershed Planning Area - Detention Basin Reconnaissance																	
Municipality										GPS Coordinates							
Location Description										GPS Coordinates							
Type					Onstream				Ownership		Lat:						
W	W-ED	Dry-T	Dry-N	CWL	Y		N		Public	Private	Long:						
Side Slope Cover					Side Slope Angle				Native Plant Buffer Width (ft.)								
TG	NP	IP	RR														
Waters Edge Cover					Basin Bottom Cover				Shoreline Erosion								
TG	N/WLP	IP	RR	SW	N/A	Unk	TG	N/WLP	SAV	FAV	IP	CLC	N/A	Min	SI	M	H
Safety Shelf					Short Circ				Sediment Forebay		Inlets Stilling Basins						
N/A	Unk	Y	N	Y w/WL Veg	Y	N		Unk	Y	N	Unk	Y	N	Rk Apr			
Outlet Stilling Basins					Connection to Other Basins				Overall Water Quality Benefits								
Unk	Y	N		Rk Apr	Y	N		US		DS	Good	Fair		Poor			
Maintenance Comments/Other Basin Uses:																	
Retrofit Opportunities (In Basin and Contrib Area):																	

Good for water quality



Native plants, buffers, varying water levels/ zones, lots of plant/ soil/ water interaction

Poor for water quality



Severe shoreline erosion, turfgrass, waterfowl, little to no plant/ soil/ water interaction, trash

Standardizing the assessments



Water Quality Review



Detention Basin Assessment

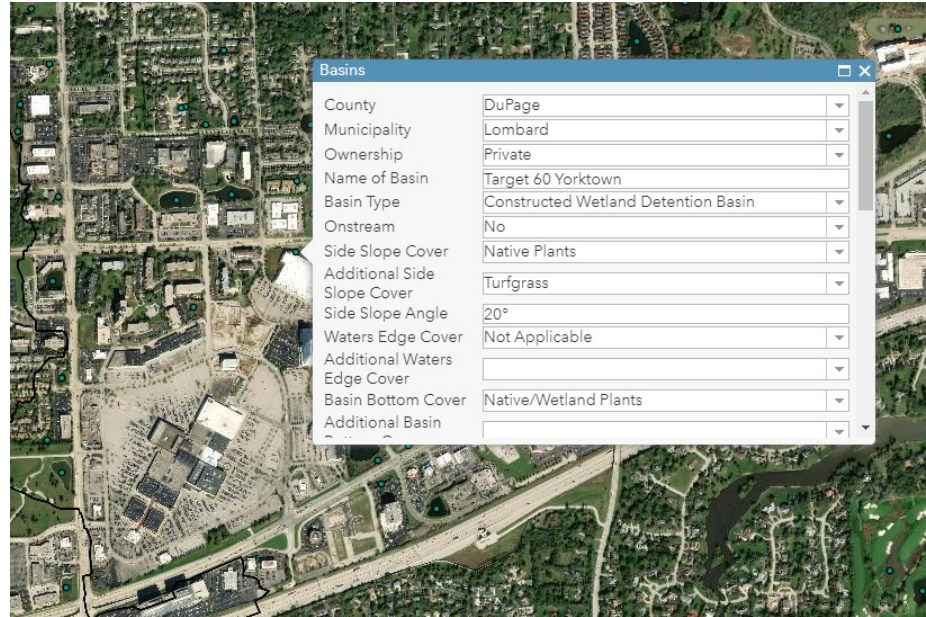


Arc GIS Online

- Need Arc GIS Online account
- Share with other agencies

Arc Collector App

- Add points, create and edit basin attributes in the field
- Enter directly into database
- Tablets or smartphones



Water Quality Projects Map



DuPage County Water Quality Improvement Program Grant

Projects that provide a water quality benefit

- Assistance program since 2000
- Fund up to 25% of construction

Eligible projects include:

- Streambank stabilization and rehabilitation
- In stream habitat improvements
- Detention basin retrofits
- Riparian or wetland buffer creation or enhancements
- Green roofs
- Rain gardens
- Permeable pavers

Previously Funded Projects



Green Infrastructure



Elmhurst Police Department Rain Garden (2017)



Jay Stream School Permeable Paver Parking Lot, Carol Stream (2016)



Jefferson Junior High Green Initiatives, Woodridge (2016)

Previously Funded Projects



Stream, Riparian Restoration & Basin Retrofits



Elizabeth Court Detention
Basin, Wood Dale (2015)



Arboretum Woods Shoreline
Stabilization, Lisle Park District
(2015)

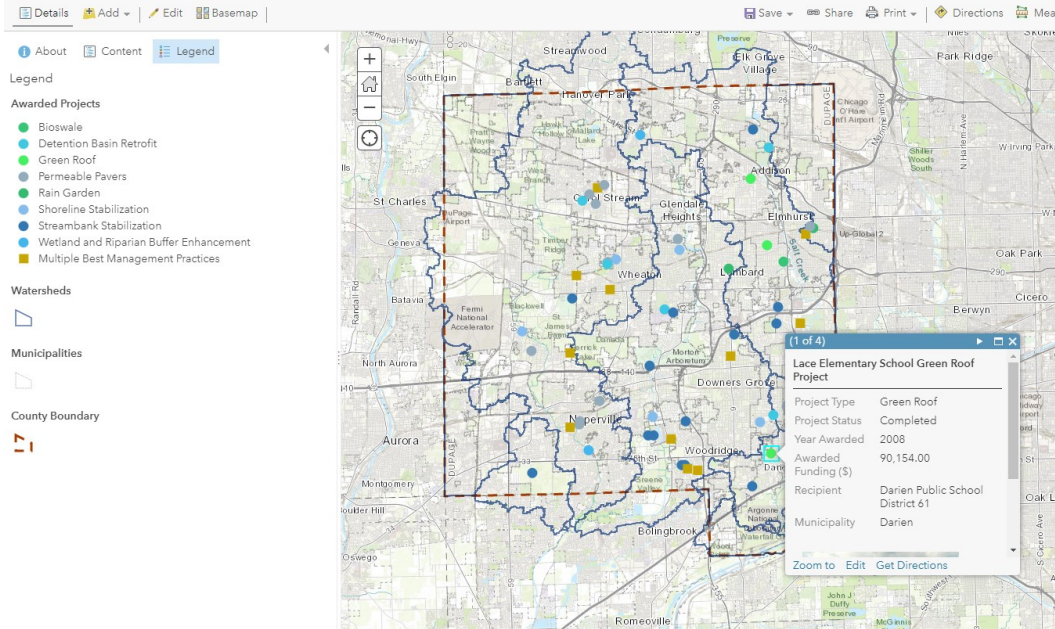


Caddie Corner Park Streambank
Stabilization, Woodridge Park
District (2013)

Water Quality Improvement Program Grant



Home ▾ Water Quality Improvement Program Awarded Projects



Next Steps



Creating a Comprehensive BMP Inventory

- Combine WQIP and Detention Basin maps, then add BMP projects from permit files
- 10 years of permit data with no comprehensive database
- Historic file search
- Started tracking BMPs in 2018 thanks to new software

Pollutant Load Reduction Modeling

Type of model to be determined

- STEPL, WinSLAMM, SWMM, HSPF, Other

Questions?



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