

Village of North Barrington Natural Areas Projects



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ENCAP, Inc.



Flint Creek

- Installed in 2013
- Streambank re-grading
- Woodland restoration
- Erosion control enhancements
- USACE Sign-off in May 2016

Flint Creek Performance Criteria

1. Temporary cover crop shall be planted on all slopes immediately after completion of grading. Within three months after planting, at least 90% of the slopes, as measured by aerial cover, shall be stabilized with vegetation or erosion control blanket. All cover crop species must be non-persistent or native and not allelopathic. If temporary cover crop is not planted immediately upon completion of grading, erosion control blanket or heavy mulch must be installed to prevent erosion.
2. All vegetated zones shall achieve at least 85% vegetative coverage.
3. The planted areas will contain at least 12 native species and no more than 30% non-native cover by the end of the monitoring period.
4. All restored areas shall not be dominated or contain cumulatively more than 25% cover of the following species: Buckhorn (*Rhynchos spp.*), Reed Canary Grass (*Phalaris arundinacea*), Purple Loosetrife (*Lythrum salicaria*), Cattail (*Typha spp.*) or Giant Reed (*Phragmites australis*).
5. The native FQI value and native Mean C-value for the planted areas should increase each successive year over the three year period. If the native FQI or native Mean C-value decreases, then corrective measures should be taken in these areas.

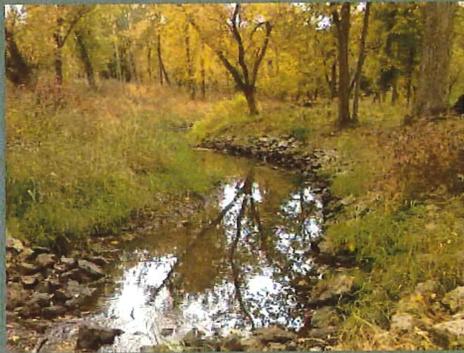
2013



2013



2013



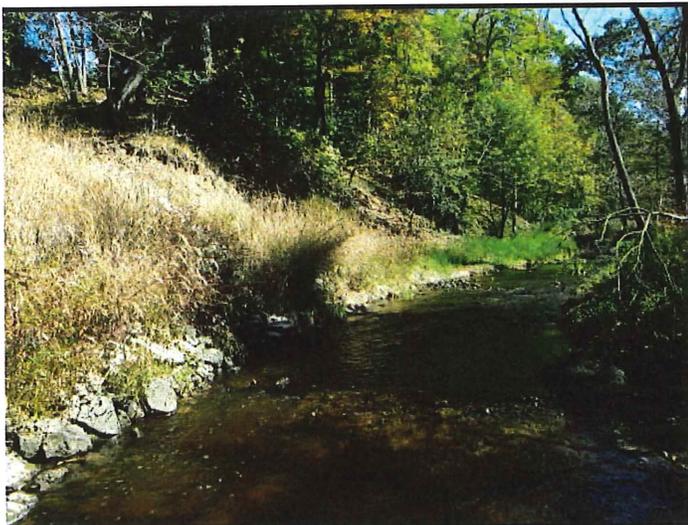
2014



2014



2015



Flint Creek

- Reduced erosion/ streambank cutting
- Improved water quality
 - Percolation into soil
 - Water filtration
 - Soil stabilization
- Improved vegetative diversity
 - Habitat value

Long-Term Management

- Native areas are touted as low-maintenance solutions- but they still need upkeep
- Reduction of costs resulting from less effort
- Ensure non-native species are not allowed to colonize



Eton Park Woodland Restoration

ENCAP, Inc. was retained in 2016 to perform natural areas management.

Goals include:

- Reduce vegetative coverage by non-native and invasive species
- Encourage biodiversity and establishment of high-quality native species throughout the Eton Park North and South parcels.
- Create beautiful natural space with high ecological function for passive recreation.



Floristic Quality Inventory

- Meander Search- List all plant species encountered during the monitoring sessions (two per year) to compile data.
- Percent cover and dominance is determined by aerial assessment.
- Generally, an FQI >20 and/or a native mean C value >3.5 are considered high quality.

Eton Park North:
FQI= 26.5 mean C= 2.96



Eton Park North



Eton Park North



Eton Park North



Eton Park North



Eton Park North



Eton Park South:
FQI= 23.66 mean C=2.37



Eton Park South



Eton Park South



Eton Park South

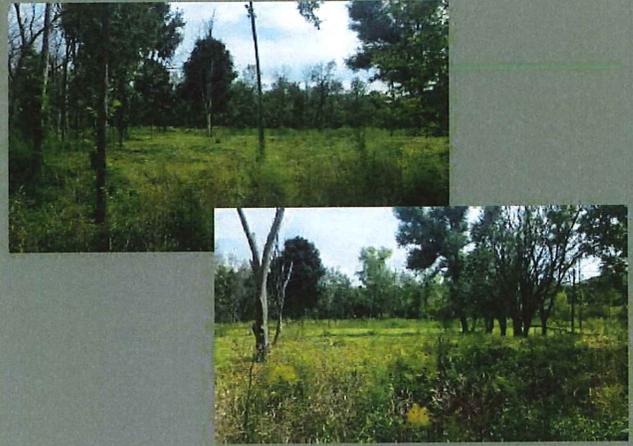
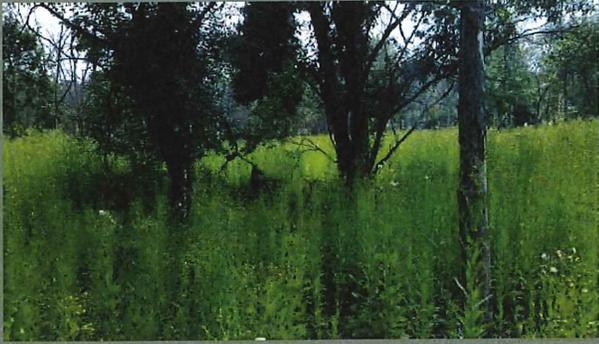


Eton Park South



Invasion!





Buckthorn- Public Enemy #1



- Higher Nitrogen in plant parts
- Release of Emodin
- Allelopathy
- Increased predation on songbirds

Natural Area Establishment- No Dumping or Mowing



Flint Creek Watershed Plan

- Goal A: Protect surface and groundwater resources and enhance overall water quality in the lakes and streams of the watershed.
- Goal B: Identify and protect important natural areas/open space in the watershed and provide appropriate passive recreational benefits.
- Goal C: Reduce existing flood damage in the watershed and prevent flooding from worsening downstream.

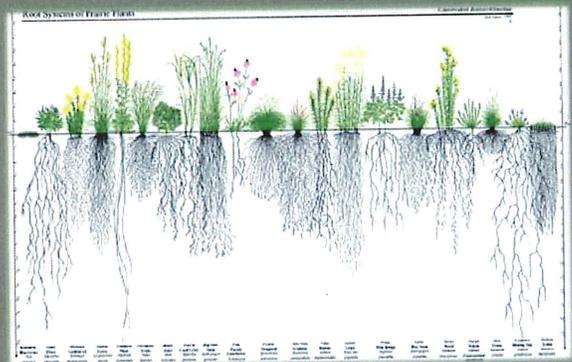
Flint Creek Watershed Plan, Continued

- Goal D: Improve aquatic and terrestrial habitat in the watershed.
- Goal E: Increase communication and coordination among municipal decision makers and other stakeholders within the watershed.
- Goal F: Foster appreciation and stewardship of the watershed through education.

Protect and Steward Valuable Land



Water Quality



Biodiversity



Sources

- Alderson, Colleen. "Invasion Biology Introduced Species Summary Project - Columbia University." *Invasion Biology Introduced Species Summary Project - Columbia University*. Columbia University, 12 Nov. 2006. Web. 06 Dec. 2016.
- Flint Creek Watershed Partnership- <http://www.flintcreekwatershed.org/>
- Klionsky, Sarah, Kathryn Amatangelo, and Donald Waller. "Above- and Belowground Impacts of European Buckthorn (*Rhamnus Cathartica*) on Four Native Forbs." *Restoration Ecology* (2010): n. pag. Web.
- Lincoln Park Zoo. "Midwestern frogs decline, mammal populations altered by invasive plant, studies reveal." *ScienceDaily*. ScienceDaily, 1 May 2013. <www.sciencedaily.com/releases/2013/05/130501145153.htm>.

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