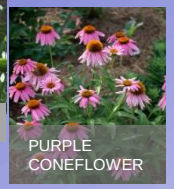
Protecting your investment

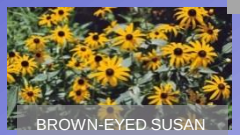
- Recycle grass clippings
- Notify the City if you see erosion
- Don't dig in the bank slope of the creek
- Don't build on the slope
- Do not place mulch on the slope
- Promote Wildlife Habitat

Examples of Native Flowering Plants for around the Home

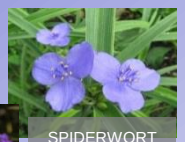

SMOOTH BLUE ASTER


WHITE CONEFLOWER


PURPLE CONEFLOWER


BROWN-EYED SUSAN


GOLDENROD


SPIDERWORT


COREOPSIS

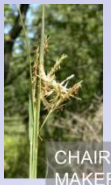

NEW ENGLAND ASTER

Examples of Native Grasses, Sedges, and Rushes for around the Home


LITTLE BLUESTEM


WOOLY SEDGE


SOFT STEM BULRUSH


CHAIR MAKER'S RUSH


PRAIRIE DROPSEED

CRESTED-OVAL SEDGE


FOX SEDGE

Christopher B. Burke Engineering, Ltd.
9575 W. Higgins Road, Suite 600 Rosemont, IL 60018
Phone: (847) 823-0500

SALT CREEK

STREAM BANK STABILIZATION

Educational Brochure

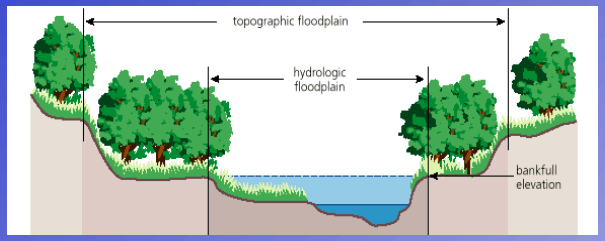
Initially provided at the "Phase 4 Public Information Meeting on February 6, 2014 at City Hall 3600 Kirchoff Rd, Rolling Meadows, IL

This project is funded, in part, under Section 319 of the Federal Clean Water Act. Grant No C9985200130

Living with Streams & Ponds

When we bought the house …

- It had a little creek in back
- The kids like to play back there - We fed the geese
- We dumped our grass clippings
- That's where I'd get rid of brush
- Now it's a thicket
- The banks are eroding
- The geese are everywhere; they make such a mess
- What does it hurt to throw grass and branches in the creek?



How has urbanization affected natural stream movement?

As a stream matures, it naturally changes its course and meanders. Water wears away the soil and rock that form the banks and deposit it downstream over the course of hundreds of years. With the creation of drainage ditches, straightened streams, and storm sewers, water is more efficiently routed into local streams. However, these changes cause the speed and velocity of stream flows to increase, particularly after heavy rainfall events. As more paved surfaces are constructed, rainwater can no longer seep into the ground naturally, causing the water to flow more rapidly into streams and resulting in erosion and cut banks. This process can have significant impacts on the property if the proper preventative measures are not taken. [1]

The stream that flows through your neighborhood is more than just a scenic part of the landscape or a habitat for wildlife. It serves the vital function of draining stormwater and preventing flooding. In order to function effectively, the stream must be maintained. [2]

The Chicago region is so flat that our streams tend to move slowly and are naturally prone to flooding. Many areas that are now developed were originally uninhabited muddy marshes with meandering streams that often overtopped their banks. As the region was built up, our creeks and streams were deepened and enlarged to drain water and to prevent flooding. Minor blockages can build up quickly in heavy rains, as floating debris piles up and creates a dam. In our flat landscape, obstructions in one spot can contribute to flooding far upstream. [2]

How can I help prevent debris jams?

While some debris is naturally occurring, like leaves or branches, some materials, such as tires or plastic bags, become detrimental to the stream ecosystem. In addition, some landowners store potential debris, including scrap lumber, firewood, or leaf piles in streamside areas where it may be washed into the stream during times of peak flow. When this debris is allowed to build up, it can cause jams, which can restrict the water flow and increase water levels. This leads to further erosion of the streambank and possible flooding during heavy rains. [1]

Many people illegally dispose of yard waste in their streams. This is not recommended and strictly prohibited by law for several reasons. Piled grass clippings kill off underlying vegetation that could otherwise help stabilize the streambank. When these nutrient-rich clippings enter the water, they can cause algae growth, odor issues, and reduce the amount of oxygen in the water, killing fish and other aquatic organisms. In addition, placing woody brush into or near a stream sets the stage for debris jams to occur, often resulting in localized flooding. If yard waste is disposed of illegally on a streambank, the landowner will be asked to remove the debris and may be subject to a fine. Many units of government now offer assistance in the disposal of yard waste. [1]

[1] DuPage County Department of Economic Development and Planning Stormwater Management Division - Streambank Stabilization in DuPage County Brochure

[2] Metropolitan Water Reclamation District of Greater Chicago - Stream Maintenance Brochure

How will the improvements will reduce NPS pollution and improve water quality?

Aggressive invasive vegetation (buckthorn, honeysuckle, etc) has shaded out the ground layer vegetation which helps stabilize the creek bank. This has allowed a significant amount of sediment to enter Salt Creek and degrade its water quality. This also allows pollutants such as fertilizers, grass clippings, and even pet waste to be washed into the creek, further degrading the water quality.

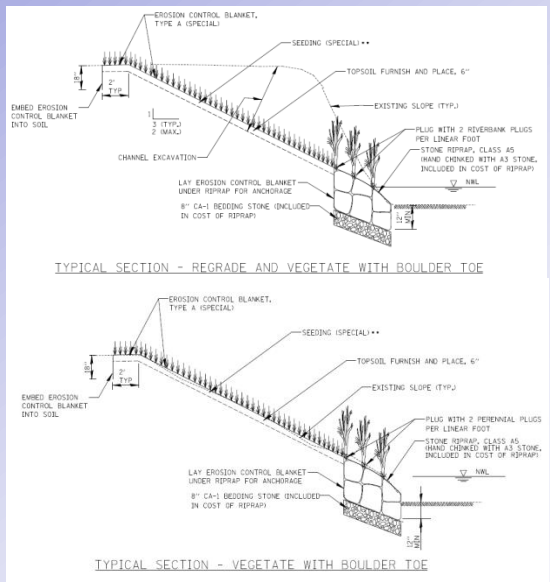
Invasive vegetation will be removed and the creek banks will be re-graded and material removed so that the severity of the slope can be reduced. The new, shallow sloped banks will be seeded with native species to promote the establishment of a native herbaceous layer that will provide soil stabilization and reduce erosion. The toe of the stream bank will be stabilized utilizing large cobbles to maintain slope stability during big rain events. Native deep-rooted grasses and forbs will be planted in sunny areas and low growing fescues will be planted in shady areas.

These techniques have been chosen for several reasons. The re-grading will allow a greater volume of water to flow through the cross section during larger events thus reducing velocity, scour and help keep the events within the banks. The plant material will also enhance the habitat, slow the water, and keep the banks stabilized. Also the herbaceous vegetation along the slopes will act as a buffer between the rear yard run-off and the creek, reducing the amount of fertilizers, herbicides and other pollutants that enter Salt Creek.

This combination of techniques will provide the most natural looking creek section possible while reducing NPS pollution and improving water quality.

Salt Creek Phase 4 Improvements

Phase 4 will improve at least 650 feet of creek bank. Construction in Fall/Winter 2014, Maintenance and Monitoring for 5 years post-construction.



Typical Proposed Treatment Along Salt Creek

Typical Existing Condition Along Salt Creek