

Local Drainage Presentation Bowes Bend Subdivision Plato Twp

Kane County Water Resources
November 7, 2017



Water Resources Division

Location

- Government Center
- Building A
- South end of 1st Floor

Ken Anderson

- Director Water Resources
- Stormwater Ordinance Administrator for Unincorporated Kane County



Water Resources Division Programs

All Water Resources Division Programs relate to unincorporated Kane County including rural subdivisions

**Stormwater
& Floodplain
Ordinance
Enforcement**

PROGRAMS

**Local
Drainage -
Cost Share
Drainage
Program**

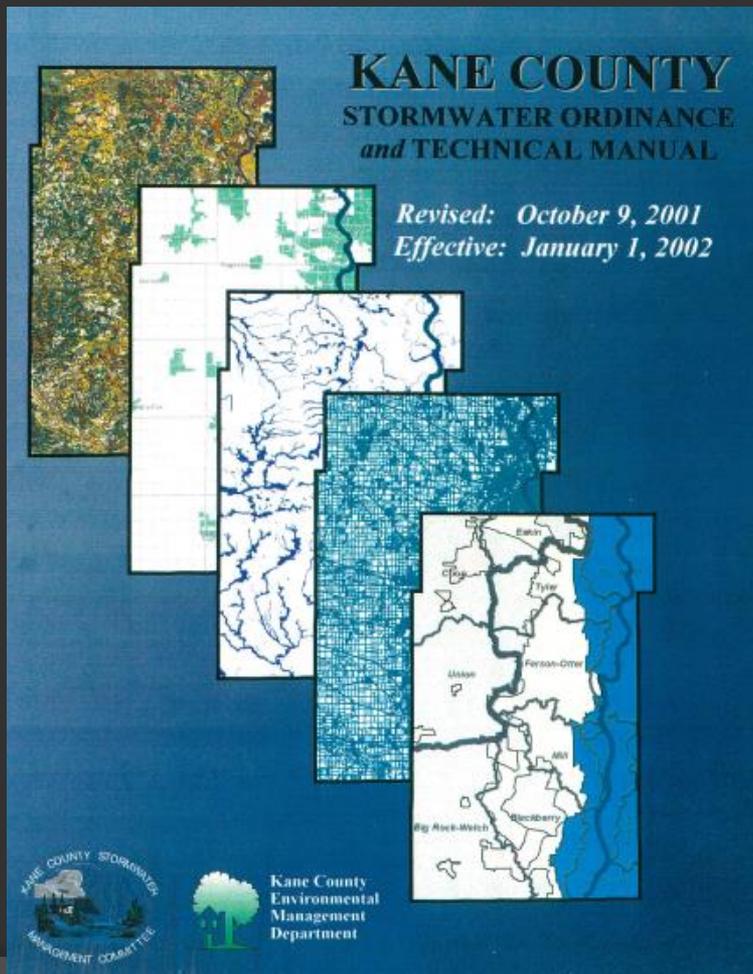
**Water Supply
Planning &
Conservation**



Water Resources Division

Division Programs

Stormwater and Engineering Plan Reviews



- Stormwater and Floodplain Ordinance Enforcement
 - New developments
 - Unincorporated Kane County
 - Long Term Stormwater Maintenance Plan (9-131)



Water Resources Division

Division Programs

Stormwater and Engineering Plan Reviews

EVA ESTATES SUBDIVISION



Hey and Associates, Inc.
Water Resources, Wetlands and Ecology
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VOKO, ILLINOIS 60071
PHONE (847) 740-8888
FAX (847) 740-2888
CHICAGO AND AURORA, ILLINOIS

BROOKFIELD, WISCONSIN

December 4, 2012

Mr. Ken Anderson
Manager, Subdivision & Special Projects Division
Kane County Facilities, Subdivision & Environmental Resources Department
719 S. Baravia Ave.
Geneva, IL 60134

SEROSUN FARMS

Project No.: 03029L

Re: Serosun Farms Estate - Existing Conditions Hydrology Review
Kane County, Illinois

Dear Ken:

As requested by the Kane County Facilities, Subdivision & Environmental Resources Department we have performed a review of the existing conditions hydrology portion of the following document:

- Kane County Final Stormwater Management Permit Application (report) prepared by Gewalt Hamilton Engineers and dated July 3, 2012

As you are aware, review of this submittal was being help upon direction of the County to proceed. This review constitutes the first full review of the existing conditions hydrology as modeled using PondPack. In order to minimize confusion with previous review comments, we will explicitly describe all outstanding comments. All prior comments that are not specifically included herein can be assumed to have been adequately addressed.

EXISTING CONDITIONS HYDROLOGIC ANALYSIS

Tributary Drainage Area Exhibit - "Serosun Farms Estate Phase I Exhibit Drainage Overlay", dated 6/9/12

1. The Kane County 2-foot topography shown on the exhibit indicates that a depression is located east of subwatershed OFF-SW1 which overflows to subwatershed OFF-SW1. Please provide documentation that this depression does not discharge to OFF-SW1 during events up to and including the 100-year event or include that drainage area in the existing conditions hydrologic model.

Please note that this comment does not affect Phase I results.

Stormwater

- Offsite Flows
- Maintenance Plan
- Transfer to HOA
- Backup SSA
- Verification of Compliance



Water Resources Division

Division Programs

Establish Special Service Areas

- For long-term stormwater maintenance
- In new, unincorporated subdivisions

STATE OF ILLINOIS

COUNTY OF KANE

ORDINANCE NO. 12 - 299

**AN ORDINANCE ESTABLISHING THE SEROSUN FARMS SPECIAL SERVICE AREA
(or SPECIAL SERVICE AREA NO. SW-49) KANE COUNTY, ILLINOIS
AND PROVIDING FOR THE LEVY OF TAXES FOR THE PURPOSE OF PAYING THE COST OF
PROVIDING SPECIAL SERVICES IN AND FOR SUCH AREA**

WHEREAS, a Preliminary plat of subdivision has been approved by the County of Kane, Illinois (the "County"), for the Serosun Farms Subdivision (the "Subdivision"); and

WHEREAS, in accordance with the Kane County Stormwater Ordinance, the Subdivision will be improved with a stormwater drainage system, and may also include special management areas, all of which will be conveyed to the Serosun Farms Homeowners' Association (the "Homeowners' Association"), a duly incorporated homeowners' association; and

WHEREAS, the Homeowners' Association is obligated to maintain the stormwater drainage system and special management areas and to impose an assessment upon the owners of all of the lots within the Subdivision to provide for the maintenance of such stormwater drainage system and special management areas; and

WHEREAS, the Kane County Stormwater Ordinance requires, as a condition of approval of the application for a stormwater management permit for the Subdivision, the establishment of a special service area pursuant to 35 ILCS 200/27-5, *et seq.*, either as a primary means of providing for the long-term maintenance of the stormwater drainage system and special management areas, or as a back-up vehicle in the event the Homeowners' Association fails to adequately carry out its duties; and

WHEREAS, pursuant to the provisions of Article VII, Section 7, Part (6) of the 1970 Constitution of the State of Illinois (the "Constitution"), the County of Kane is authorized to create special service areas in and for the unincorporated areas of the County; and

WHEREAS, pursuant to the "Special Service Area Tax Law", 35 ILCS 200/27-5, *et seq.* (2003), the County is authorized to levy and impose taxes upon property within special service areas for the

ORDINANCE NO. 12 - 299

**AN ORDINANCE ESTABLISHING THE SEROSUN FARMS SPECIAL SERVICE AREA
(or SPECIAL SERVICE AREA NO. SW-49) KANE COUNTY, ILLINOIS
AND PROVIDING FOR THE LEVY OF TAXES FOR THE PURPOSE OF PAYING THE COST OF
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Water Resources Division

Division Programs

Local Drainage - Cost-Share Drainage Programs

- Solve residential drainage problems, with technical assistance and shared funding (if eligible) in unincorporated Kane County and in small municipalities
- Bring together residents, township road districts and the county



EVENING PRAIRIE SUBDIVISION CAMPTON TOWNSHIP



SHIREWOOD FARM HAMPSHIRE TOWNSHIP



Water Resources Division

Division Programs

Local Drainage - Cost-Share Drainage Programs

Long Term Maintenance Plan:

- HOA?
- SSA – Petition County -since 2011
 - Sunvale
 - Middlecreek
 - Shirewood
 - Ogden Gardens
 - Wildwood West
 - Savanna Lakes
 - Cheval De Selle Venetian
 - Cheval De Selle Citation
 - Plank Road Estates
 - Exposition View
 - Pasadena Drive
 - Tamara Heights

ALGONQUIN SHORES DUNDEE TOWNSHIP



PASADENA DRIVE AREA AURORA TOWNSHIP



Water Resources Division

Division Programs

Local Drainage – Bowes Bend Platted in 1978-79



Water Resources Division

Division Programs

Local Drainage – Bowes Bend in 1985



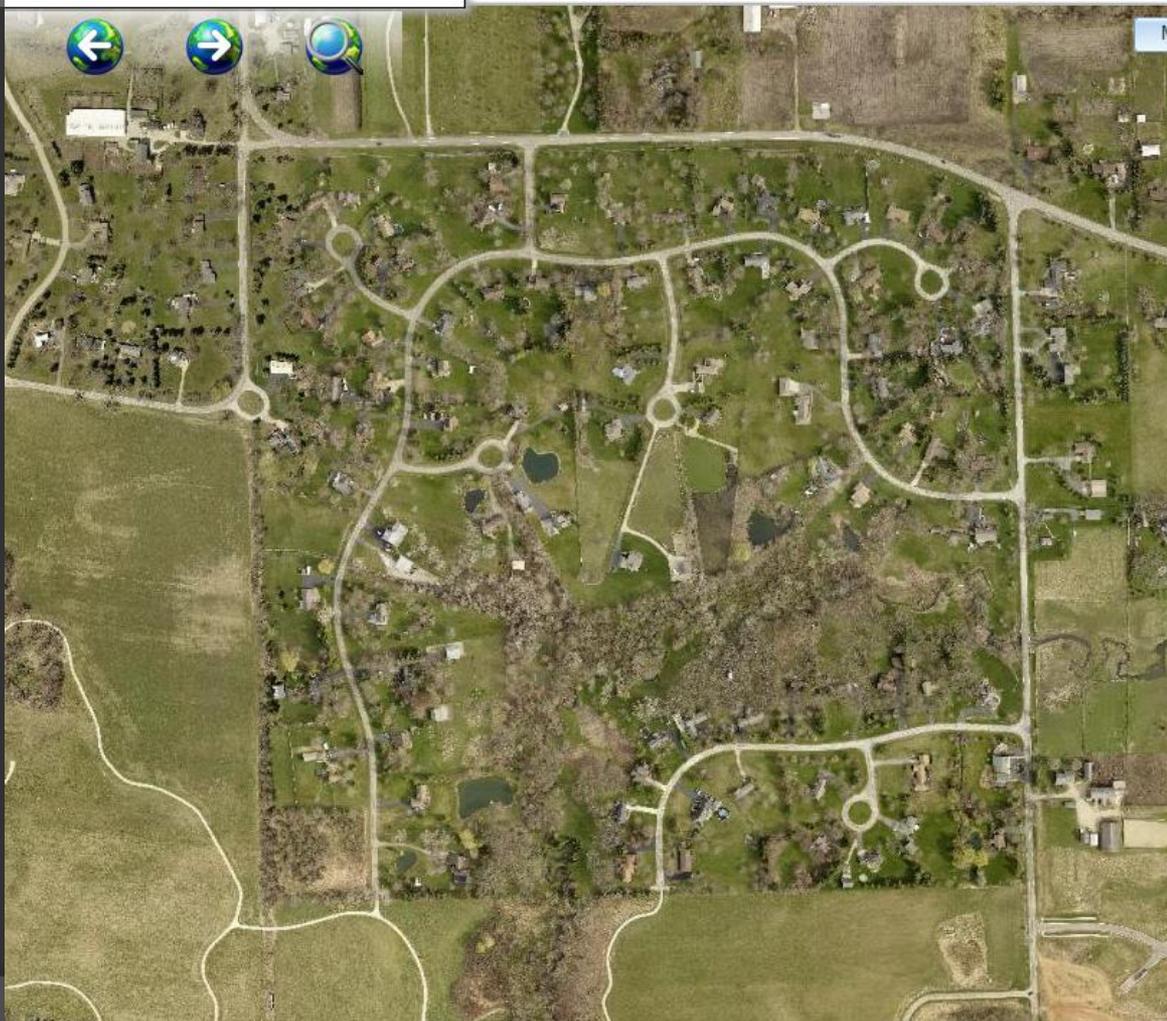
Note:
drainage
channels



Water Resources Division

Division Programs

Local Drainage – Bowes Bend in 2016



Water Resources Division

Division Programs

Local Drainage – Bowes Bend

Two Components of Drainage System

1. Subsurface Drainage System

- a. Controls groundwater to help septic fields and basements
- b. Consists of underdrains

2. Surface Drainage System

- a. Protects property from floods
- b. Consists of ditches, culverts and Bowes Creek



Water Resources Division

Division Programs

Subsurface Drainage System – Bowes Bend

- 1999 Cost-Share project completed on Channel Court totaling \$6,590
- 2001 Drainage Complaint Meeting held for Current Court area
- 2007 failure on Channel Court system repair funded by 09N815 Channel in the amount of \$25,000 to date. Significant investment in drainage system made by 9N830 Channel and 41W081 Current.
- Investigation completed by County and Township in 2017 and observation manhole installed on Current Court System
- Cost-Share project completed at Channel and Bowes with Township Road District and homeowners in 2017



Water Resources Division

Division Programs

Subsurface Drainage System – Bowes Bend

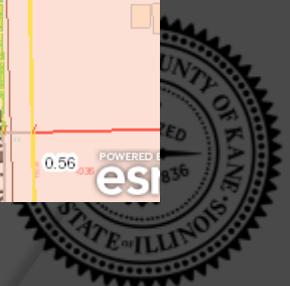
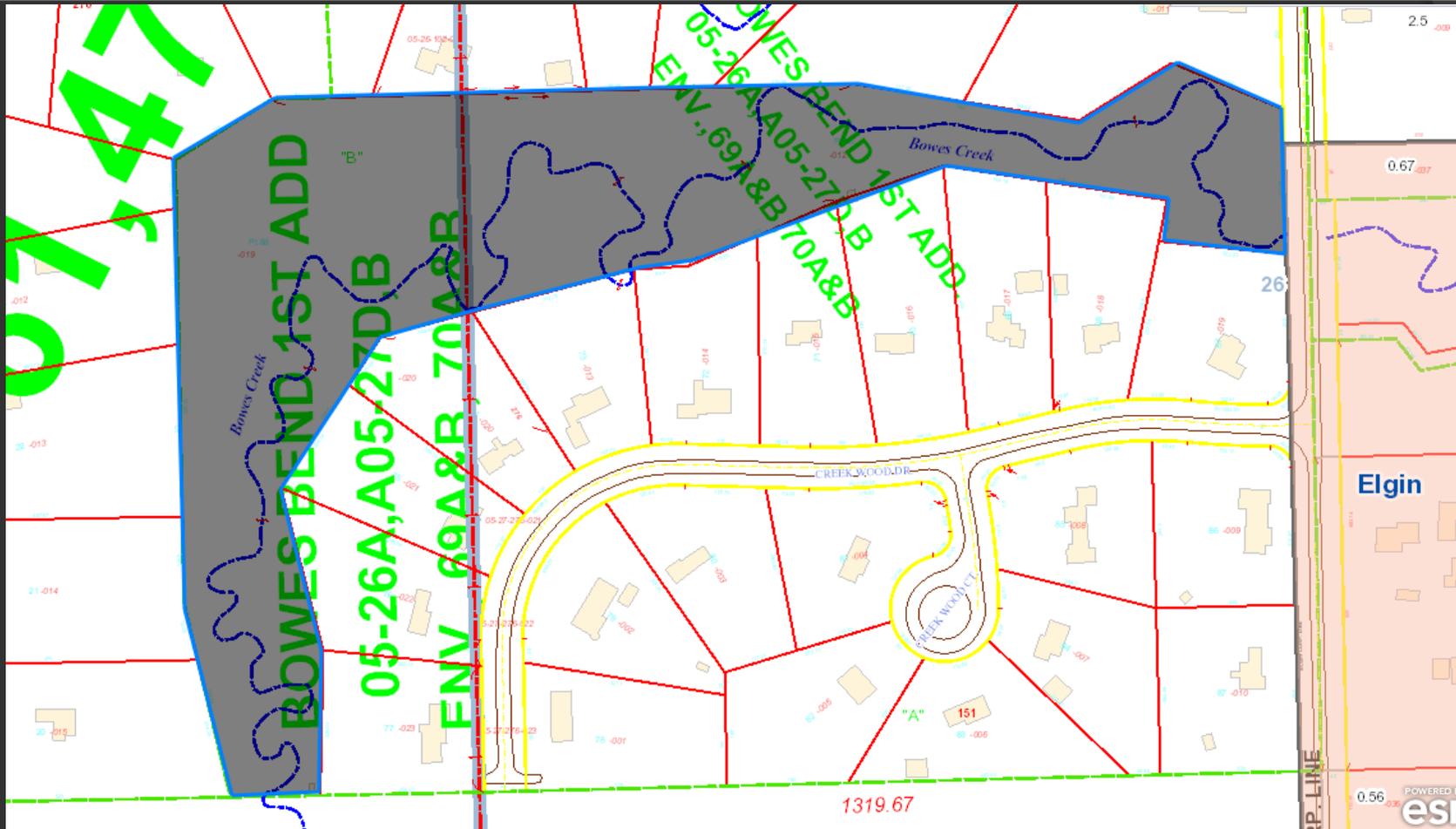
- Total project cost to address Current Ct subsurface system is \$85,000
- If Cost-Share funds are available in 2019, project split would be 1/3 for Township, County and Bowes Bend residents
- Total contribution would be \$28,300 each
- Should individual lot owners be responsible for subsurface drainage on their lot or should the subdivision as a whole collectively fund projects?
- We need to look at the whole picture and then decide as subsurface drainage is only part of what needs to be considered.



Water Resources Division

Division Programs

Surface Drainage System Lot 88 – Bowes Bend



Water Resources Division

Division Programs

Surface Drainage System Lot 88 – Bowes Bend

- Owned 1/24 by Lots 21,23 & 24 in the original Bowes Bend, and lots 53,54,55,64,65, and 67 through 77 in the First Addition to Bowes Bend
- Under Illinois Drainage Law, owners are responsible for maintenance of drainage on property
- Nov 2017 inspection indicated Bowes Creek in fair condition



Water Resources Division

Division Programs

Lot 88 – Bowes Bend – Specific Recommendations



Blockages from fallen trees should be removed out of the creek



Water Resources Division

Division Programs

Lot 88 – Bowes Bend – Specific Recommendations



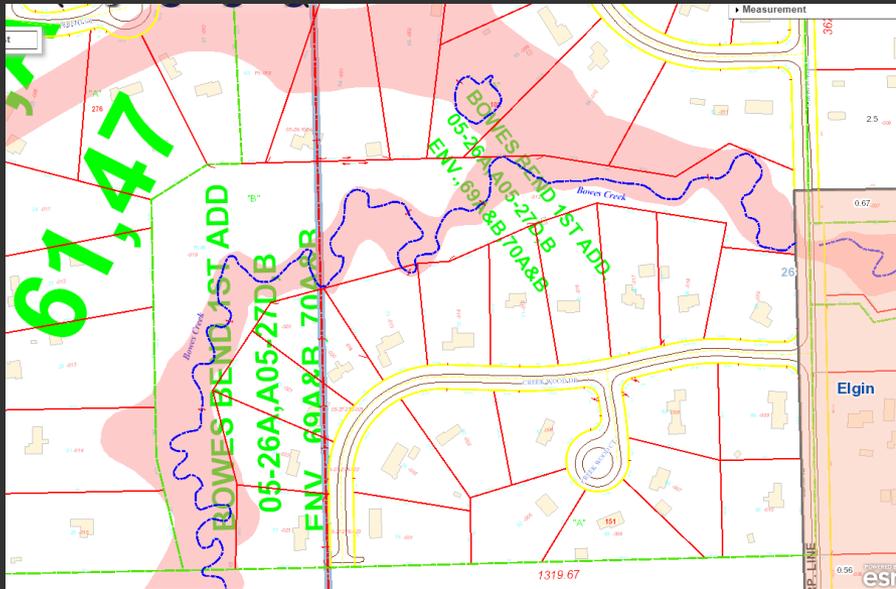
Drainage ditches constructed with subdivision should be cleared



Water Resources Division

Division Programs

Lot 88 – Bowes Bend – General Recommendations



Brush piles need to be removed out of the floodplain



Water Resources Division

Division Programs

Lot 88 – Bowes Bend – General Recommendations



Native cone flowers and black eye susan planted along bank with deep root systems

Due to sandy soils, deep rooted vegetation should be encouraged within 5' of the bank to reduce erosion



Shallow rooted mowed sod up to edge of bank can cause major erosion



Water Resources Division

Division Programs

Bowes Bend 2018 Recommendations



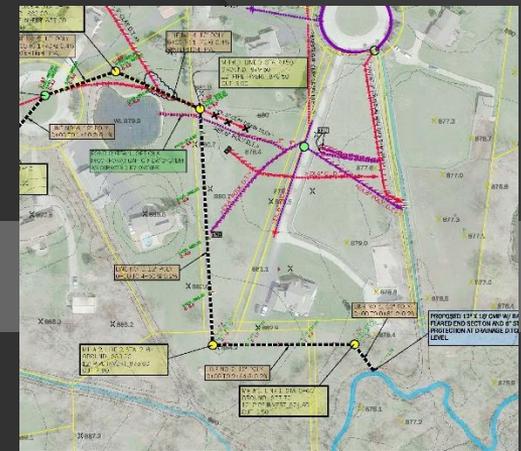
- Work with the Forest Preserve, Road District and Owner of 9N736 Bowes Bend to construct new pipe from Forest Preserve to east side of Bowes Bend Drive and install bubble-up structure into ditch
- Cost-Share Recommended:
 - Forest Preserve: \$7,025
 - Plato Road District: \$6,470
 - Bowes Bend Resident Share: \$6,800
 - Note costs do not include landscaping, each owner would be responsible to complete landscaping



Water Resources Division

Division Programs

Bowes Bend 2018 Recommendations



- Kane County to leverage upstream cost-share improvements to begin downstream work
- Cost-Share Recommended:
 - Upstream Cost-Share Contribution \$20,295
 - Kane County Downstream Cost-Share Contribution \$20,295 (as funds are available, \$10,000 in 2018 budget for Bowes)

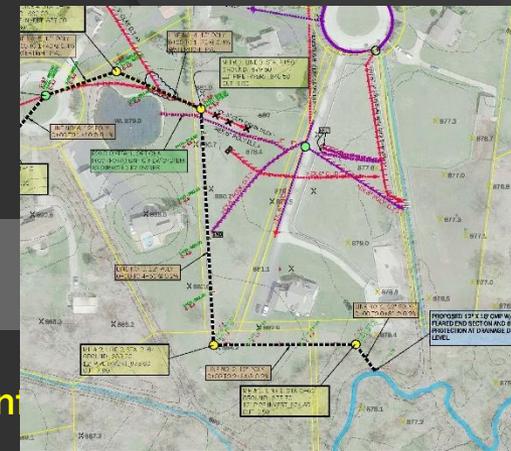


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Division Programs

Bowes Bend 2018 Recommendations

- Bowes Bend Residents should strongly consider petitioning the County Board to establish an SSA for long term stormwater maintenance needs that would include major drainage ditches between lots and Bowes Creek. Residents should discuss future maintenance needs of newly re-built drain tiles and whether long term maintenance of those should be included as well
- SSA can be tiered so 24 owners have greater responsibility regarding creek and owners with tiles greater responsibility with tile maintenance
- County requires a minimum of 51% of all registered voters to sign the petition
- SSA's take about 9 months to create
- With 87 lots in total, a yearly amount of \$100 per lot would result in \$8,700 per year. Typically subdivisions maintain a balance of \$5,000-\$10,000 after initial work is complete.
- SSA is subject to approval of Chairman's Financial Committee



Water Resources Division

Division Programs

Local Drainage – Bowes Bend

- Questions?
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- Assistant Director Water Resources
 - wollnikjodie@co.kane.il.us
 - www.countyofkane.org

