

CHAPTER 8 - REVISED

RECOMMENDED PLAN AND IMPLEMENTATION STRATEGY

INTRODUCTION

At the request of the Town of Salem, R.A. Smith National, Inc. prepared a Storm Water Management Plan. The intent of the plan is to develop a storm water quantity and quality plan for the area outlined on Figure 1-1. The goals of the Town of Salem Storm Water Management Plan fall into the following four areas:

- I. **Protect the water quality of the lakes and streams within the Town of Salem, the local wetlands, and groundwater.**
- II. **Protect environmentally sensitive areas such as wetlands, fish and wildlife habitat, and environmental corridors.**
- III. **Protect public and private property from the potential damages caused by storm water runoff.**
- IV. **Provide the framework for compliance with the Wisconsin Pollutant Discharge Elimination System General Permit to discharge storm water from all portions of the Municipal Separate Storm Sewer System (MS4).**

The study area includes the areas tributary to the Fox River and Des Plaines River. The study area is approximately 20,684 acres (32.3 square miles) in size, and includes all of the area within the Town's boundary.

To meet the above goals, this chapter summarizes the recommendations provided in earlier topic-specific sections of this report. This chapter will include flooding and drainage recommendations, water quality recommendations, public information and education strategy, implementation strategy, estimated storm water utility budget, alternative financing options, and the recommended plan adoption process.

FLOODING AND DRAINAGE RECOMMENDATIONS

Chapter 4 detailed the issues throughout the Town relating to flooding and drainage. The following recommendations to address these issues focus on projects, policy, and administrative procedures.

Pursue solutions to known **Seven Priority Flooding and Drainage problems.**

Based on the evaluation of alternatives to address the **seven** priority flooding and drainage problems described in Chapter 4 of this report, Table 8-1 summarizes a prioritized ranking for action, the recommended solution, and the estimated costs. Prioritization of these projects was based on the following factors:

- Frequency of flooding
- Severity of flooding
- Number of homes affected by flooding

- Ability to tie in water quality benefits to help the Town achieve the required 40% TSS reduction goal
- Estimated cost to address this problem
- Feasibility of construction and regulatory approvals needed to construct project

Table 8-1
Drainage Priorities and Estimated Costs

| Priority Ranking | Drainage Issue | Proposed Alternative | Estimated Cost |
|------------------|---|--|----------------|
| 1 | 256 th Ave & CTH AH | High water relief storm sewer on 256 th Avenue, south of CTH AH. | \$111,875 |
| 2 | 122nd Street & 224 th Ave | Storm sewer conveyance system | \$205,175 |
| 3 | Salem Oaks Subdivision | Storm sewer conveyance system and wet detention pond. | \$552,000 |
| 4 | Timber Lane Subdivision | Storm sewer conveyance system and wet detention pond for drainage along 270 th Avenue; Storm sewer conveyance system for drainage along 268 th Avenue; Restore low-lying detention areas west of 268 th Avenue. | \$659,500 |
| 5 | Sunset Oaks Subdivision | Storm sewer conveyance system; retrofit the Town owned wet detention pond to provide additional storage and water quality treatment. | \$661,500 |
| 6 | Shoreview Subdivision | Upstream detention to reduce peak flood flows in the navigable stream flowing through this subdivision. | \$800,000 |
| 7 | 99 th Street & 270 th Ave | High water relief storm sewer on 270 th Avenue between 99 th and 100 th Streets. | \$76,300 |

Address **Additional** Drainage Complaints

The additional drainage complaints discussed in Chapter 4 and depicted on Figure 4-12 were compiled as part of a Town-wide drainage complaint inventory and each was evaluated for potential solutions. Within this database, detailed information was compiled for each complaint including general field observations, whether it is a private property issue or a public concern, if the complaint is located within a floodplain, the approximate number of homes being affected, and the frequency and severity of the drainage complaint. Each complaint was then evaluated for a possible solution, an approximate cost, as well as a prioritization ranking for action (ie. high, medium, low). The solutions to these complaints should be addressed on an ongoing basis as funding is available through the existing storm water utility. The complete drainage complaint database for 2009 is included in Appendix N.

Develop more stringent release rates for the entire Town

The current storm water management ordinance for the portion of the Town that is within the Fox River Watershed requires the post-developed 2-, 10-, and 100-year recurrence interval event runoff to be controlled to pre-development levels. The portion of the Town that is within the Des Plaines River Watershed is held to more restrictive requirements that allow the maximum post-development runoff release rate to be 0.04 cfs/acre for the 2-year event, and 0.30 cfs/acre for the 100-year event.

Based on the results of the hydrologic and hydraulic modeling efforts in this plan and due to the numerous drainage and flooding concerns within the Fox River Watershed under existing conditions, it is recommended

that the Town require the more restrictive Des Plaines River Watershed post-development runoff release rate regulations for all new development in the Fox River Watershed as well. These more restrictive runoff release rates will help reduce the flooding concerns within this watershed, but only as development occurs.

Revise the Storm Water Management Ordinance Applicability Criteria

The current storm water management ordinance applies to any projects that result in the land disturbance of 1.0 acres or more, consistent with the NR151 requirements. Kenosha County is in the process of updating their storm water management ordinance and has included the applicability of projects with a land disturbance of 1.0 acres or more, as well as any project that increases the amount of impervious surface by 0.5 acres or more. It is recommended that the Town consider adding the applicability requirement for projects adding impervious surfaces by 0.5 acres as well. Impervious surfaces are solid surfaces that prevent rainfall from infiltrating back into the ground, thus leading the rainfall to run off these surfaces in greater quantities, at higher velocities with an increased pollutant loading. This is another way that the Town can be more proactive in preventing further flooding issues in the Town.

Develop a Database for Drainage Complaints

It is recommended that a drainage concerns database be created for the Town so that all existing and future drainage complaints can easily be documented and organized to coordinate follow-up field inspections. A general drainage complaint form should be used so that consistent information about each complaint can be documented, such as general location, full description of the complaint, frequency of issue, contact information, etc. This database is recommended to be created in a GIS format to easily link concerns to parcels and map drainage problem areas. A sample drainage complaint form is shown in Figure 8-1.

Figure 8-1
Sample Drainage Complaint Form

| <i>Town of Salem</i> CONCERNS INVENTORY | | | |
|---|--|---|---|
| <input type="button" value="Previous Record"/> <input type="button" value="Next Record"/> <input type="button" value="First Record"/> <input type="button" value="Last Record"/> <input type="button" value="Find Record"/> <input type="button" value="Print Record"/> | | | |
| <input type="button" value="Res. for Drive Permit DB"/> | | <input type="button" value="Res. for Utility Permit DB"/> | |
| <input type="button" value="Contact Log DB"/> | | <input type="button" value="Work Order DB"/> | |
| Record No. <input type="text"/> | Date of Complaint <input type="text"/> | Employee <input type="text"/> | |
| CONTACT DATA | | | |
| Business / Development Name <input type="text"/> | | First Name <input type="text"/> | Last Name <input type="text"/> |
| Street No. <input type="text"/> | Prefix <input type="text"/> | Street Name <input type="text"/> | Suffix <input type="text"/> Dir. <input type="text"/> |
| City <input type="text"/> | State <input type="text"/> | Zip Code <input type="text"/> | Contacts Tax Key No. <input type="text"/> |
| Home Phone <input type="text"/> | Work Phone <input type="text"/> | Ext. <input type="text"/> | E-mail <input type="text"/> |
| LOCATION AND NATURE OF CONCERN | | | |
| <input type="checkbox"/> Contact Data same as Location of Concern | | General Location <input type="text"/> | |
| Business / Development Name <input type="text"/> | | First Name <input type="text"/> | Last Name <input type="text"/> |
| Street No. <input type="text"/> | Prefix <input type="text"/> | Street Name <input type="text"/> | Suffix <input type="text"/> Dir. <input type="text"/> |
| Tax Key No. of Concern <input type="text"/> | | <input type="checkbox"/> More Tax Keys No. in Related Records Field | |
| Plat Page No. <input type="text"/> | Section <input type="text"/> | Quarter Section <input type="text"/> | <input type="checkbox"/> More Section / Quarter Section Data in Related Records |
| <input type="checkbox"/> Inquiry by Supervisor | | Date of Inquiry <input type="text"/> | |
| <input type="checkbox"/> Storm Water | | <input type="checkbox"/> Town Project | |
| <input type="checkbox"/> Development | | <input type="checkbox"/> Infrastructure | |
| <input type="checkbox"/> Permit | | <input type="checkbox"/> Other | |
| Text <input type="text"/> | | <input type="checkbox"/> DPW Work Order Generated | |
| DPW Work Order No. <input type="text"/> | | Start Date of DPW Work Order <input type="text"/> | |
| Nature of Concern <input type="text"/> | | | |
| Frequency <input type="text"/> | Related Records <input type="text"/> | | |
| Priority Rating <input type="text"/> | | | |
| REMEDIAL DATA | | | |
| Engineering Firm <input type="text"/> | Engineer Initials <input type="text"/> | Date Field Checked <input type="text"/> | Date Called Back <input type="text"/> |
| Engineer's Opinion of Problem <input type="text"/> | | | |
| Recommended Action <input type="text"/> | | | |
| Remedial Work Schedule <input type="text"/> | | | |
| Date Remedial Work Scheduled <input type="text"/> | Remedial Work Completed <input type="text"/> | | |
| Date Completed <input type="text"/> | | | |
| General Notes <input type="text"/> | | | |
| Code <input type="text"/> | Picture of Problem | Related Image A | Related Image B |

Develop Driveway Culvert Permit

The Town currently allows property owners to hire contractors to install driveway culverts with the supervision of a representative from the Town Highway Department. It is recommended that this system be refined to include a permitting process to provide the Town with a system of checks and balances on the size, length, type and elevation of the culvert being installed.

Review Ordinances for Floodplain Regulations

It is recommended that the Town Plan Commission and the Town Board review the local building ordinances to ensure that appropriate regulation dealing with floodplain zoning and structure floodproofing are included and are consistent with Kenosha County General Zoning and Shoreland / Floodplain Zoning Ordinance.

Flood Storage Compensation Requirements

It is recommended that the Town Plan Commission and the Town Board evaluate an ordinance to require any loss of flood storage from the floodway and flood fringe districts due to filling to be compensated at a ratio of 1.5 to 1 at a minimum. The additional compensation is a safety factor to prevent downstream flooding problems. All compensatory storage must be hydraulically equivalent for the 10-year and 100-year recurrence interval flood discharges

WATER QUALITY RECOMMENDATIONS

As outlined in Chapter 5, the Town's MS4 General Permit requires a Total Suspended Solids (TSS) loading reduction of 20 percent by 2008 and 40 percent by 2013 within the urbanized areas of the Town. The Town's No Controls TSS loading was calculated to show a 23% reduction. Therefore, the Town meets the 20% TSS loading reduction requirement of 2008. However, the Town will need to remove an additional 17% to meet the 40% reduction goal and thus additional work will be necessary. The recommendations to achieve this goal are as follow:

WinSLAMM Modeling

Additional WinSLAMM analysis will need to be completed over the next few years to meet the 40% TSS reduction requirement by March of 2013. As mentioned in Chapter 5, due to uncertainty with the current NR151 regulations and scheduled updates to the WinSLAMM model expected to be completed by January 2010, further analysis was not completed as part of this plan. It is recommended that this analysis is completed in Calendar Years 2010 and 2011 to allow a sufficient amount of time for the Town to identify what type of additional projects and BMPs will be required, budget for this additional work, and complete these projects by March 2013.

Revise the Erosion Control Ordinance Applicability Criteria

The Town's current Erosion Control Ordinance applies to larger developments with land disturbing construction activities greater than 1 acre, as required per Wisconsin Code NR151. It is recommended that the Town consider extending the applicability requirement for smaller construction activities and develop a land disturbance permit. Land disturbing activities can be defined to include excavation, filling, grading, demolition, or any other activity that removes the protective ground cover. A disturbance area of 0.5 acres (21,780 square feet) is recommended to be the minimum amount applicable to this permit. This permit is also recommended to regulate fill activities over 400 cubic yards.

A permit for this type of activity could be combined with the building permit or the driveway culvert permit mentioned above. A combined permit would be applicable in most situations where a new home is proposed on an already platted parcel of land. Greater oversight at the time of a building permit application can lead to a reduction of construction issues that commonly result in blocked or compromised drainageways and increased sediment loading entering surrounding lakes and streams.

Develop a Storm Water Management Facilities Database

It is highly recommended that the Town develop an inventory of all storm water management facilities (public and private) within the Town. The Wisconsin Department of Natural Resources (WDNR) allows municipalities to claim the TSS removal for private storm water management facilities as long as they have a long term maintenance agreement acknowledging that the municipality is responsible for all long term maintenance. A complete inventory of these facilities will give the Town an idea of any additional facilities that they may want to pursue for long term maintenance agreements with the owners in an effort to help reach the 40% TSS reduction goal.

This inventory will also be helpful as NR528 regulations for the management of accumulated sediments from storm water management facilities are on the horizon. The proposed rule includes self-regulation through sediment evaluation, compliance with appropriate regulatory requirements, certification, and record retention. The types of land use that generate the runoff and sediment will determine the appropriate disposal method available for the sediments and sludge removed from storm water management facilities. This database will help the Town track dredging efforts throughout the Town and to document disposal of the sediments.

Construction Site Erosion Control Inspections

Continue to implement and enforce the Construction Site Erosion Control Ordinance adopted in 2008. Inspections shall continue to be completed at all sites with over an acre of disturbance at a minimum of once per month. Documentation of these inspections shall be kept at the Town Hall.

Post-Construction Storm Water Management

Continue to implement and enforce the Post-Construction Site Storm Water Management Ordinance adopted in 2008. Maintenance Agreements for all storm water management facilities shall be kept on record at the Town, and facilities shall be inspected regularly to ensure proper operation of these facilities. Inspection records shall be kept at the Town Hall.

Illicit Discharge Detection & Elimination

Continue to implement and enforce the Illicit Discharge Ordinance and Response Procedures adopted in 2008. Annual field screenings shall continue to be completed and documented during dry weather months at all of the major outfalls within the Town.

Pollution Prevention

Continue to complete the following activities as part of the Town's Pollution Prevention Program:

1. Inspect all Town-owned storm water management facilities annually.
2. Develop a regular street sweeping program of all curbed roadways within the Town.
3. Clean all catch basins at a minimum of once per year. It is recommended that this is done in late fall to clean out any leaf debris that got into the storm sewer systems.
4. Continue to apply road salt at a level that maintains roadway safety, but minimizes the

- environmental impacts.
5. Encourage residents to bring in leaf and yard waste to the Town Hall for proper composting.
 6. Minimize the amount of fertilizer application in urban areas.
 7. Continue to use good housekeeping practices at the Town's Department of Highway Yard. This includes covering all aggregates when not in use; keeping all oils, chemicals and gasoline in the indoor storage areas; and completing all vehicle maintenance and cleaning indoors so that all potential contaminants runoff into the sanitary drains.
 8. Provide regular educational sessions with employees to stress the importance of these pollution prevention techniques.

Storm Sewer System Mapping

Continue to maintain the Town's storm sewer system map, developed in 2008, to reflect any new roadways, culverts, storm water management facilities, locations of WPDES permit holders, etc. as new development occurs in the Town.

Manure & Nutrient Management

NR151, Subchapter II provides performance standards intended to protect water quality on agricultural lands by minimizing the amount of soil erosion, nutrients from manure and croplands, and other nonpoint source pollutants to enter waterways. The Town should educate and encourage agricultural property owners to decrease the amount of nutrients applied to the landscape and to prevent spills, runoff, and erosion from transporting those nutrients into our waterways. The Town is encouraged to coordinate their efforts with the WDNR, the Wisconsin Department of Agriculture and Consumer Protection (DATCP), and Kenosha County to promote and enforce the NR151 standards.

Agricultural Buffers

Buffers between croplands and stream banks can save agricultural property owners money by not investing seed, fertilizer and chemicals on lower-yielding land while also preventing fertilizer runoff into the stream, erosion of the topsoil, and larger gullies from forming in the higher-yielding parts of the field. The Town is encouraged to educate agricultural property owners about the benefits of buffers and also the Conservation Reserve Program (CRP), which provides funding to these property owners for their efforts. Encourage buffer strips of 50 to 75 feet from all lakes, rivers and streams.

Alternative Crop Practices

The Town is encouraged to educate agricultural property owners of the storm water and erosion control benefits of alternative cropping techniques such as No Till, Reduced Till, Contour Strip Cropping, and Rotational Grazing.

INFORMATION AND EDUCATION STRATEGY

The Town of Salem is participating as part of the Southeast Wisconsin Clean Water Network Program along with approximately 20 other permitted municipalities within the Root-Pike Watershed. This program is officially called the "Keep Our Waters Clean" program and is included in Appendix L. In general, the long term goals for this program come from the requirements of the MS4 Permit and focus on improving urban storm water quality and eliminating illicit discharges.

In addition to being part of this program, it is recommended that the Town complete the following educational activities to be in compliance with their MS4 Permit:

**Table 8-2
Public Information & Education Program Activities**

| I&E METHOD | ACTIVITY |
|--|--|
| Internet Web Pages | The Town of Salem operates a storm water education page on their internet web page at http://www.townofsalem.net . This web page should continue to be used to distribute information on environmental issues and upcoming events. |
| Articles in the Town's bi-annual newsletter | The Town should include at least one informational storm water related article per newsletter. |
| Educational information put into utility billing inserts. | The Town should include a brief storm water related insert into at least one billing per year. |
| Display at local events | Show the UW-Extension Clean Waters display at local civic events and local schools. |
| Placement of educational material at public buildings | The Town should continue to post storm water educational materials in the display area for flyers located in the lobby of the Town Hall. I&E material on lawn care, fertilizer use, pet waste, erosion control, etc., developed by the University of Wisconsin Extension, WDNR, and Waukesha County can be displayed for public pick up. |
| Provide information regarding the Town's storm water performance standards | Storm water and erosion control performance standards should be clearly outlined on the Town's web page and on informational brochures to educate business owners, contractors, developers, and consultants. |
| Tours of management practices | Tours of management practices and pollution prevention activities are recommended for local citizens and civic leaders. Tours provide the opportunity for residents to see first hand the progress being made by the Town. |
| Educational signs at management practice sites | Signs to explain the purpose of related management facilities can educate the public on how their dollars are being spent. |
| Annual presentations for elected officials | Annual presentations given to Town Board to update them on the status of the Town's storm water requirements and MS4 Permit tasks. |
| Storm Sewer Stenciling Program | To prevent the dumping of waste materials down storm drains, placement of the statement, " <i>Dump No Waste Drains to River</i> " on the storm sewer inlets is recommended. A local civic or scout group could conduct this project. The University of Wisconsin Extension has material available to conduct this activity. |
| Educational programs in the local schools | To help educate students, the Town of Salem should work with the science departments at the Town school districts to develop environmental education programs that include urban storm waters. Programs such as "Project WET" and "Testing the Waters" should be explored for potential incorporation into the school curriculum. |

As discussed in Table 8-2, the University of Wisconsin Extension has developed a series of informational brochures that can be used by the Town for display at the Public Works Office or made available on the Town's web page. The following is a list of some of the titles that are available:

- *Car Care for Cleaner Water*
- *Storm Drain Stenciling – How You Can Prevent Water Pollution*
- *Cleaning Up Stormwater Runoff*
- *Storm Sewers – The Rivers Beneath Our Feet*

- *Polluted Urban Runoff – A Source of Concern*
- *Erosion Control for Home Builders*
- *Standard Erosion Control Plan*
- *Wisconsin's Runoff Rules: What Farmers Need to Know*
- *Brown Water Green Weeds: Familiar Signs of Non-point Source Pollution*

Copies of these publications can be obtained on the University of Wisconsin Extension web page:
<http://clean-water.uwex.edu/pubs/storm.htm>

IMPLEMENTATION STRATEGY

For any project to move from concept to construction, an implementation strategy is necessary. The following implementation strategy outlines a recommended schedule, financing options aside from the existing storm water utility that are available for plan implementation, and the administrative and regulatory process that will need to be followed to implement the plan.

TABLE 8-3
Recommended Implementation Schedule

| RECOMMENDATION | RECOMMENDED COMPLETION DATE |
|---|--|
| Flooding and Drainage Recommendations | |
| Priority Flooding Project 1 – CTH AH & 256 th Ave | 2010 |
| Priority Flooding Project 2 – 122 nd St & 224 th Ave | 2011 |
| Priority Flooding Project 3 – Salem Oaks Subdivision | 2012 |
| Priority Flooding Project 4 – Timber Lane Subdivision | 2015 |
| Priority Flooding Project 5 – Sunset Oaks Subdivision | 2018 |
| Priority Flooding Project 6 – Shoreview Subdivision | 2020 |
| Priority Flooding Project 7 – 99 th St & 270 th Ave | Project on hold: residents fixing tile |
| Analysis & Preliminary Engineering of Nuisance Drainage Complaints | 2010 |
| Nuisance Drainage Improvement Projects | 2010-2020 |
| Develop More Stringent Release Rates for the Town | 2010 |
| Revise the Storm Water Management Ordinance Applicability Criteria | 2010 |
| Develop a Database for Drainage Complaints | 2010 |
| Develop a Driveway Culvert Permit Process | 2010 |
| Review Ordinances for Floodplain Requirements | 2010 |
| Review Flood Storage Compensation Requirements | 2010 |
| Water Quality Recommendations | |
| WinSLAMM Modeling for 40% TSS Reduction Goal | 2010 – 2011 |
| Construction of Storm Water Management Facilities Required to Meet the 40% TSS Reduction Goal by March 13, 2013 | 2011 - 2013 |
| Develop a Land Disturbance Permit | 2010 |
| Develop a Database to Track Storm Water Management Facilities | 2010 |
| Construction Site Erosion Control Ordinance Enforcement & Construction Site Inspections | Ongoing for ordinance enforcement & once/month for inspections as development occurs |
| Post-Construction Storm Water Management Enforcement & Storm Water Facility Annual Inspection | Ongoing for ordinance enforcement & annual inspections for facilities |
| Illicit Discharge Detection & Elimination & Annual Outfall Inspections | Ongoing for ordinance enforcement & Annual outfall inspections |
| Pollution Prevention Program | Ongoing Good Housekeeping Practices |
| Municipal Storm Sewer System Mapping | Ongoing |
| Manure & Nutrient Management Education Efforts | Ongoing |
| Agricultural Buffer & Alternative Crop Practice Education Efforts | Ongoing |
| Information & Education Strategy | Ongoing |

Regulatory Permits

Implementation of some of the structural components of the project may require regulatory permits from the WDNR and U. S. Army Corps of Engineers (USACOE). The recommended wet detention basins may require Chapter 30 permits from the State of Wisconsin. Installation of the detention ponds may require 30-day public notices and the preparation of environmental assessment worksheets. Prior to the start of construction of any of the structural components of this plan, the Town of Salem should contact the WDNR and USACOE to determine regulatory jurisdiction and needed permits.

STORM WATER UTILITY BUDGETING

The Town adopted the Year 2009 storm water utility budget as part of the storm water utility creation in 2008. Table 8-4 outlines the recommended 10-year budget, Years 2010 through 2020, and includes the recommendations in this plan.

As shown in this table, it is expected to cost approximately \$6.2 million dollars over the next 10 years to address all of the recommendations listed above. With the current Storm Water Utility ERU fee of \$60 per ERU over the next 10 years, the Town will collect approximately \$4.7 million dollars to allocate toward storm water management. It is recommended that the Town review this proposed budget to decide if an increase in the Storm Water Utility ERU fee should be implemented at some point in the future to balance the budget.

ALTERNATIVE FINANCING OPPORTUNITIES

The following is a summary of the financing options that are available to the Town of Salem beyond the existing storm water utility for the implementation of this plan.

Grant Opportunities

A variety of grant opportunities through various national, state, and private agencies are available to local governments for projects that involve storm water management, flood control, wetland and habitat restoration. A non-inclusive list is provided below.

Wisconsin Department of Natural Resources

- Clean Water Fund
- Local Water Quality Management Planning Aids
- Municipal Flood Control Grant Program
- Nonpoint Pollution Abatement Programs
- Lake Protection and Planning Grants
- River Protection Planning and Management Grants
- Wisconsin Waterfront Planning Grants
- Dam Maintenance, Repair, Modifications, Abandonment, and Removal

National Fish and Wildlife Foundation

- Sustain our Great Lakes

U.S. Fish and Wildlife Services

- Partners for Fish and Wildlife Program
- Great Lakes Fish and Wildlife Restoration Grants Program

TABLE 8-4
Town of Salem Recommended Storm Water Utility Budget through 2020
December 2009

| ANNUAL OPERATION & MAINTENANCE | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | TOTAL |
|---|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|---------------------|---------------------|
| WPDES Permit Annual Fee | \$ 500 | \$ 500 | \$ 500 | \$ 500 | \$ 500 | \$ 500 | \$ 500 | \$ 500 | \$ 500 | \$ 500 | \$ 500 | \$ 5,500 |
| Root Pike WIN Annual Fee | \$ 2,205 | \$ 2,205 | \$ 2,205 | \$ 2,205 | \$ 2,205 | \$ 2,205 | \$ 2,205 | \$ 2,205 | \$ 2,205 | \$ 2,205 | \$ 2,205 | \$ 24,255 |
| Public Involvement and Participation Program | \$ 1,500 | \$ 1,500 | \$ 1,500 | \$ 1,500 | \$ 1,500 | \$ 1,500 | \$ 1,500 | \$ 1,500 | \$ 1,500 | \$ 1,500 | \$ 1,500 | \$ 16,500 |
| Construction Site Erosion Control Ordinance & Enforcement Procedures | \$ 500 | \$ 500 | \$ 500 | \$ 500 | \$ 500 | \$ 500 | \$ 500 | \$ 500 | \$ 500 | \$ 500 | \$ 500 | \$ 5,500 |
| Post-Construction Site Pollutant Control Ordinance & Long-term Maintenance | \$ 500 | \$ 500 | \$ 500 | \$ 500 | \$ 500 | \$ 500 | \$ 500 | \$ 500 | \$ 500 | \$ 500 | \$ 500 | \$ 5,500 |
| Illicit Discharge Program On-going Field Screening Inspection & Enforcement | \$ 5,000 | \$ 5,000 | \$ 5,000 | \$ 5,000 | \$ 5,000 | \$ 5,000 | \$ 5,000 | \$ 5,000 | \$ 5,000 | \$ 5,000 | \$ 5,000 | \$ 55,000 |
| Implementation of the Pollution Prevention Program for Municipal Facilities | \$ 1,000 | \$ 1,000 | \$ 1,000 | \$ 1,000 | \$ 1,000 | \$ 1,000 | \$ 1,000 | \$ 1,000 | \$ 1,000 | \$ 1,000 | \$ 1,000 | \$ 11,000 |
| On-going Storm Sewer System Mapping | \$ 1,000 | \$ 1,000 | \$ 1,000 | \$ 1,000 | \$ 1,000 | \$ 1,000 | \$ 1,000 | \$ 1,000 | \$ 1,000 | \$ 1,000 | \$ 1,000 | \$ 11,000 |
| WPDES Permit Annual Report | \$ 2,000 | \$ 2,000 | \$ 2,000 | \$ 2,000 | \$ 2,000 | \$ 2,000 | \$ 2,000 | \$ 2,000 | \$ 2,000 | \$ 2,000 | \$ 2,000 | \$ 22,000 |
| Re-apply for Permit Coverage | \$ 1,500 | \$ - | \$ - | \$ - | \$ - | \$ 1,500 | \$ - | \$ - | \$ - | \$ - | \$ 1,500 | \$ 4,500 |
| Administrative Services Related to NR216 Permit & Storm Water Utility | \$ 1,440 | \$ 1,483 | \$ 1,528 | \$ 1,574 | \$ 1,621 | \$ 1,669 | \$ 1,719 | \$ 1,771 | \$ 1,824 | \$ 1,879 | \$ 1,935 | \$ 18,443 |
| Highway Department Services Relating to Roadway and Drainage System Maintenance | \$ 100,000 | \$ 103,000 | \$ 106,090 | \$ 109,273 | \$ 112,551 | \$ 115,927 | \$ 119,405 | \$ 122,987 | \$ 126,677 | \$ 130,477 | \$ 134,392 | \$ 1,280,780 |
| One Full Time Employee | | | | | | | | | | | | \$ - |
| Culvert Maintenance | | | | | | | | | | | | \$ - |
| Backfill Operations | | | | | | | | | | | | \$ - |
| Restoration | | | | | | | | | | | | \$ - |
| Ditching | | | | | | | | | | | | \$ - |
| Legal / Engineering / Contracted Services Related to WPDES Permit & Storm Water Utility | \$ 15,000 | \$ 15,000 | \$ 15,000 | \$ 15,000 | \$ 15,000 | \$ 15,000 | \$ 15,000 | \$ 15,000 | \$ 15,000 | \$ 15,000 | \$ 15,000 | \$ 165,000 |
| SUBTOTAL | \$ 132,145 | \$ 133,688 | \$ 136,823 | \$ 140,051 | \$ 143,377 | \$ 148,302 | \$ 150,330 | \$ 153,963 | \$ 157,706 | \$ 161,561 | \$ 167,032 | \$ 1,624,978 |
| CAPITAL IMPROVEMENTS | | | | | | | | | | | | |
| WinSLAMM 40% Modeling Assessment | \$ 7,500 | \$ 5,000 | | | | | | | | | | \$ 12,500 |
| Ordinance Development and Revisions | \$ 10,000 | | | | | | | | | | | \$ 10,000 |
| Development of Complaint Inventory Database, Culvert and Land Disturbance Permits | \$ 15,000 | | | | | | | | | | | \$ 15,000 |
| Priority Flooding Project 1 - CTH AH & 256th Ave | \$ 111,875 | | | | | | | | | | | \$ 111,875 |
| Priority Flooding Project 2 - 122nd Street & 224th Ave | | \$ 205,175 | | | | | | | | | | \$ 205,175 |
| Analysis and Preliminary Engineering of all Recorded Drainage Complaints | \$ 10,000 | | | | | | | | | | | \$ 10,000 |
| Construction of Nuisance Drainage Improvement Projects | \$ 55,000 | \$ 55,000 | \$ 55,000 | \$ 55,000 | \$ 55,000 | \$ 55,000 | \$ 55,000 | \$ 55,000 | \$ 55,000 | \$ 55,000 | \$ 55,000 | \$ 605,000 |
| Culvert Inventory & Mapping | | \$ 25,000 | \$ 25,000 | | | | | | | | | \$ 50,000 |
| Priority Flooding Project 3 - Salem Oaks Subdivision | | | \$ 552,000 | | | | | | | | | \$ 552,000 |
| Priority Flooding Project 4 - Timber Lane Subdivision | | | | | | \$ 659,500 | | | | | | \$ 659,500 |
| Priority Flooding Project 5 - Sunset Oaks Subdivision | | | | | | | | \$ 661,500 | | | | \$ 661,500 |
| Priority Flooding Project 6 - Shoreview Subdivision | | | | | | | | | | \$ 800,000 | | \$ 800,000 |
| Priority Flooding Project 7 - 99th Street & 270th Ave | | | | | | | | | | | | \$ - |
| Equipment Maintenance and Purchase Costs | \$ 50,000 | \$ 50,000 | \$ 50,000 | \$ 50,000 | \$ 50,000 | \$ 50,000 | \$ 50,000 | \$ 50,000 | \$ 50,000 | \$ 50,000 | \$ 50,000 | \$ 550,000 |
| Storm Water Quality Practices to meet the WDPES 40% TSS Reduction Goal* | | | \$ 100,000 | \$ 100,000 | \$ 100,000 | | | | | | | \$ 300,000 |
| SUBTOTAL | \$ 259,375 | \$ 340,175 | \$ 782,000 | \$ 205,000 | \$ 205,000 | \$ 764,500 | \$ 105,000 | \$ 105,000 | \$ 766,500 | \$ 105,000 | \$ 905,000 | \$ 4,542,550 |
| TOTAL | \$ 391,520 | \$ 473,863 | \$ 918,823 | \$ 345,051 | \$ 348,377 | \$ 912,802 | \$ 255,330 | \$ 258,963 | \$ 924,206 | \$ 266,561 | \$ 1,072,032 | \$ 6,167,528 |

* Exact costs for storm water quality practices needed to meet the 40% TSS reduction goal is not quantifiable at this time and is only meant to be an estimate

Federal Emergency Management Agency – FEMA

- Hazard Mitigation Assistance Program

Borrowing Options

Borrowing options for capital improvements for storm water management fall into the following categories:

1. General obligation borrowing.
2. General obligation Bonds under sec. 67.05, Wisconsin Stats.
3. Bonds, not general obligation under sec 67.125 Wisconsin Stats.
4. Promissory notes, pursuant to sec. 67.12 Wisconsin Stats.
5. Mortgage Revenue Bonds, Certificates, and notes under sec. 66.006 Wisconsin Stats.
6. Tax Increment financing bonds under sec. 66.46 Wisconsin Stats.

PUBLIC COMMENT REVIEW PERIOD AND PLAN ADOPTION

An important first step in the plan implementation is the formal adoption of the plan by the Town of Salem. The steps in the approval process are as follows:

1. Three hard copies of the draft storm water management plan will be provided for staff review along with a CD containing the draft plan to be posted on the Town’s website for public review.
2. Public review and comment period through November 1, 2009.
3. Town Board discussion of review comments and consideration of the draft storm water management plan in November 2009.
4. Addendum to the draft storm water management plan addressing all review comments to date to be submitted in December 2009.
5. Public information meeting held in January 2010.
6. Adoption of final storm water management plan by Town Board in February or March of 2010.