

2010 City of Madison Storm Water Utility Capital Budget



Agenda

1. Review of overall budget amounts
2. Review of main primary categories & budgets (with questions)
3. Review of specific projects
4. Questions ?

Budget Overview

Project Name	Capital Budget 2011
1 Storm Sewer with Street Projects	\$ 3,474,025
2 Greenway Improvements	450,000
3 Stormwater Basins	1,025,000
4 Urban Water Quality Compliance	669,000
5 Storm Box Replacement	200,000
6 Major Roadway Culvert Crossings	50,000
7 Assessable Drainage Improvements	150,000
8 Shorelines	182,500
9 Local Drainage Problems	250,000
10 Lower Badger Mill Creek	0
11 Upper Badger Mill Creek Watershed	0
12 Inter-Municipal Storm Management	1,351,000
13 Wingra Creek Corridor	250,000
14 Willow Creek Relief Storm, Ph 4	0
15 Starkweather Creek Watershed	590,000
16 Street Cleaning Equipment	403,000
17 1000 Rain Gardens	140,000
18 Warning Sirens	90,000
19 Engineering - Remodel and Ceiling	182,400
20 Dredging	125,000
21 Equipment & Vehicles	300,000
22 ESB Replacements, Impr. & Additions	50,000
23 Lake Wingra Watershed Management	125,000
24 Upper Badger Mill Creek Floodplain	50,000
25 Madison Beaches-Water Quality Mgt.	95,000
26 Central Park Area Pond	438,000
Total	\$ 10,637,025

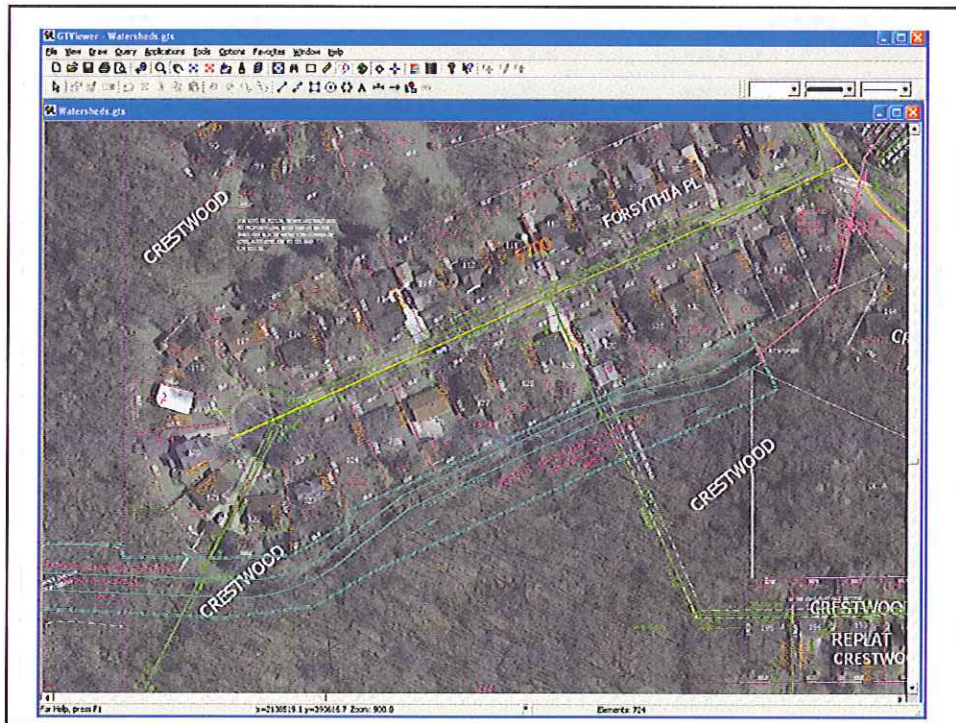
Storm Sewer with Street Reconstructs - \$3,474,025 32.6%

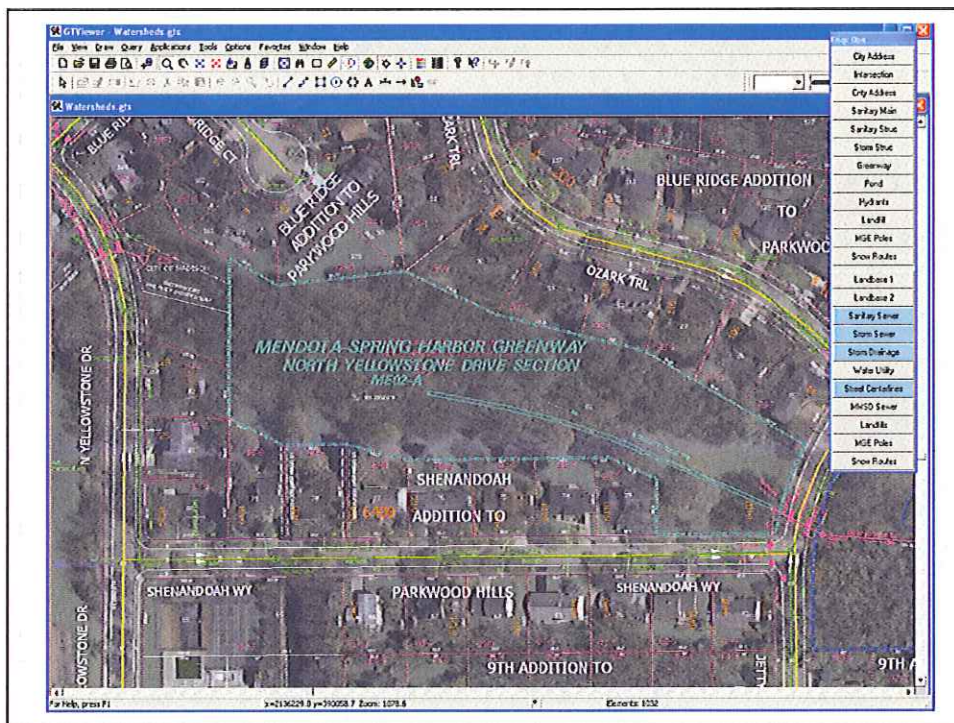
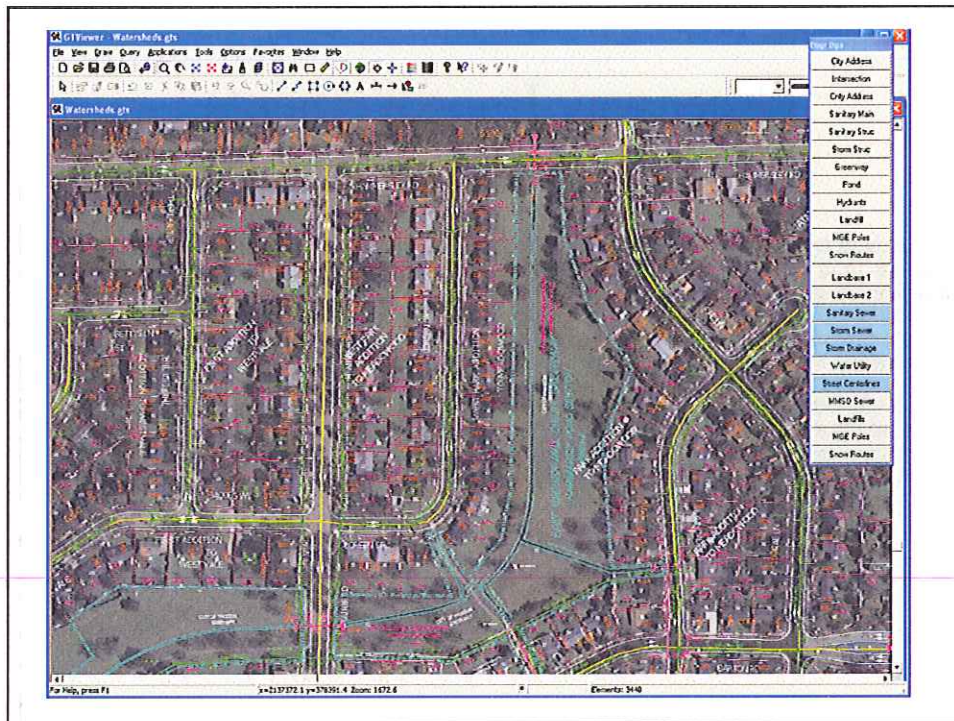
This project is for the design and installation of storm sewer systems that 'accompany' street projects. This is a continuing program to provide mainline storm sewer improvements, replacements, and rehabilitation in conjunction with City streets being reconstructed and resurfaced. Additionally, this project consists of installing various conduits to serve streets being improved with curb and gutter and asphaltic pavement, as directed by the Common Council (Major Streets). This project also funds an annual 'Waterway Repairs' contract that is used for small drainage improvements. Funding includes \$900,000 of GO Debt reauthorized from 2010.

Greenway Improvements

\$450,000 - 4.2%

This projects finances the capitalized cost to rehabilitate and repair drainage channels or greenways that are used to transport stormwater runoff including land acquisition, landscaping, and the maintenance of trees. Carryover projects from 2010 shall be priorities. Those include: a project to maintain existing concrete cunettes to prolong their respective useful life (Forsythia, Prairie) and to prevent groundwater intrusion into adjacent residences. Another priority project is the greenway near Shenandoah which has become severely eroded. Other work may occur in the Reston Heights Greenway and the greenway along Island/Nautilus. The Sauk Creek Greenway shall be improved in conjunction with a Sanitary Sewer Access Improvement project. This project also includes an annual 'Restoration/Landscaping' contract that makes needed repairs to open drainage ways and a contract for selective removal of distressed or problem trees within the greenway system. A larger project in Owen Conservancy shall be tentatively scheduled for in 2012. Funding includes \$65,000 in Utility Reserves reauthorized from 2010.

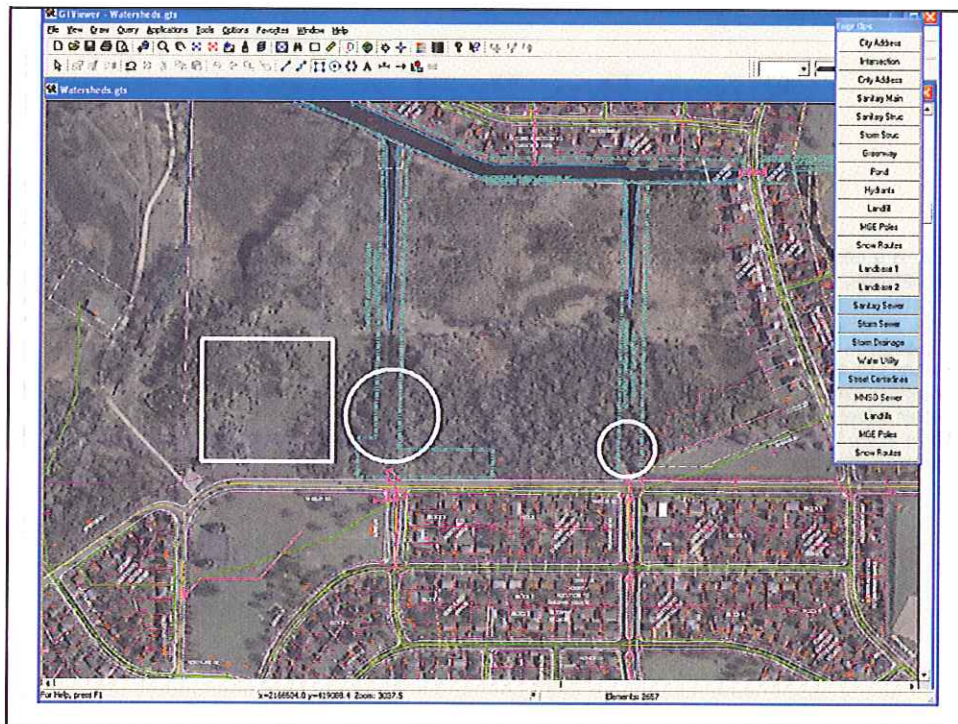




Stormwater Basins

\$1,025,000 – 9.6%

This project funds capitalized rehabilitation and repair of the Utility's stormwater detention/retention basins and creation of new basins to capture sediment to meet the mandate of 40% control Citywide by 2013. Money is also budgeted for continuing work at the Blackhawk Pond adjacent Hidden Cave (if needed), and the High Point Road Pond, just east of Raymond. Both of these ponds have experienced problems of rapid draw down (loss of water) due to underlying geologic karst formations. Areas identified for new basins include: School Road Area (Ilene at Wheeler and Delaware at Wheeler), Bonner at Wheeler, Warner Park, Cherokee Area, Rimrock Road, Pilgrim Park, and various other potential sites.



Urban Water Quality Compliance (catchbasins) - \$669,000 6.2%

This project is for the construction of facilities to enhance storm water quality and reach compliance with the 40% reduction of suspended solids, as required by Section NR 151, Wisconsin Administrative Code, by 2013. Proprietary catchment devices and sediment catch basins will be installed in critical areas that drain directly to Lake Monona and Lake Mendota. These basins shall also collect urban trash. A large sediment structure is proposed in Warner Park near the railroad tracks. Locations are coordinated with street reconstruction projects or are chosen based on potential to collect greater volumes of sediment. After initial compliance, this project would target other key areas for sediment removal such as the City's snow storage sites. Funding includes \$669,000 of GO debt proceeds reauthorized from 2010.

Storm Box Replacement \$200,000 – 1.8%

This is a continuing program to systematically replace aged and failing storm sewer box culverts. Additionally, many storm boxes that are structurally sound are in need of maintenance in the form of cleaning. Sediment has accumulated in the storm sewers, cutting conveyance efficiencies by up to 50% or more. This item shall fund either a cleaning project or a replacement project, or a combination of both, depending on priorities and available funding. The top priority for 2011 is to reconfigure the opening to the storm box on Vernon Boulevard at Midvale Boulevard to eliminate the unsightly and unsafe fence/cage. This budget item also anticipates the relining of the failing storm sewer culvert in the Manitou Way median and extending and repairing the culvert crossing Woodard Drive at the Warner Lagoon outlet. A replacement on Pickford Street is budgeted separately with the reconstruction list.

Major Roadway Crossings

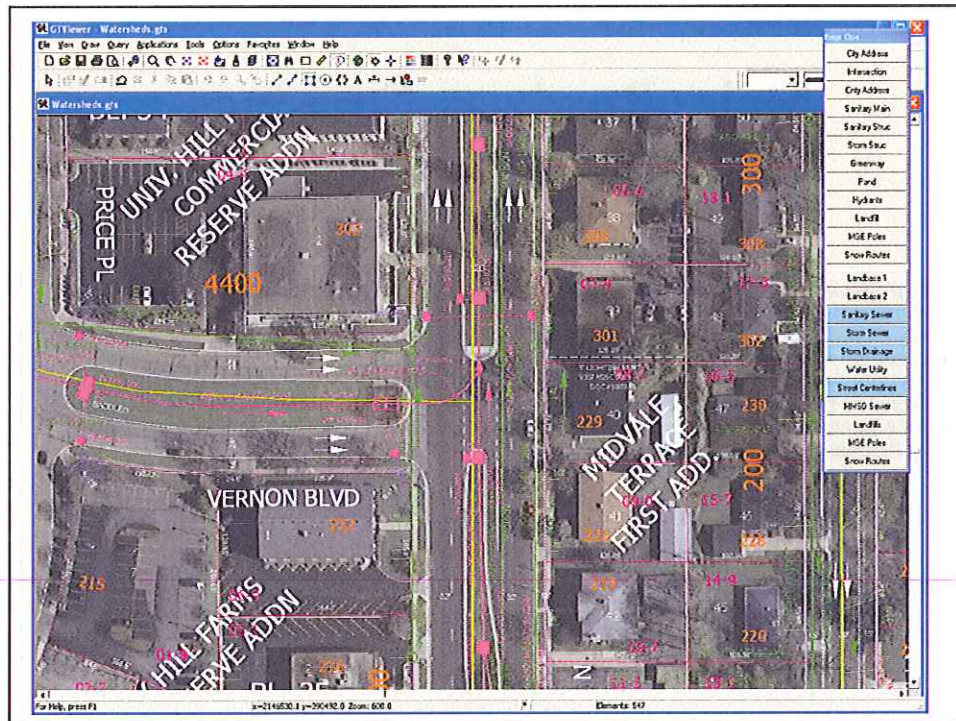
\$50,000 – 1%

This project is for major (larger size) stormwater culvert crossings under roadways in areas of new development or in areas impacted by new development. When the crossing is entirely within a newly platted street, it is proposed that the City pay only for the proportion of the total project cost that can be attributed to a culvert end area in excess of 64 square feet. Actual expenditures are dependent on developments approved by the City. One anticipated project is installation of a culvert crossing on Elderberry Road just east of Pleasant View Road. The culvert crossing of Woodward Drive (Warner Lagoon Outlet) is in need of extension and repair. Funding includes \$50,000 of GO Debt Proceeds reauthorized from 2010.

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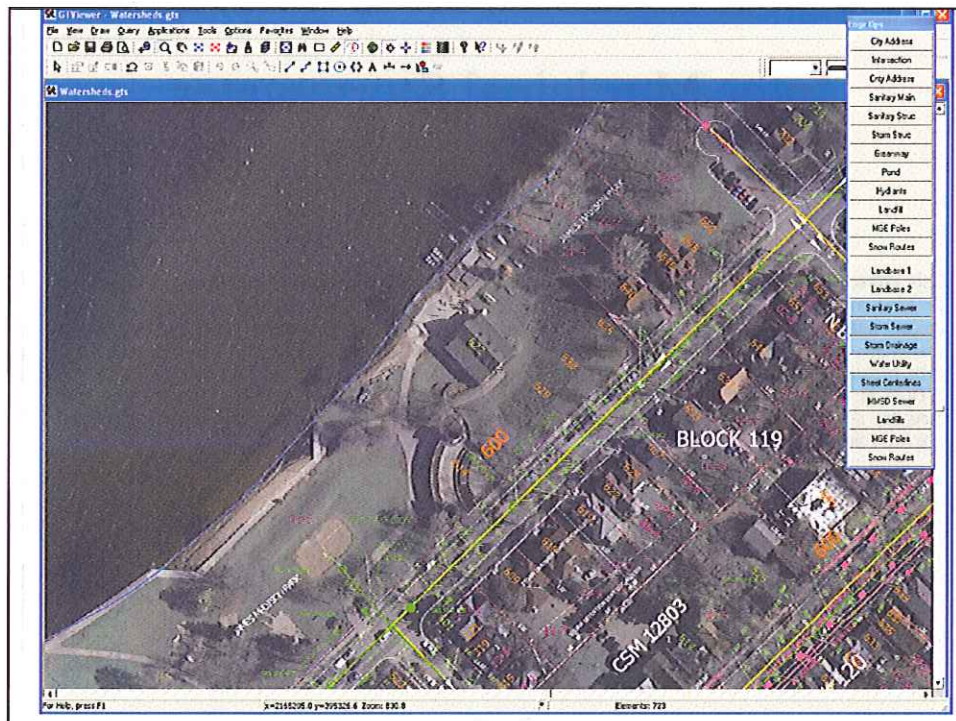
Assessable Drainage Improvements \$150,000 1.4%

This project is for additions to the stormwater management system in developing areas or for solving drainage problems in existing areas. The work may include wetland and floodplain surveys, planning, and permitting. Larger projects include subsequent phases of the Center for Industry & Commerce Plat and the Interstate Commerce Park Plat. Potential smaller projects have been identified at 1331 Everett Street, 214 Rethke, and Debra Lane backyards. In future years, a project is planned for Brentwood Parkway and the Warner Park area. Newly developing areas are 100% assessable. Existing areas are 50% assessable. Funding includes \$75,000 in Utility Reserves reauthorized from 2010.

Shoreline Improvements

\$182,500 – 1.7%

The Shoreline Improvement Program is for large-scale improvements to the public shoreline of lakes, creeks, and rivers. The annual action of lake ice requires periodic maintenance of shorelines. High lake levels have also exacerbated the erosion of the shorelines. Projects scheduled for 2011 include B.B. Clarke, James Madison Park, a portion of the Yahara River along Riverside, and a potential canoe launch at Ingersoll. All projects would require the necessary public participation and agreement prior to advancing. Funding includes \$47,500 in GO Debt Proceeds reauthorized from 2010.

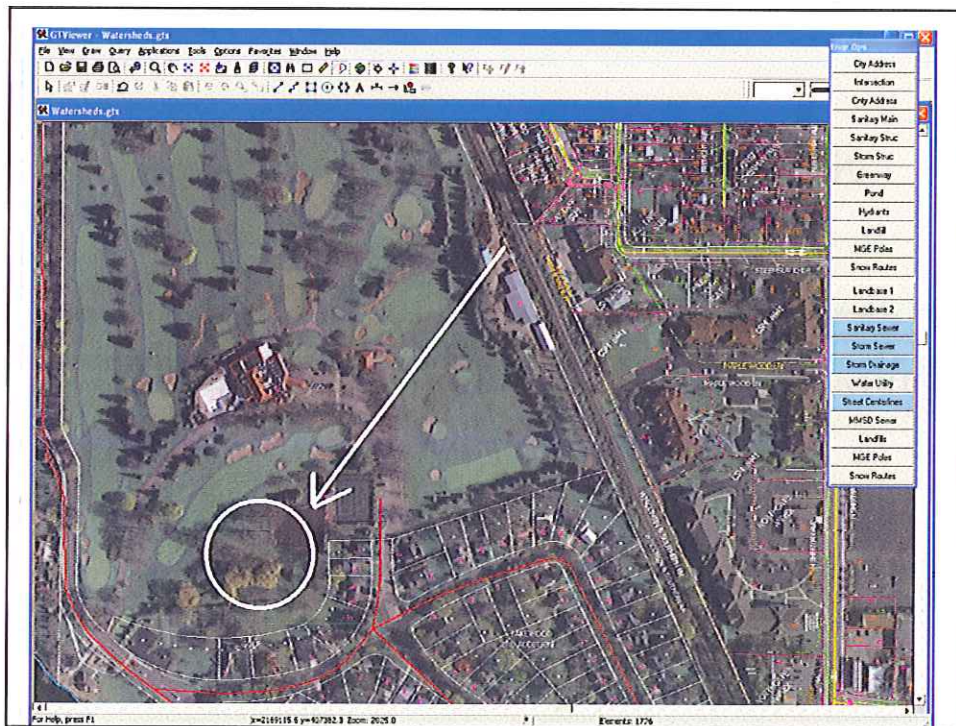
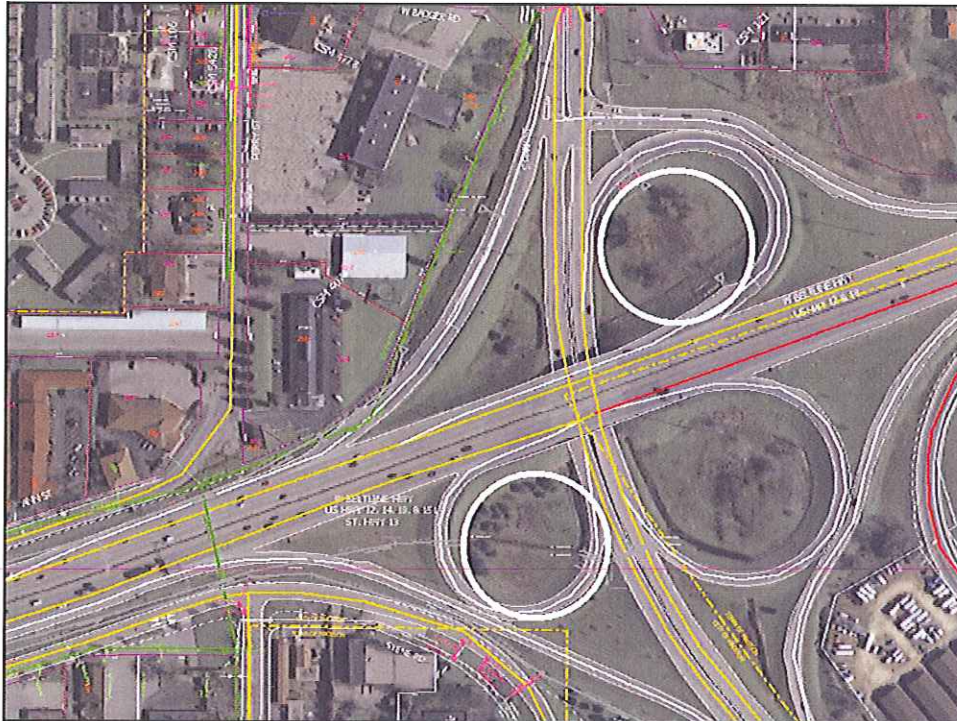


Local Drainage Problems \$250,000

City Engineering maintains a database of over 200 drainage problems and plans to address these problems on a priority basis. This budget item would continue to implement solutions to the drainage problems on a prioritized basis, as determined by the City Engineer and the Common Council. The proposed project for 2011 is an upgrade of the low point serving Cumberland at Richard. The proposed solution would require cooperation of the Madison School District. Another priority is to design and/or install measures in the Cardinal Glenn Plat to correct debris problems from the upstream farm that lead to flooding and erosion. Funding includes \$100,000 in GO Debt Proceeds reauthorized from 2010.

Inter-Municipal Stormwater Management - \$ 1,351,000

This project is for the funding of cooperative projects with neighboring municipalities. The work is detailed in inter-governmental agreements, which establish the level of cost participation. This project will fund \$500,000 per year for stormwater management improvements within the Arboretum and within watersheds draining to the Arboretum. The other major items for 2011 are funding for a joint project with the Village of Maple Bluff to solve a flooding problem and cooperating with the WDOT to construct a sediment pond in the interchange at the Bellline and Park Street. Funding includes \$676,000 in GO Debt Proceeds reauthorized from 2010. Other funding is from Municipal Capital Participation.

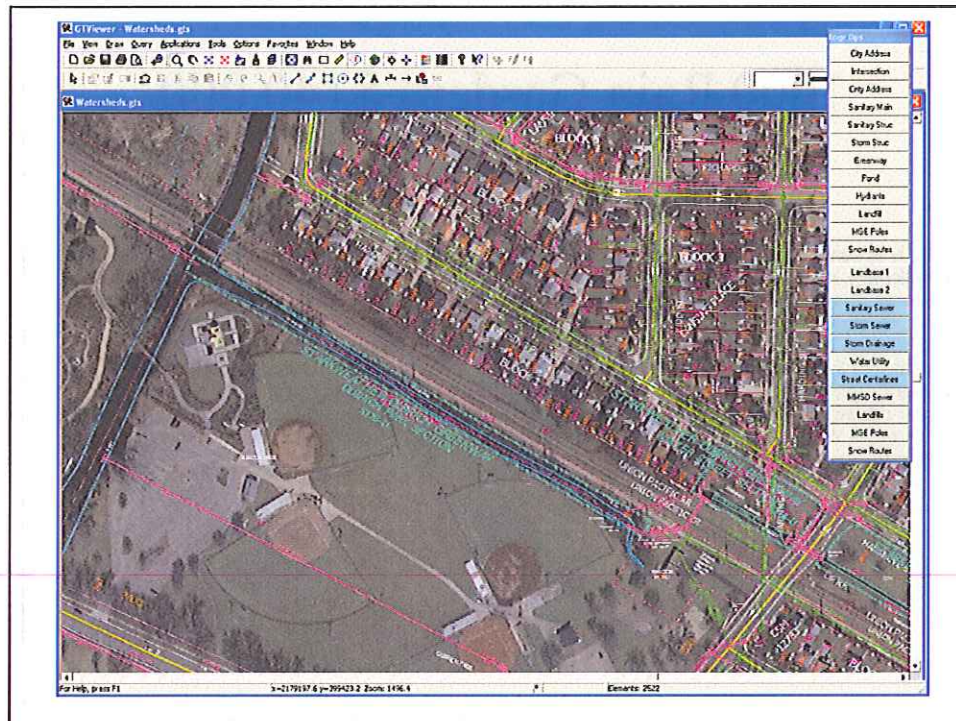


Wingra Creek Corridor \$250,000 2.35%

The Wingra Creek Corridor is in need of shoreline and embankment work to enhance stormwater conveyance and water quality as well as provide a more enhanced corridor for pedestrian usage. Planning, design, and permitting began in 2003, with implementation phases proposed over several years. Previous phases from Fish Hatchery Road to the lower railroad bridge have been completed. The next phase thru Quann Park to Olin shall be 2011 and 2012.

Starkweather Creek Watershed \$590,000 – 5.5%

2011 projects include the rehabilitation of the greenway segment along Olbrich Park discharging to Starkweather Creek from the east and repairs to the Starkweather Creek shoreline from Zeier Road east to the railroad tracks. Another potential project is tree removal along the creek from Stoughton Road to Sycamore Avenue. Funding includes \$220,000 in GO Debt Proceeds reauthorized from 2010.



Street Cleaning Equipment

\$403,000 – 3.8%

This item is for the replacement of mechanical street sweeping machines. Sweepers require a high level of maintenance and are recommended for replacement on a five year cycle. Replacement cost is presently approximately \$175,000, less \$20,000 salvage of old equipment. The 2011 budget reflects replacement of two mechanical sweepers. Funding includes a smaller sweeper for use on bike paths (\$85,000).

1000 Rain Gardens \$140,000

1.3%

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Warning Sirens \$90,000

0.8%

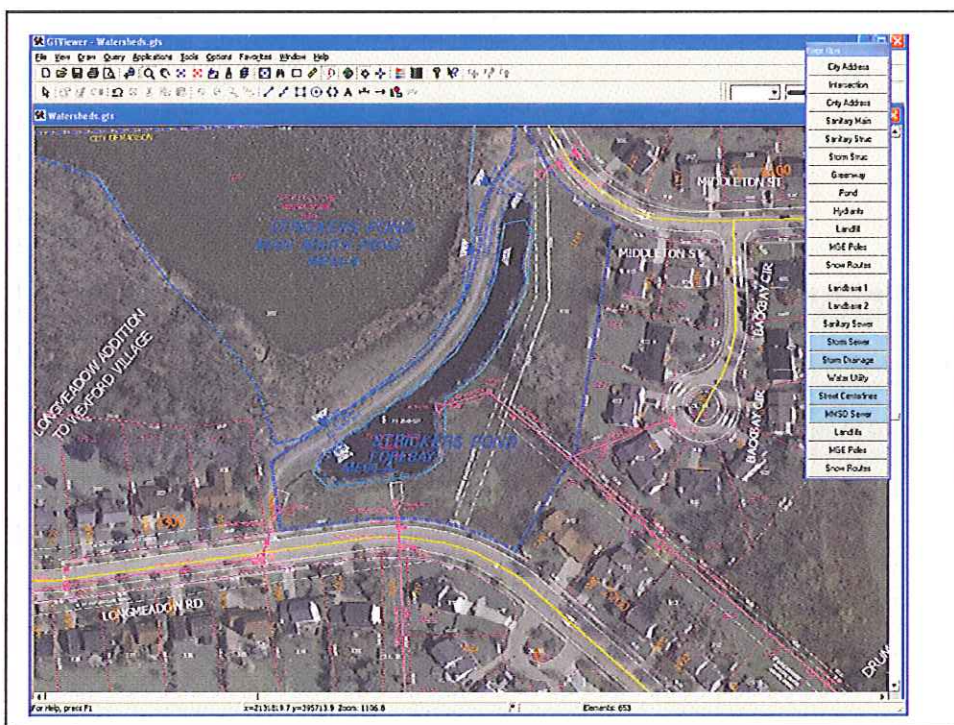
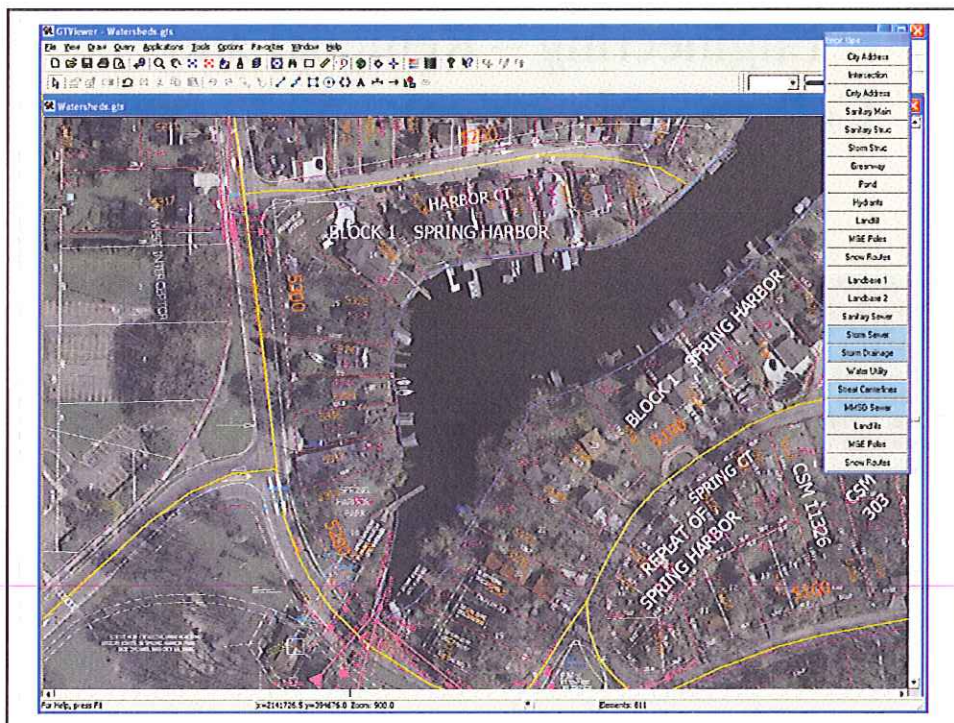
In 2005, the Stormwater Utility assumed the responsibility for the maintenance and expansion of Emergency Warning Sirens. A long range plan has been developed to increase the range of the sirens and retiring the smaller sirens with limited range. This items budgets for approximately four sirens per year; newly placed ones or replacements.

Engineering – Remodel and Ceiling replacement - \$182,000 1.7%

This project is to replace the ceiling and lighting in Engineering first floor CCB. In addition, this project is remodeling the front counter space to make it ADA compliant, installing carpeting throughout, relocating or removing existing walls to improve efficiency, and creating a break room for engineering employees. This project includes moving the Engineering Annex (Room 107A) to rooms 112 and 118, which housed the County Supervisors' and the County Clerk's offices. This will provide Engineering with needed square footage and also move the Engineering Annex closer to the Main Office. This budget item represents only the Stormwater Utility portion of the project. The Stormwater Utility will be paying for 24% of the total or \$182,400. This is a reauthorization from 2010.

Dredging \$125,000 1.2%

This dredging project includes preliminary and final design, permitting and disposal requirements associated with the proposed dredging of the retention ponds or other Stormwater features. Several sites are presently in need of dredging. It is anticipated that this will be a continuing project annually, on a prioritized basis. Sites known to be in need of dredging include Strickers Pond Forebay, Acewood Retention Basin, Morningside Retention Basin, Warner Park Lagoon outlet channel, Spring Harbor outlet, and Odana Golf Course Pond. All other City ponds are being monitored for siltation and shall be incorporated into the schedule accordingly. For 2011 Spring Harbor and Strickers Pond are scheduled to receive maintenance dredging.



Equipment & Vehicles \$300,000 – 2.8%

This project is for the replacement of existing vehicles and equipment that have exceeded their useful life and the addition of new equipment necessary to maintain the sanitary sewer system. Vehicles scheduled for replacement in 2011 include: (#2968) 3500 Chevy one-ton truck with dump body and plow; (#2969) 3500 Chevy one-ton with dump body, plow and spreader; (#3122 and 3124) Vactors on Freightliner chasses; (#M1036-M1045) four gas meters with calibration/charging docking stations. New vehicles and equipment include a leadworker van and digital scanning structure inspection system. Note: If an additional crew is approved in the 2011 operating budget, the Division will purchase two new Vactors but retain #3124 for an additional year and replace it in 2012. This amount represents only the Stormwater Utility portion of cost.

Engineering Service Building Replacements - 0.47%

This project is for replacement of existing equipment that has outlived its useful life and additions/upgrades to the Engineering Service Building. In 2011, projects planned include the replacement of the existing hot water system with a solar thermal system, overhead doors and controls, fencing and other security-related improvements and architectural/engineering services for an addition to the Engineering Service Building to provide additional vehicle storage space. Cost represents the Stormwater Utility portion only.

Lake Wingra Watershed Management \$125,000 1.2%

This project would work in cooperation with the Friends of Lake Wingra to develop and implement an integrated and comprehensive watershed management plan. This plan would guide future implementation by the Stormwater Utility or other agencies. Other funding consists of \$8,000 from the Friends of Lake Wingra and an proposed WDNR Lake Planning Grant of \$10,000.

Upper Badger Mill Creek Floodplain Study - \$50,000 0.47%

The floodplain map created by WDNR as part of the 2009 Dane County map modernization project did not include updates and corrections to this area of the City (including, but not limited to): 1) WDOT replacement of the bridge at Nesbitt and Maple Grove; 2) Channelization of the waterway upstream of this new culvert crossing as part of the WDOT bridge project; 3) WDOT installation of culverts on Verona Road (STH 18 & 151) bypass; 4) Relocation of a culvert crossing Maple Grove Road north of Nesbitt; and 5) Construction of the retention basin in the area bounded by Nesbitt Road and the Verona bypass completed by City Engineering under WDNR permit. This project shall provided for hiring a consultant specializing in floodplain mapping to update and correct the maps for this area as directed by WDNR and to relieve some residents of flood insurance requirements.

Madison Beaches – Water
Quality Management - \$95,000
0.89%

This project shall continue the City's efforts to implement clean beaches that began as a pilot project in 2010. In 2011, similar methods of enclosures and deflectors shall be employed to isolate or move algae from the beach areas. Additionally, this project may fund a test of an ultraviolet treatment process to treat the beach water within an enclosure. It is anticipated that this will be tried at Bernie's Beach on Monona Bay.

Central Park Area Pond \$436,000
4.1%

A small retention basin will be constructed between Livingston Street and Paterson Street in the general vicinity of the new "Central Park." The pond will treat approximately 12.5 acres of urban area. It is estimated that the pond will be able to remove approximately 70% of the total suspended load associated with this watershed on an annual basis. Currently, this watershed is estimated to contribute approximately 15,000 pounds of load to the lakes; with construction of this treatment system that will be reduced to 4,500. The pond will be constructed in an area with high ground water and likely contaminated soils and will therefore likely require dewatering during construction, disposal of excavated material at a landfill, and a clay liner.

General Budget Questions?