

Feasibility Study



2011 Comprehensive Drainage Study

Project I.D.: 11B010/4916-0003

Town of Buchanan
Outagamie County, Wisconsin

November 2011





November 22, 2011

Angela Gorall, Administrator/Clerk
Town of Buchanan
N178 County Road N
Appleton, WI 54915

Dear Angela:

RE: 2011 Comprehensive Drainage Study

Enclosed is one copy of the 2011 Comprehensive Drainage Study as authorized by the Town Board. The study reviewed drainage problems west of De Bruin Road in the urbanized areas of the Town. After reviewing the data file of drainage concerns for the past several years, and completing a field reviews immediately after rain events, we determined several "problem areas". These locations were surveyed and evaluated for feasible/cost effective alternatives to improve the stormwater drainage in the area and minimize concerns. Preliminary (high level) cost estimates for alternatives are provided in addition to our recommendations for proceeding.

If you have any questions or comments regarding the study, please contact me at your earliest convenience.

Sincerely,

CEDAR CORPORATION

A handwritten signature in black ink, appearing to read "Thad Majkowski", is written over the printed name.

Thad Majkowski, P.E.
Project Manager

cc: Colin Meisel, Foth

2011 Comprehensive Drainage Study

Distribution

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2011 Comprehensive Drainage Study

Project ID: 11B010/4916-0003

Prepared for
Town of Buchanan
N178 County Road N
Appleton, WI 54915

Prepared by

Cedar Corporation
&
Foth Infrastructure & Environment, LLC

November 2011

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2011 Comprehensive Drainage Study

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2011 Comprehensive Drainage Study

Executive Summary

This study investigates stormwater drainage problems west of De Bruin Road in the urbanized areas of the Town of Buchanan. Detailed Stormwater Modeling/Analysis was not included in this study, but the intent was to provide broad high level review and recommendations regarding stormwater drainage in the Town for specific problem areas identified.

As part of this study, existing drainage concerns were reviewed and documented to help determine problem locations within the Town. Three areas were determined to be problem areas and are further evaluated in this study. Those areas included Springfield Drive and surrounding area, Hank Drive and surrounding area, and Hickory Park Subdivision. A field topographic survey was completed in these areas to help evaluate the problems and to provide broad high level recommendation for improving stormwater drainage for the Town in these areas.

After analysis of the field data, it was determined that all three areas were very similar, and all had longitudinal ditch grades that were, for the most part, less than 1.00% grade. These grades are not suitable for conveying stormwater in naturally grass lined ditches. Four potential alternatives were evaluated, including storm sewer, “mini” storm sewer, regrading the existing ditches while adjusting the driveway culverts, and regrading with a ditch liner. Each alternative has its pros and cons, and vary in cost. At this time, the recommendation is for the Town to evaluate the alternatives and determine what type of facility and level of service the Town should provide its residents and then determine how it will be paid for, by the Town’s General Fund (taxes), by the property owner through an assessment process, or by grants.

List of Abbreviations, Acronyms, and Symbols

Cedar	Cedar Corporation
County	Outagamie County Highway Department
Foth	Foth Infrastructure & Environment, LLC
McMahon	McMahon Associates
Omni	Omni Associates

1 Introduction

The Town of Buchanan has experienced stormwater drainage issues for many years in various locations due to flat grades of roadway ditches, poorly constructed culverts/drain piping, property owners filling of ditches as well as natural filling, culverts heaving, and lack of rear yard drainage. This study is focused on the urbanized area of the Town west of De Bruin Road.

1.1 Purpose

Several objectives were identified to be satisfied as part of this study. These objectives are listed and described below.

- ◆ Identify “Problem Areas” west of De Bruin Road – As previously stated; there are several areas within the Town that have stormwater drainage problems. The scope of this study does not include investigating the entire Town, but rather specific areas based on Town records, general knowledge of the stormwater drainage in the Town, and resident complaints.
- ◆ Create a ranking system for stormwater drainage problems.
- ◆ Recommend a feasible solution to the problems.
- ◆ Preliminary costs estimate to provide a magnitude of cost.

1.2 Scope of Work

As part of the study requested by the Town of Buchanan, the following items have been or will be completed as part of the scope of this study.

- ◆ A review of existing drainage concerns to identify the “cause” of the concern and location of the concern. Concerns were mapped based on the type or cause of the concern to provide a visual representation of potential problems areas, and to provide a base map for future mapping if requested.
- ◆ The development of a ranking system to provide the Town guidance on the severity of drainage concerns in the Town and how to best approach each concern.
- ◆ Field topographic survey selected areas to provide information to evaluate the problem and to provide solutions.
- ◆ Evaluation of drainage problems and identification of the responsible party for resolving the problem. If the Town is found responsible, feasible solutions and preliminary cost estimate are to be created.
- ◆ Present the findings of the study at a Town Board Meeting.
- ◆ Assist the Town in holding a Public Information Meeting.
- ◆ Finalize study based on Town Board Meeting and Public Informational Meeting.
- ◆ Included information to the Town in order to incorporate the Study in the CIP.
- ◆ Review current Town Drainage Policy and provide “high level” comments on how they relate to the study recommendations.

This study will not provide detailed recommendations for any particular area in the Town but rather high level recommendations on the problems that can be potentially corrected. Survey data was only collected to the level required to provide a “high level” review and does not include information on every culvert in the Town. This study also does not evaluate the amount of stormwater generated in the Town, or the required capacity of existing or proposed facilities. After finalizing this study, additional detail studies or engineering design work will be required to determine the final detailed solution for each area reviewed in this report.

In addition, this study does not investigate potential impacts or mitigation efforts that may be required due to environmental concerns such as wetlands, endangered species, historical sites, archaeological sites, stormwater treatment, or floodways.

1.3 Regulatory Requirements

As stated previously, this study does not cover detailed reviews or provide recommendations of environmental or other regulatory requirements. However, potential wetland areas and floodways have been identified by Outagamie County Land Information and Wisconsin Department of Natural Resources websites are shown on Figure 4.

Permits and approvals may also need to be obtained from the following agencies during design of the project:

- ◆ Army Corp of Engineers
- ◆ City of Appleton
- ◆ East Central Planning
- ◆ Federal Emergency Management Agency – FEMA
- ◆ Garners Creek Stormwater Utility
- ◆ Town of Harrison
- ◆ Outagamie County Zoning Department
- ◆ Outagamie County Highway Department
- ◆ Village of Combined Locks
- ◆ Village of Kimberly
- ◆ Wisconsin Department of Natural Resources – WDNR

2 Background Information

The existing topography and drainage facilities are relatively flat (less than 1.0 %) in the Town which contributes to the poor stormwater drainage and resident complaints. Most roadways in the Town do not have curb and gutter or storm sewer which leaves the existing ditches with standing stormwater after rainfall events. Photographs from Appendix A show stormwater drainage problems from the community.

There are also a number of known backyard drainage issues in various locations in the Town. Some locations are in dedicated drainage easements and others are not. These are due to a lack of grade or obstructions caused by residents such as berms or other landscaping. Some culverts in the Town also appear to be undersized (no hydraulic analysis was completed), creating choke points for the stormwater drainage. Currently, only a 15" culvert is required when installing a new driveway, depending on the location, this may or may not have adequate capacity.

In response to legislation requiring the treatment of stormwater prior to discharge, several stormwater ponds have been constructed in the Town, including near the intersection of Stoney Brook Road and Creek View Lane, near the intersection of Main Street and Emons Road, and to the East of Speedway Lane (outside of the study limits). A proposed stormwater pond is planned south of Block Road between Hopfensperger Road and Marion Avenue.

There have been several reports, studies, and reviews that have been completed over the last several years in the Town of Buchanan. In 2010 two small studies were completed by Foth along Kebe Court and for the B&R Plat. The study along Kebe Court provided costs estimates and recommendations for improving drainage along the cul-de-sac including urbanizing the roadway (curb and gutter with storm sewer) and re-ditching or providing storm sewer from the roadway to the newly construction stormwater pond directly west of the roadway. Recommendations and costs estimates were provided in the B&R Study to improve rear yard drainage in the area. No action has been taken on either study, pending the recommendation from this comprehensive study.

As required by the MS4 Permit and the WDNR, an ongoing illicit discharge detection and elimination screening program is being completed by Omni for the Town. This study identifies areas of potential contaminated/polluted water being discharged into the community's drainage system and ultimately being discharged into local waterways.

A Stormwater Management Plan was completed by McMahon in 2008 for the Town's MS4 permit. This plan identifies several potential BMPs and treatment alternatives for the Town to obtain the required 40% TSS removal by 2013.

In addition to these more formal studies, Drainage Concern Reviews have been requested and completed for individual residents or neighbors by Town staff, McMahon, Foth, and Cedar over the last several years. Detailed Town records go back to 2004, and prior to 2004 there are 24 documented reviews. The number of reviews completed each year is listed below.

2004 – 15
2005 – 18
2006 – 11
2007 – 17
2008 – 34
2009 – 19
2010 – 32
2011 – 24 (to date)
Total: 170

3 Discussion

3.1 Drainage Evaluation System

In order to provide the Town a method to help prioritize stormwater drainage problems, a ranking system was developed with several parameters, ratings, and weights. The higher the total “score” of an individual project, the higher priority it should have. While this system should prove useful while comparing areas to each other, it should only be used as a tool and not as a final decision.

While this ranking system could be applied to the three study areas discussed below, some of the areas are large enough that the Town may wish to divide the areas up based on drainage basins, or roadways, and evaluate them as smaller project areas. For this reason, the study areas have not been evaluated at this point.

	Ranking	Weight	x	Current Project	=	Total
Health and Safety Concern - These scores are based on severe of a health and safety concern is, and how long the concern is present based on site visits and photographs.						
shallow standing water mosquitoes	1					
standing water, mosquitoes, slight odor	2					
moderate standing water (<1') for long periods after storms (>1 week)	3	5	x	0	=	0
deep standing water (>1') for long periods after storms(> 1 week)	4					
recent injury or accident	5					
Property Damage - These scores are based on damage to the property from site visits, photographs, receipts, and contractor estimates.						
no property damage	1					
little property damage (aesthetics, property value)	2					
moderate property damage - flooded unfinished basement, cleanup <\$2,000	3	4	x	0	=	0
high property damage to single property - >\$5,000	4					
moderate damage to multiple properties	5					
Roadway Condition/Reconstruction Plans - Scores should be based of off the Towns CIP Plan as well as site visits, photographs, and Traffic Volume						
no current construction plans	1					
recently reconstructed, 20+ years	2					
10-20 years projected reconstruction	3	3	x	0	=	0
5-10 years projected reconstruction	4					
<5 years projected reconstruction	5					

	Ranking	Weight	x	Current Project	=	Total
Location - These scores are to based on the location of a concern, large concerns encompassing large areas may need to averaged.						
rear yard drainage issues - no drainage easements possessed by Town	1					
rear yard drainage issues - drainage easement is present	2					
roadside ditch next to local road (subdivision)	3	3	x	0	=	0
roadside ditch next to collector (i.e., Springfield Drive, Marion Ave, Pinecrest)	4					
roadside ditch next to major road (ie, Eisenhower, StoneyBrook, Emons), next to park or school	5					
Size - Scores to be based off of the number of properties affected. Large commercial properties or apartment complexes may need to be evaluated as multiple properties.						
limited to one property	1					
2-3 properties	2	4	x	0	=	
3-5 properties	3					
5-9 properties	4					0
10+	5					
Cost Allocation of Solution - Score based on how much cost will be to Town, this may also be evaluated by a per resident affected basis. Estimated costs should be evaluated based on engineering estimates or based off of recent similar projects.						
Town Cost	1					
Combination of Town and Property Owner Costs	2	4	x	0	=	0
Property Owner Costs	3					
Grant Funding Available	4					

	Ranking	Weight	x	Current Project	=	Total
Longevity of Solution - Score base on how long the solution is expected to last						
Temporary Solution (0-5 years)	1					
Moderate Term Solution (5-10 years)	2	3	x	0	=	
Long Term Solution (10-20 years)	3					0
Permanent Solution (20+ years)	4					

Maintenance required by Town - Score based on how much time or time/money will be required to maintain improvement						
High	1					
Moderate	2	3	x	0	=	0
Low	3					
None	4					

Complaints - This score should be based off of the number of formal complaints, either written, or via e-mail.						
no complaints	1					
1 complaint	2					
2-3 complaint	3	2	x	0	=	0
3-5 complaint	4					
5+ complaints	5					
Total Ranking:						0

* The Town Board needs to evaluate the ranking and weights associated with each category for this Study. Additional categories or subcategories can also be added.

3.2 Study Areas

Three areas were selected for field analysis based on the Town data and field reviews after rainfall events. Locations included areas around Springfield Drive, Hank Drive, and Hickory Park Drive. These locations have several similarities including:

- ◆ Multiple sub-basins
- ◆ Generally flat slopes
- ◆ History of known drainage problems
- ◆ Resident complaints
- ◆ Shallow driveway culverts

The following discussion describes each location's existing drainage patterns, the drainage problems, and provides proposed alternatives to improve the drainage along with a preliminary cost estimate.

3.2.1 Springfield Drive and Surrounding Area (Subdivisions - Glenbrooke Estates, Lavender Downs, Pincecrest Estates, Country Breeze Estates, Kirk and Gosz)

3.2.1.1 Existing Conditions

Springfield Drive has a history of drainage problems due to the very flat grades that can be seen on Figure 1. Of the documented drainage concerns, 35 of them have occurred in this area, many of them dealing with roadside ditches that can be seen on Figure 3. During the spring snow melts, the County has had to remove floating ice from the roadway in addition to cleaning/thawing frozen culverts because of the poor stormwater drainage. There are known rear yard stormwater drainage issues along Lavender Lane and Pinecrest Blvd due to poor grading.

Based on the 2008 Stormwater Management Plan by McMahon, the ditches in the area are classified as grass swales with a 0.5% longitudinal slope which are proposed to remove 10% - 20% of TSS generated in this area (see Appendix B).

The primary basin currently drains to the Main Street pond. Depending on how this pond was designed, the removal of the grass lined ditches may or not impact the ponds performance and current TSS removal rate. If the pond was designed with the swales providing pretreatment, additional BMPs such as a grass lined swale, or catch basins, may be required to maintain current treatment levels.

The remaining drainage basins discharge to either Garners Creek Tributary 3 or to Eisenhower Drive which leads to Garners Creek. Currently, the treatment from the stormwater runoff from these basins is from the grass lined swales.

3.2.1.2 Alternatives

After reviewing the field data and determining that a majority of the longitudinal ditch slopes were less than 1.00%, a more detailed field reviews (survey of every driveway culvert) was determined not to be necessary. Slopes less than 1.00% are generally not considered adequate for natural grass lined ditches, required piping or other methods to provide adequate stormwater drainage.

Providing storm sewer would require the urbanization of the road including the addition of curb and gutter and wider lanes, requiring complete reconstruction of the roadway. Inlets would need to be designed and spaced 300'-400' apart, and storm sewer would be sized to carry the stormwater to an existing outfall for the designated rainfall event. The design of storm sewer would eliminate the existing treatment that the grass lined ditches currently provide.

The second alternative for improving the stormwater drainage is the construction of "mini" storm sewer below the roadside ditches. Small storm sewer pipes would be installed under the existing ditches bedded in an open graded stone. During small rain events, this will allow water to percolate through the stone to the perforated pipe and travel through the pipe to an outfall. During high rainfall events, these flows would not be contained in the "mini" storm sewer, but would instead travel above the pipe in the existing ditches. After the high flows have subsided,

low flows would continue to drain through the “mini” storm sewer. This alternative allows the roadway to remain the same size and grade, but would require the regrading of all of the existing ditches, replacement of driveway culverts, and at a minimum, the pulverization and paving of the roadway depending on the Paser Ratings of the road. “Mini” storm sewer may reduce the existing treatment that the grass lined ditches provide.

The third alternative evaluated for this area was lining the ditches. Lining the ditches will still require the existing ditches to be regraded and culverts replaced in order to provide a more constant slope throughout the community. This will allow for existing culverts to be hydraulic sized for the stormwater flow that they see, improving drainage if existing culverts are too small. Ditch lining effectively allows the stormwater to drain at a flatter slope because materials such as finished concrete, plastic, or smooth stone generate less friction with the water. As with the other alternatives, ditch lining would also eliminate any treatment from the existing grass lined ditches. Ditch lining is an alternative allowed by the current Town Policy (see Appendix C).

While not a long term solution, a fourth alternative that has the potential to improve drainage is to regrade the existing roadside ditches and replace the existing driveway culverts. While adequate grade is not present in most locations in the Town, some grade improvements can be made by removing and replacing driveway culverts at a more advantageous grade. In some locations, this may result in roadside ditches being significantly deeper/wider than the current conditions. This alternative will not eliminate standing water in many locations in the Town, but has the potential to reduce the amount of standing water and the time after a storm that stormwater is present. This alternative also allows for existing culverts to be hydraulically sized.

The poor stormwater drainage in rear yard locations will also need to be evaluated in this area. Extending storm sewer or “mini” storm sewer along a lot line to pick up trapped stormwater or simply regrading may be able to improve the rear yard stormwater drainage.

Three of the four alternatives result in treatment losses may or may not have a significant impact on the Town’s overall removal (regrading of the ditches will have no impact on current stormwater treatment). The Stormwater Management Plan does identify several potential BMPs in the area including:

- Pinecrest Estates Pond (P-BMP-G7c1 - \$77,300)
- Springfield East Pond-Alt. 1 (P-BMP-G8c5 - \$522,800)
- Springfield East Pond-Alt. 2 (P-BMP-G8c5 – (\$711,300)
- Springfield Regional Pond-Alt. 2 (P-BMP-G8d3 – (\$1,377,000)
- Springfield Regional Pond-Alt 3 (PBMP-G8d3 - \$933,900)

These ponds would provide greater treatment than was lost by the grass lined swales, and also provides treatment for areas much larger than those discussed in this study. Moreover, the regional ponds would also provide treatment for drainage areas from outside the Town. Other treatment options in combination with these alternatives also should be evaluated, such as grass lined swales (200’ prior to discharge), catch basins, rain gardens, etc.

3.2.2 Hank Drive and Surrounding Area (Subdivisions - Van Handel Plat, B&R Plat, Homestead Subdivision)

3.2.2.1 Existing Conditions

Hank Drive and the surrounding area also have a history of drainage problems due to the very flat grades that can be seen on Figure 1. Of the documented drainage concerns, 26 of them have occurred in this area. While many of them pertain to roadside ditches, many of them also are related to rear yard and side yard issues shown on Figure 3. The rear yard issues in the B&R Platt area were reviewed in the 2010 and will not be discussed in detail, however, the Town will need to consider both the B&R Study and the Kebe Ct. Study while evaluating stormwater drainage problems in the community. Additional rear yard stormwater drainage problems are present between Colonial Ct. and Ridgefield Ct. to the west and Wedgewood Ct and Skyview Ct to the east. Stormwater from the easterly streets drains to the west to Hank Drive. However, the lack of grade and defined drainage routes causes ponding of stormwater.

Similar to the Springfield Drive area, the 2008 Stormwater Management Plan by McMahon Associates classifies the roadside ditches as grass swales with a 0.5% longitudinal slope which are proposed to remove 10% - 20% of TSS generated in this area.

None of the existing drainage basins currently drain to a pond or other structural BMP and discharge to Garners Creek Tributary 3. All stormwater treatment is from the existing grass lined swales.

3.2.2.2 Alternatives

Similar to Springfield Drive, the slopes in the majority of the basins are less than 1.00%, which is not adequate for natural grass lined ditches. The exception is the northwest area near Hillside Drive. This area has adequate slope for the ditches, where several ditches have slopes of well over 1.00%. Consequently this area has had minimal complaints.

The same four alternatives for removing stormwater existing in the Hank Drive area as with Springfield Drive which include storm sewer, “mini” storm sewer, regrading, and ditch lining. However, areas near Colonial Ct. and Ridgefield Ct. will need to be evaluated for rear yard issues. The poor stormwater drainage in these areas could be resolved by extending storm sewer or “mini” storm sewer along a lot line to pick up trapped stormwater.

Three of the four alternatives result in treatment losses may or may not have a significant impact on the Town’s overall removal (regarding of the ditches will have no impact on current stormwater treatment). The Stormwater Management Plan does identify several potential BMPs in the area including:

- Brookhaven Pond (P-BMP-G611 – \$927,100)
- Town Hall Park Pond (P-BMP-G7x1 - \$133,800)
- Hillside Pond (P-BMP-G7y3 - \$146,700)

These ponds would provide greater treatment than was lost by the grass lined swales, and also provides treatment for areas much larger than those discussed in this study. Moreover, the regional ponds would also provide treatment for drainage areas from outside the Town. Other treatment options in combination with these alternatives also should be evaluated, such as grass lined swales (200' prior to discharge), catch basins, rain gardens, etc.

3.2.3 Hickory Park Drive and Surrounding Area (Hickory Park Estates Subdivision)

3.2.3.1 Existing Conditions

Hickory Park Estates also has a history of drainage problems due to the very flat grades that can be seen on Figure 1. Of the documented drainage concerns, 27 of them have occurred in this area, many of them dealing with roadside ditches similar to the Springfield Drive area. Some known rear yard drainage issues are known due primarily to poor grading.

Just like the previous two areas, the 2008 Stormwater Management Plan by McMahon Associates classifies the roadside ditches in the area as grass swales with a 0.5% longitudinal slope which are proposed to remove 10% - 20% of TSS generated in this area.

There are several sub-basins in this location, with all of the stormwater drainage discharges to Garners Creek Tributary 2, which flows between Barberry Lane and Briarwood Drive before heading to the northwest. The center basin, G6g1, drains to a set of twin culverts that travels along a drainage easement to the north.

A potential pond has been identified in the area east of Hopsfensberger Road and south of Block Road. This pond could provide stormwater treatment for approximately half of the Hickory Park Subdivision.

3.2.3.2 Alternatives

Longitudinal ditch slopes in the majority of the basin are less than 1.00%, which are not adequate for natural grass lined ditches.

The same four alternatives for removing stormwater existing in the Hickory Park Subdivision as the previous two areas include storm sewer, "mini" storm sewer, regrading, and ditch lining. Poor rear yard drainage may be improved by extending storm sewer or "mini" storm sewer along a lot line to pick up trapped stormwater or by simply regrading.

Three of the four alternatives result in treatment losses may or may not have a significant impact on the Town's overall removal (regrading of the ditches will have no impact on current stormwater treatment). The Stormwater Management Plan does identify several potential BMPs in the area including:

- Brookhaven Pond (P-BMP-G611 – \$927,100)
- Gillian Court Pond (P-BMP-G6f1 - \$376,000)
- Valleywood Pond-Alt. 2 (P-BMP-G6f1 - \$672,400)
- Meadow Breeze Pond (P-BMP-G6g1 - \$83,400)

These ponds would provide greater treatment than was lost by the grass lined swales, and also provides treatment for areas much larger than those discussed in this study. Moreover, the regional ponds would also provide treatment for drainage areas from outside the Town. Other treatment options in combination with these alternatives also should be evaluated, such as grass lined swales (200' prior to discharge), catch basins, rain gardens, etc.

3.2.4 Preliminary Cost Estimates

The preliminary cost estimates for the alternatives described are shown in Table 1. These costs do not include the costs of additional stormwater ponds or other Best Management Practices (BMPs) to remove suspended solids currently being removed by the grass ditches located along the roadway.

Table 1
Project Cost Summary

Alternative	\$/Centerline Foot
A Storm Sewer	\$215
B Mini Storm Sewer	\$184
C1 Ditch Lining-Reconstruction	\$168
C2 Ditch Lining-No Road Work, Driveway and Culvert Replacement	\$102
D1 Reditching	\$157
D2 Reditching-No Road Work, Driveway and Culvert Replacement	\$85

Preliminary costs estimates A, B, C1, and D1 are assuming total roadway reconstruction and do not include costs for sidewalk or multi-use trails. C2 and D2 do not include roadway work. All estimates include a percentage for technical, administrative, and contingency costs.

3.3 Evaluation of Alternatives

All three study areas are very similar in the fact that the existing roadside ditches are relatively flat with most longitudinal ditches grades being less than 1%, and the same four alternatives are feasible in each study area. When considering the four potential alternatives, each has their own positives and negatives outlined below:

Table 2
Proposed Drainage Options - Positives and Negatives

Alternative	Positives	Negatives
Storm Sewer	<p>Most likely to eliminate roadside stormwater drainage problems.</p> <p>Reconstruction of roadway may provide additional parking depending on width, and the potential for the addition of sidewalk</p> <p>Curb and gutter generally increases property values in the community</p> <p>Easiest to maintain for property owner.</p> <p>Long-term solution</p>	<p>Highest cost of construction, determination of “who pays” has to be discussed</p> <p>Eliminates the “rural” feel to many of the residential areas.</p> <p>May require additional BMP’s for TSS removal.</p>
“Mini” Storm Sewer	<p>Maintains the “rural” feel to many of the residential areas.</p> <p>Stormwater will be contained inside of pipe during low stormwater flows.</p> <p>Easy to maintain for property owner.</p>	<p>Potential for culverts/storm sewer to heave after regrading of ditches based on the shallow bury depth</p> <p>Stormwater will still be present in the ditches during high flows</p> <p>Maintenance of the stone bedding</p> <p>May require additional BMP’s for TSS removal.</p>
Ditch Lining	<p>Maintains the “rural” feel to many of the residential areas.</p> <p>Easy to maintain for property owner.</p>	<p>Still may have some standing stormwater.</p> <p>Potential for culverts /ditch lining material to heave after regrading of ditches.</p> <p>Stormwater will still be present in the ditches during high flows</p> <p>May require additional BMP’s for TSS removal.</p>
Reditching	<p>Least Expensive</p> <p>Maintains the “rural” feel to many of the residential areas</p>	<p>Short term solution</p> <p>Property owner or Town maintenance will be required</p> <p>Potential of culverts to heave after regrading of ditches</p>

4 Financing

There are several alternatives to finance the selected improvements. The first option is to increase the Town's current tax rate. This allows the cost to be spread out among all of the Town's residents, regardless of location relative to a proposed improvement. While this may only result in a relatively small increase, residents outside of the proposed improvement area may object to the increase.

The second option is a reallocation of the Town's funds. Simply put, money for any proposed improvement will need to come out of another department's budget. While this limits direct cost to residents, it may be difficult provide enough funding by simply reallocating existing funds.

Assessments allow the Town to assess the costs to the residents in the area where the improvements are proposed. Assessments can be determined by many different methods including linear foot of frontage property to the improvement, based on the area of parcel, a per property basis, etc, or by some combination of methods.

Some money may be available through grants, such as the DNR Stormwater Management Funds, which typically pay up to 50% of a project cost (this may only apply towards a pond or other treatment improvement). The application period is in April of each year.

While any one financing option may not be feasible, or produced the necessary funding need for a proposed improvement, typically some combination of all the above options can be combined to provide the necessary funding for the project.

5 Conclusions

After analyzing the location and severity of the stormwater drainage problems in the urbanized area of the Town, three locations were evaluated. Those three areas were found to be very similar, all areas had several smaller sub-basins, at least a portion of Town's stormwater treatment was being created by the roadside ditches, and all three areas had roadside ditches that predominantly less than 1% longitudinal slope.

Potential alternatives to alleviate the stormwater drainage problems were created along with preliminary cost estimates for each alternative. While all four alternatives appear feasible to improve stormwater drainage in some way, each has there positive and negative that should be evaluated.

While each alternative will need to be evaluated, individual problems areas can now be analyzed using the Stormwater Drainage Ranking System. While this system should not be used to determine a solution, it will be a tool for the Town to prioritize actions after potential alternatives for these areas, and other areas in the Town.

6 Recommendations

Similar to any study completed for a municipality, there are many decisions and factors that need to be evaluated when choosing an alternative. Some of these items the Town Board needs to address include:

- ◆ Whether to provide pedestrian bicycle facilities on the roadway.
- ◆ Whether to provide on street parking on the roadway.
- ◆ Review and revise the Town's Stormwater Management Practices.
- ◆ What effect the options have on the Town's Stormwater Management Reduction in TSS.
- ◆ Whether to keep the Rural "feel" of having ditches.
- ◆ What is the most equitable way to finance the improvements, how are the costs allocated, to the Town and/or residents, or a combination?

At the time of this Study, it was recommended that the Town Board discuss which type of facilities/level of service it wishes to provide its residents and at what cost. The Town Board approved to have an Open House for the residents to review and comment on the proposed plan. The Drainage Study Open House was completed on September 13, 2011 and was heavily attended by the residents of the project area. A copy of the Open House information sheet is included in Appendix D. A survey was prepared and available to the residents at the Open House and on-line through the Town website.

A total of 287 surveys were completed and submitted to the Town Administrator. The Administrator took this information and summarized it in the "Town of Buchanan Drainage Study Survey and Analysis Report" dated October 2011. A copy of the report is included in Appendix D.

At the Open House several residents mentioned the size of the culverts, cross road and driveways, are too small for the drainage basin. These will be reviewed when an area is studied for improvements.

Based on the survey, the residents' responses varied with no real strong support for a specific selection of option. In other words, there were as many in favor of an option as opposed to it. With a response like that, the Town Board will need to review each question/option and determine a direction the Town proposes to move toward for future drainage issues. The Town Board also needs to determine if it is feasible to have a "One Option Fits All" or "A Combination of Options Based on the Need and Financial Allocation Per Area" along with the financial considerations for each option, how are the costs allocated? Based on that determination, it also has to be discussed whether an area could petition the Town Board to provide a different level of service than the "Selected Option" if they are willing to financially support that proposed option and it makes sense environmentally.

Once these decisions are made, the Town should complete the next phase of the Study by following these steps:

- ◆ Evaluate the three Study Areas and any other areas brought forward based on the Ranking System proposed in the Study.
- ◆ Review the rankings and determine if the areas are too large and need to be broken down further to be evaluated as smaller projects.
- ◆ Prioritize the areas based on rankings.
- ◆ Town Board to review the areas, select the option to be considered and discuss the cost allocation.
- ◆ The Administrator and Town Engineer will prepare a preliminary cost estimate and cost allocation based on the Town Board's decision.
- ◆ Determine if a meeting/survey with the residents for each area is required to explain the proposed option and cost allocation.
- ◆ The Town Board is to make a motion to proceed with adding these areas to the 5 Year Capital Improvement Plan.
- ◆ On a yearly basis, the Town Board should review these projects and new drainage concerns residents bring forward. Make change sot the CIP or policy if appropriate at that time.

Once the work is completed above, the Town Administrator should prepare a policy for the Town Board to review and adopt which provides guidance for future drainage concerns.

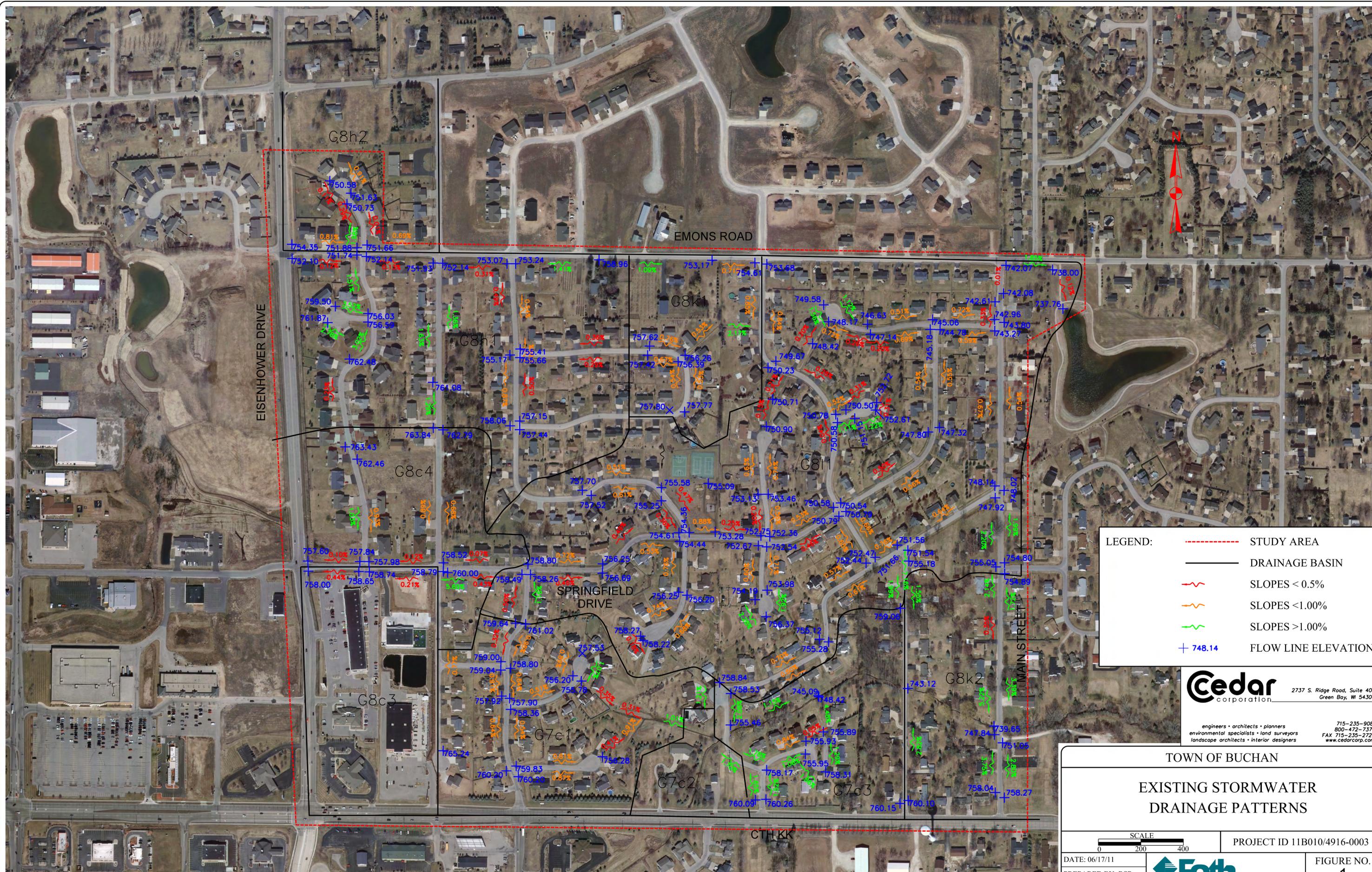
7 References

Omni Associates, *Ongoing Screening Program Illicit Discharge Detection and Elimination Program, Town of Buchanan, November 9, 2009*

Omni Associates, *Ongoing Screening Summary Report 2010 Inspection Year Illicit Discharge Detection and Elimination Program, Town of Buchanan, November 29, 2010*

McMahon Associates, *Stormwater Management Plan, Town of Buchanan, June 2008*

Figures



LEGEND:

- - - - - STUDY AREA
- DRAINAGE BASIN
- ~ SLOPES < 0.5%
- ~ SLOPES < 1.00%
- ~ SLOPES > 1.00%
- + 748.14 FLOW LINE ELEVATION

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TOWN OF BUCHAN

**EXISTING STORMWATER
 DRAINAGE PATTERNS**

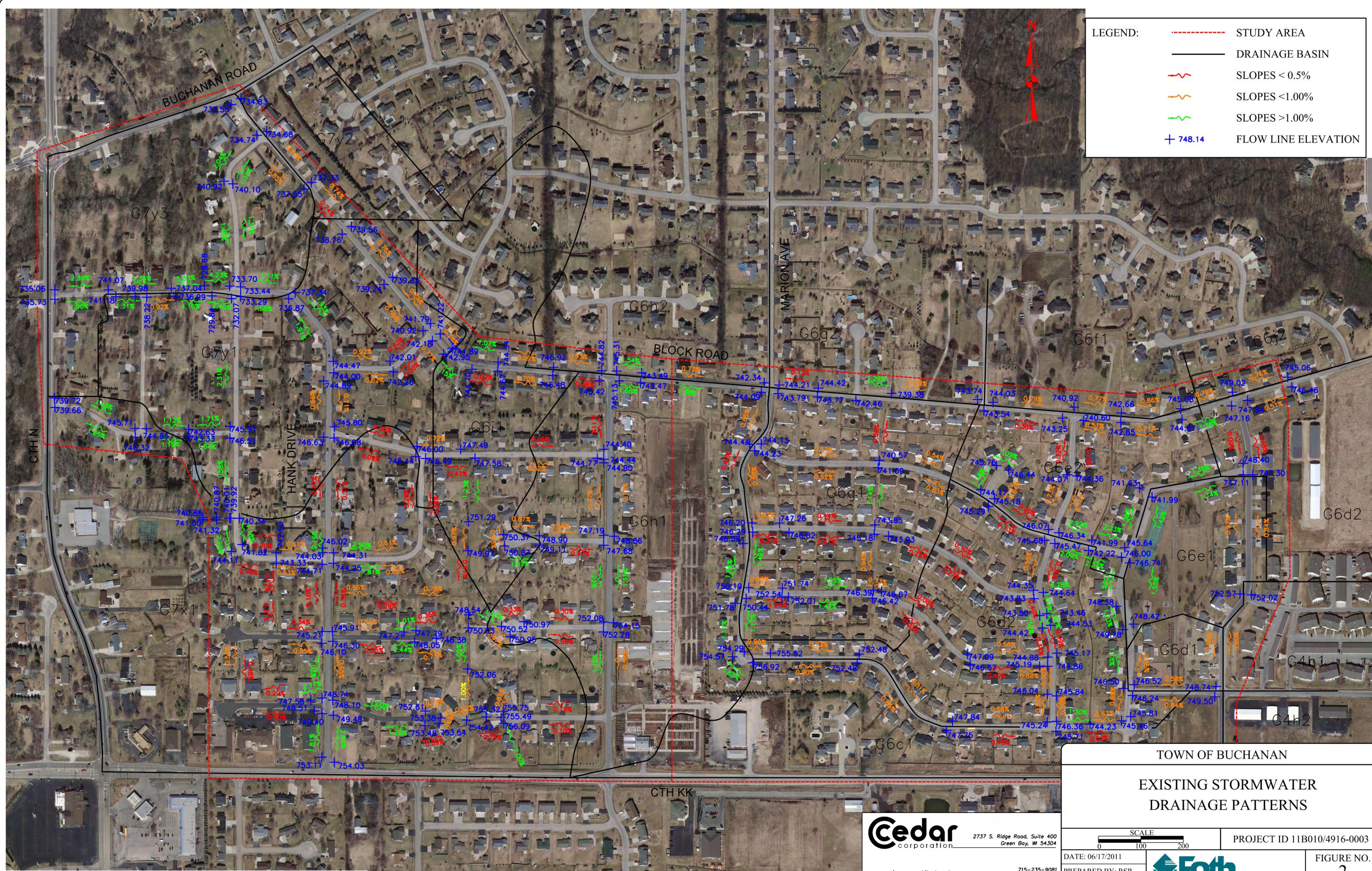
PROJECT ID 11B010/4916-0003

SCALE
 0 200 400

DATE: 06/17/11
 PREPARED BY: RSP
 CHECKED BY: CLM1

Foth
 Foth Infrastructure & Environment, LLC

FIGURE NO.
 1



LEGEND:

- - - - - STUDY AREA
- DRAINAGE BASIN
- ~ SLOPES < 0.5%
- ~ SLOPES < 1.00%
- ~ SLOPES > 1.00%
- + 748.14 FLOW LINE ELEVATION

TOWN OF BUCHANAN

EXISTING STORMWATER DRAINAGE PATTERNS

PROJECT ID 11B010/4916-0003

SCALE
0 100 200

DATE: 06/17/2011

PREPARED BY: RSP

CHECKED BY: CLM

FIGURE NO.
2

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TOWN OF BUCHANAN DRAINAGE CONCERNS FIGURE 3

- Front Yard Issues – Roadside ditches.
- Rear and Side yard Issues
- Cross Road Culverts – Town Issue
- Combination of Front/Rear/Side Yard

SCALE:
0 250 500 1000 2000

Disclaimer: This Map will not be used to determine the Study results without a detailed review of each complaint.

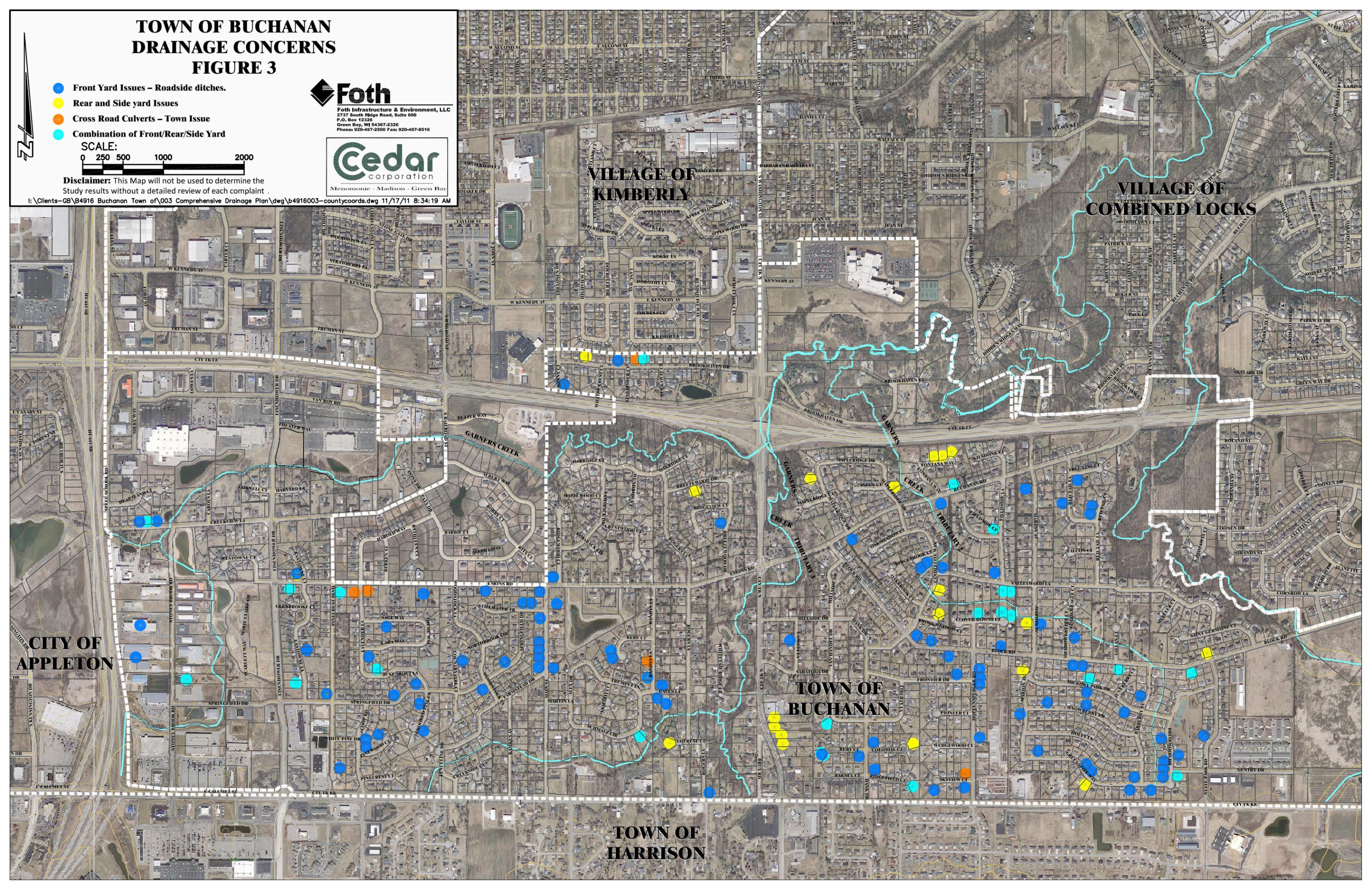


Foth Infrastructure & Environment, LLC
2737 South Ridge Road, Suite 600
P.O. Box 12326
Green Bay, WI 54307-2326
Phone: 920-497-2500 Fax: 920-497-8516



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VILLAGE OF
KIMBERLY

VILLAGE OF
COMBINED LOCKS

TOWN OF
BUCHANAN

TOWN OF
HARRISON

CITY OF
APPLETON

TOWN OF BUCHANAN ENVIRONMENTAL CONDITIONS FIGURE 4

- MAPPED WETLANDS
- POTENTIAL WETLANDS
- FLOODPLAIN - 100 YEAR

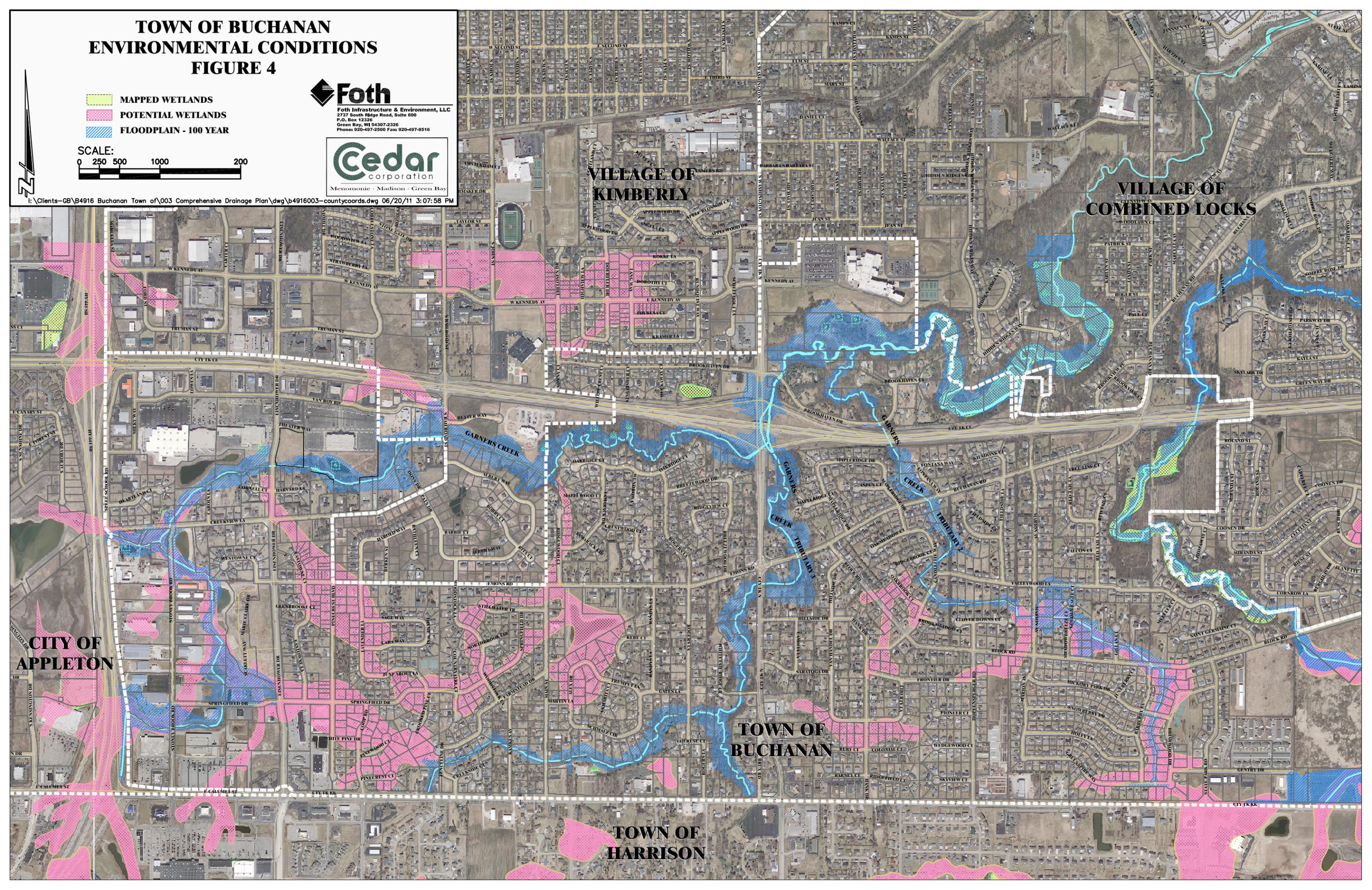


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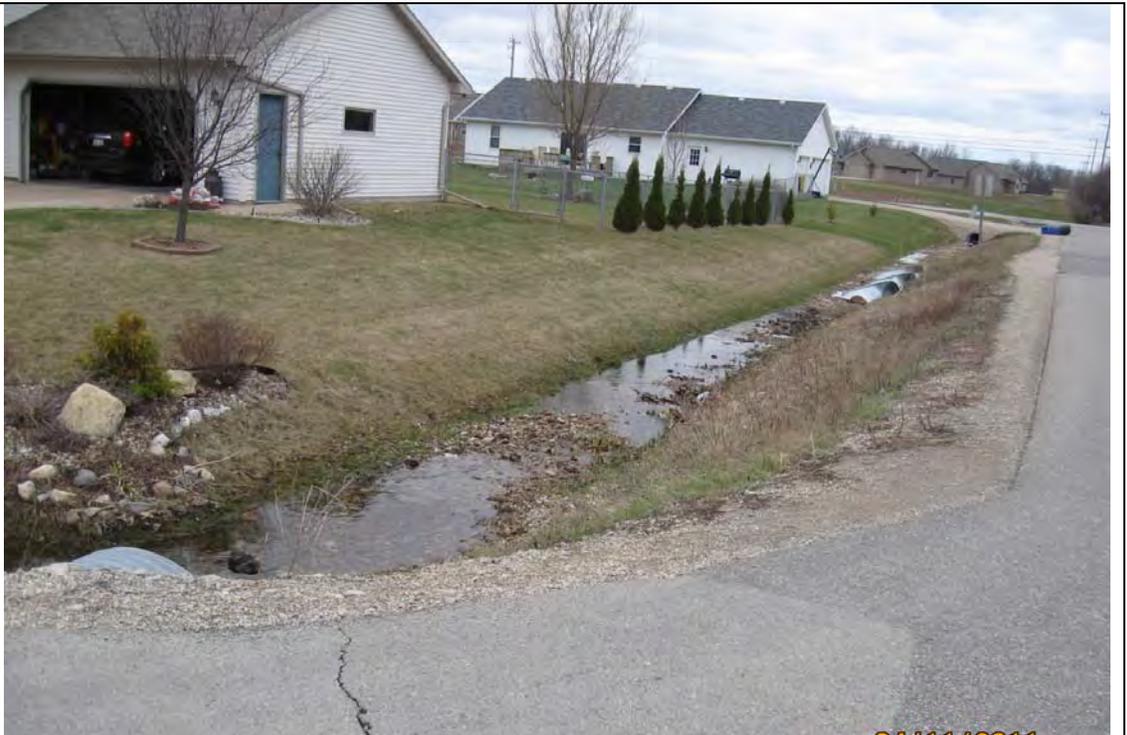
Appendix A
Photographs

Client's Name: Town of Buchanan	Site Location: 2011 Comprehensive Drainage Study – Problem Areas	Project No. 11B010/4916-0003
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Photo No. 1	Date: 8-8-10
Direction Photo Taken: East	
Photo Taken By: CLM	
Description: Stillwater Trail – Algae growing in ditch	



Photo No. 2	Date: 4-11-11
Direction Photo Taken: -	
Photo Taken By: TMM	
Description: Main Street – Standing stormwater	



Client's Name: Town of Buchanan	Site Location: 2011 Comprehensive Drainage Study – Problem Areas	Project No. 11B010/4916-0003
---	---	--

Photo No. 3	Date: 4-11-11
Direction Photo Taken: -	
Photo Taken By: TMM	
Description: Springfield Drive – trash in standing stormwater	



Photo No. 4	Date: 4-11-11
Direction Photo Taken: -	
Photo Taken By: TMM	
Description: Springfield Drive – trash in standing stormwater	



Client's Name: Town of Buchanan	Site Location: 2011 Comprehensive Drainage Study – Problem Areas	Project No. 11B010/4916-0003
---	--	--

Photo No. 5	Date: 8-10-10
Direction Photo Taken: South	
Photo Taken By: Dave Van Vonderen	
Description: Van Handel Drive – standing stormwater after major rainfall event	



Photo No. 6	Date: 6-12-10
Direction Photo Taken: -	
Photo Taken By: CLM	
Description: Colonial Ct. – Rear yard standing stormwater– water has been present for several days	



Client's Name: Town of Buchanan	Site Location: 2011 Comprehensive Drainage Study – Problem Areas	Project No. 11B010/4916-0003
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Photo No. 7	Date: 7-16-10
Direction Photo Taken: North	
Photo Taken By: CLM	
Description: Hickory Park Drive – Algae is growing in the ditch stone.	

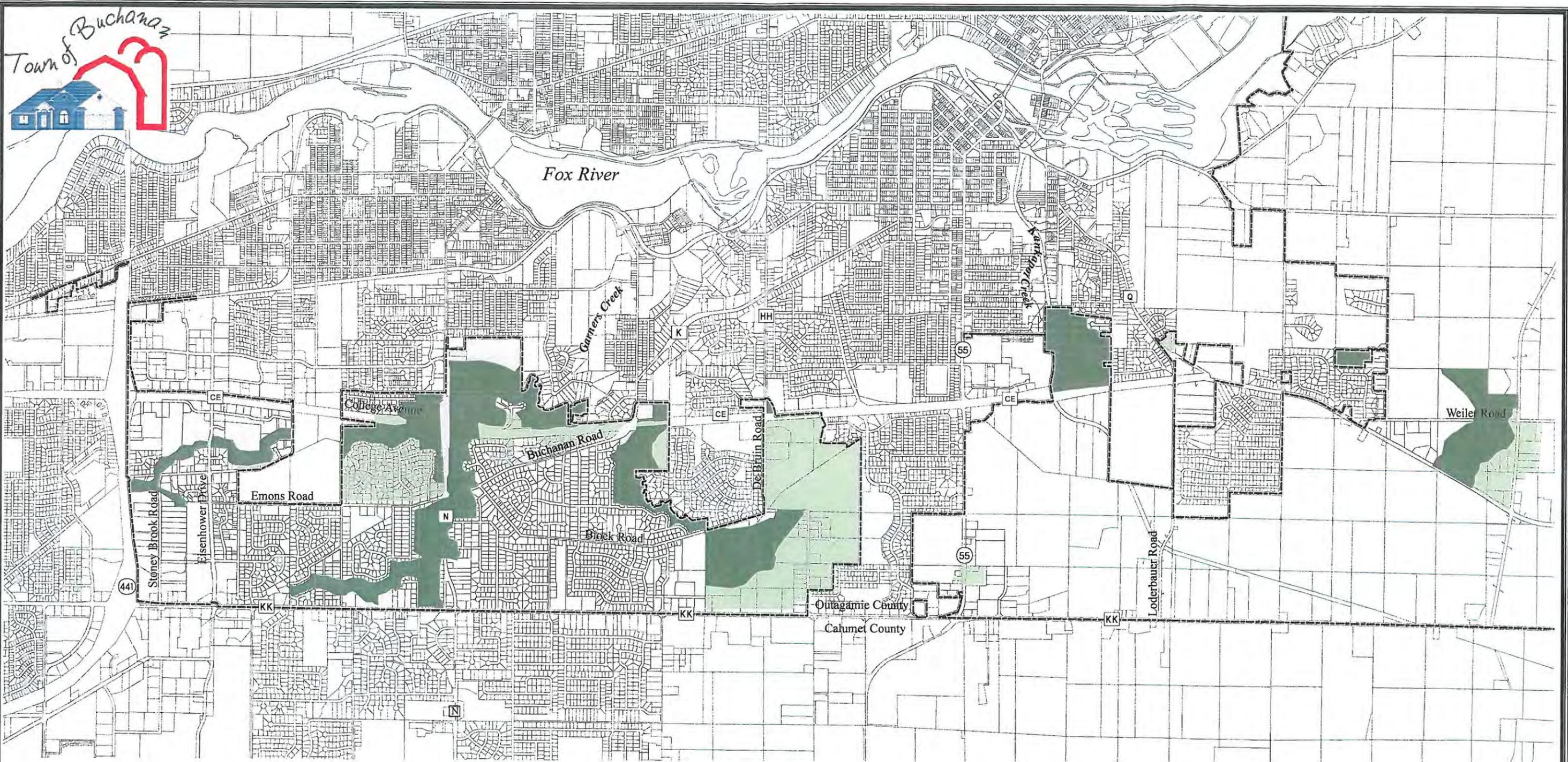


Photo No. 8	Date: 4-11-11
Direction Photo Taken: West	
Photo Taken By: TMM	
Description: Greenspire Way – standing stormwater	



Appendix B

Grass Swales - 2008 Stormwater Management Plan



Sources: Calumet and Outagamie Counties, 2005.

Disclaimer: The property lines, right-of-way lines, and other property information on this drawing were developed or obtained as part of the County Geographic Information System or through the County property tax mapping function. McMahon Associates does not guarantee this information to be correct, current, or complete. The property and right-of-way information are only intended for use as a general reference and are not intended or suitable for site-specific uses. Any use to the contrary of the above stated uses is the responsibility of the user and such use is at the user's own risk.

Surface Drainage

-  Grass Swale with a 0.5% Longitudinal Slope
-  Grass Swale with a 2.0% Longitudinal Slope
-  Grass Swale with a 4.0% Longitudinal Slope
-  Curb and Gutter Streets
-  Ditch Liner
-  Filter Strip

Other Mapped Features

-  Municipal Boundary
-  Parcel Lines
-  Streams
-  Surface Water

NORTH

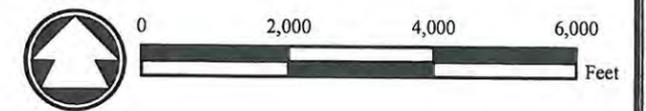


FIGURE 10
SURFACE DRAINAGE
 STORMWATER MANAGEMENT PLAN
 TOWN OF BUCHANAN
 OUTAGAMIE COUNTY, WISCONSIN

III. Alternative #2 - 40% TSS Reduction, March 10, 2008
 HE Sweeping-NPC-Twice per yr.

		Town of Buchanan UPB*																												
Drainage System	BMP ID	Total Suspended Solids (TSS)							Total Phosphorus (TP)							Wet Detention Pond Cost				Street Sweeping/Grass Swale Cost				Cost to Benefit						
		Area (acres)	Before Drainage System (lbs)	After Drainage System (lbs)	PBMP TSS Removal %	After Outfall Controls (lbs)	Total Load Reduction (lbs)	Total Load Reduction (%)	Net Gain (lbs)	Before Drainage System (lbs)	After Drainage System (lbs)	PBMP TP Removal %	After Outfall Controls (lbs)	Total Load Reduction (lbs)	Total Load Reduction (%)	Water Surface Area (acres)	Capital Costs For 2007	Average Annual O&M Costs For 2007	Average Annual O&M Costs Over 20 Years	Capital & Average Annual O&M Costs Over 20 Years	Curb Miles Within MS4 Urban Planning Area	Curb Miles Swept Twice a Year (April 1 To Nov. 25)	Curb Miles Swept Annually (April 1 To Nov. 25)	Grass Swales within Drainage Area (Miles)	Capital & Average Annual O&M Costs For 2007	Capital & Average Annual O&M Costs Over 20 Years	Average Annual TSS Reduction Allocated To Town (lbs)	Average Annual TSS Reduction Over 20 Years For Town (lbs)	Average Annual Total Cost For Town (\$/lbs)	
Swale0		316.37	68,183	57,988	0.0%	57,988	10,195	15.0%	0	232.99	208.69	0.0%	208.69	24.29	10.4%						14.56	0.00	0.00	14.56	\$13,833	\$188,001	10,195	203,906	\$0.92	
Swale2		131.06	21,837	18,841	0.0%	18,841	2,996	13.7%	0	91.80	83.60	0.0%	83.60	8.20	8.9%						6.05	0.00	0.00	6.05	\$5,745	\$78,083	2,996	59,917	\$1.30	
Swale4		344.62	52,732	43,504	0.0%	43,504	9,228	17.5%	0	213.03	188.88	0.0%	188.88	24.16	11.3%						11.95	0.00	0.00	11.95	\$11,355	\$154,322	9,228	184,559	\$0.84	
Sweeping1		17.82	4,137	4,005	0.0%	4,005	132	3.2%	0	13.36	13.12	0.0%	13.12	0.24	1.8%						0.78	0.78	1.55	0.00	\$70	\$958	132	2,635	\$0.36	
Sweeping2		12.87	2,797	2,701	0.0%	2,701	96	3.4%	0	9.95	9.75	0.0%	9.75	0.20	2.0%						0.75	0.75	1.50	0.00	\$68	\$922	96	1,912	\$0.48	
Sweeping4		10.82	1,974	1,912	0.0%	1,912	61	3.1%	0	7.73	7.60	0.0%	7.60	0.13	1.7%						0.51	0.51	1.02	0.00	\$46	\$629	61	1,226	\$0.51	
Sweeping5		0.44	97	94	0.0%	94	3	3.3%	0	0.37	0.36	0.0%	0.36	0.01	2.0%						0.03	0.03	0.06	0.00	\$3	\$37	3	63	\$0.59	
P-BMP-G4h2		16.88	5,595	4,792	0.0%	4,792	803	14.4%	0	15.62	13.89	0.0%	13.89	1.73	11.0%						1.25	0.00	0.00	1.25	\$1,188	\$16,151	803	16,058	\$1.01	
P-BMP-G4i2		3.25	1,080	909	0.0%	909	171	15.8%	0	3.02	2.64	0.0%	2.64	0.38	12.4%						0.23	0.00	0.00	0.23	\$222	\$3,014	171	3,417	\$0.88	
P-BMP-G5b1	Kimberly High School Pond	28.29	9,538	9,062	84.2%	1508	8030	84.2%	7554	28.19	27.27	64.7%	9.95	18.24	64.7%	0.45	\$75,200	\$3,256	\$44,254	\$119,454										
P-BMP-G5c3		25.92	5,593	4,601	0.0%	4,601	992	17.7%	0	21.14	18.53	0.0%	18.53	2.61	12.4%						1.68	0.02	0.05	1.66	\$1,577	\$21,434	992	19,846	\$1.08	
P-BMP-G6f1	Brookhaven Pond	78.87	17,790	14,713	77.4%	4021	13770	77.4%	10693	63.40	55.60	55.7%	28.09	35.32	55.7%	0.92	\$251,237	\$4,646	\$63,138	\$314,375										
P-BMP-G6g1	Brookhaven Pond	26.42	5,774	4,659	77.4%	1305	4469	77.4%	3354	21.95	19.00	55.7%	9.73	12.23	55.7%	0.30	\$81,541	\$2,801	\$38,065	\$119,606										
P-BMP-G6i1	Brookhaven Pond	200.67	42,084	34,428	77.4%	9511	32573	77.4%	24917	159.16	139.06	55.7%	70.51	88.65	55.7%	2.17	\$594,320	\$8,590	\$116,735	\$711,055										
P-BMP-G7c1		19.92	4,155	3,367	0.0%	3,367	788	19.0%	0	16.06	13.96	0.0%	13.96	2.10	13.1%						1.28	0.01	0.02	1.27	\$1,204	\$16,367	788	15,765	\$1.04	
P-BMP-G7x1	Town Hall Park Pond	66.54	14,519	11,917	80.1%	2895	11624	80.1%	9022	53.47	46.72	57.3%	22.84	30.63	57.3%	0.59	\$133,800	\$3,674	\$49,928	\$183,728										
P-BMP-G7x3		2.36	497	429	0.0%	429	68	13.8%	0	1.91	1.73	0.0%	1.73	0.18	9.5%						0.15	0.00	0.00	0.15	\$146	\$1,980	68	1,370	\$1.45	
P-BMP-G7y3		41.39	6,826	5,615	0.0%	5,615	1211	17.7%	0	28.52	25.19	0.0%	25.19	3.33	11.7%						1.94	0.00	0.00	1.94	\$1,845	\$25,069	1,211	24,212	\$1.04	
P-BMP-G8a4	Springfield Regional Pond	0.34	139	136	65.8%	48	91	65.8%	88	0.30	0.29	51.2%	0.15	0.15	51.2%	0.01	\$1,616	\$79	\$1,072	\$2,688										
P-BMP-G8b2	Springfield Regional Pond	8.65	3,324	3,278	65.8%	1136	2188	65.8%	2142	7.13	7.06	51.2%	3.48	3.65	51.2%	0.18	\$38,630	\$1,886	\$25,633	\$64,262										
P-BMP-G8b4	Springfield Regional Pond	8.76	3,450	3,348	65.8%	1179	2271	65.8%	2169	7.78	7.62	51.2%	3.80	3.98	51.2%	0.18	\$40,100	\$1,958	\$26,609	\$66,709										
P-BMP-G8b6	Springfield Regional Pond	24.12	8,942	8,411	65.8%	3056	5885	65.8%	5355	20.88	19.94	51.2%	10.19	10.68	51.2%	0.48	\$103,928	\$3,337	\$45,345	\$149,273										
P-BMP-G8c3	Springfield Regional Pond	3.92	1,395	1,329	65.8%	477	918	65.8%	852	3.57	3.45	51.2%	1.74	1.83	51.2%	0.07	\$16,210	\$791	\$10,756	\$26,966										
P-BMP-G8c5	Springfield Regional Pond	48.40	10,642	8,698	65.8%	3638	7005	65.8%	5060	39.53	34.39	51.2%	19.30	20.23	51.2%	0.57	\$123,695	\$3,607	\$49,022	\$172,717										
P-BMP-G8d3-Alt. 3	Springfield Regional Pond	31.01	15,800	13,961	65.8%	5400	10400	65.8%	8560	31.03	28.16	51.2%	15.15	15.88	51.2%	0.84	\$183,643	\$4,427	\$60,171	\$243,814										
P-BMP-G8g3		39.33	17,663	15,808	0.0%	15,808	1,855	10.5%	0	38.99	35.70	0.0%	35.70	3.28	8.4%						2.70	0.81	1.61	1.89	\$1,872	\$25,440	1,855	37,093	\$0.69	
P-BMP-G8h2	Springfield Regional Pond	8.88	2,054	1,675	65.8%	702	1352	65.8%	973	7.45	6.47	51.2%	3.64	3.81	51.2%	0.11	\$23,874	\$1,166	\$15,842	\$39,716										
P-BMP-G8h4-Alt. 2	Regal Pond-Modification	16.54	7,185	6,878	84.4%	1124	6061	84.4%	5755	16.29	15.80	70.2%	4.85	11.44	70.2%	0.69	\$50,000	\$3,972	\$53,980	\$103,980										
P-BMP-G8k1	Emons Acres Pond	10.13	1,809	1,486	82.7%	314	1495	82.7%	1172	7.44	6.56	58.5%	3.09	4.35	58.5%	0	\$5,000	\$0	\$0	\$5,000										
P-BMP-G8i1-Alt. 1	Main Street Pond	110.47	23,326	18,874	80.2%	4611	18714	80.2%	14263	89.68	77.84	56.7%	38.81	50.87	56.7%	0.92	\$260,400	\$4,658	\$63,302	\$323,702										
P-BMP-G8m1		19.65	4,110	3,381	0.0%	3,381	730	17.8%	0	15.74	13.81	0.0%	13.81	1.93	12.3%						1.23	0.00	0.00	1.23	\$1,169	\$15,888	730	14,593	\$1.09	
P-BMP-G8n3		22.04	4,633	3,924	0.0%	3,924	709	15.3%	0	17.85	15.97	0.0%	15.97	1.89	10.6%						1.43	0.00	0.00	1.43	\$1,357	\$18,442	709	14,187	\$1.30	
P-BMP-K2a4		33.41	16,231	14,497	0.0%	14,497	1734	10.7%	0	31.58	29.02	0.0%	29.02	2.56	8.1%						1.92	0.00	0.00	1.92	\$1,828	\$24,845	1,734	34,681	\$0.72	
P-BMP-K3b3		24.80	11,644	10,124	0.0%	10,124	1520	13.1%	0	25.46	22.74	0.0%	22.74	2.72	10.7%						1.78	0.00	0.00	1.78	\$1,690	\$22,966	1,520	30,407	\$0.76	
Totals:		1,754.96	397,554	339,344		237,415	160,138	40.3%	101,928	1,342.36	1,200.42		950.49	391.87	29.19%	8.47	\$1,983,193	\$48,847	\$663,852	\$2,647,045	50.21	2.90	5.81	47.30	\$45,219	\$614,547	160,138	3,202,765	\$1.02	

2008 Requirement (20%): 79,511 lbs removed (Total Load Reduction)
 2013 Requirement (40%): 159,021 lbs removed (Total Load Reduction)
 Total Load Reduction: 160,138 lbs removed

Total Capital Cost: \$1,983,193
 Total Capital & Average Annual O&M Costs over 20-Years: \$3,261,591

Removal Required to Achieve 40% TSS Reduction: -1,117 lbs of TSS

* Excludes: Ag land, OSUD, Water, Wetlands, Woods, Internally Drained Areas, and all MS4 Jurisdictional areas within UPB

Appendix C

Town Drainage Policy

Town of Buchanan

Roadway Ditch Drainage and Right-of-Way Policy

The following policy is established to provide landowners and Town staff or designees guidance on maintenance, use and alterations to roadway ditches used for drainage and general management of Town owned road right-of-way (ROW) or easements.

- 1) **PURPOSE:** It is the purpose of this policy to:
 - a) Clarify the system of handling roadway ditch, drainage and ROW issues;
 - b) Maintain or improve the quality of life of landowners by improving drainage aesthetics and reducing health or safety issues;
 - c) To provide consistency in Town policy over time which anticipates staff, engineering and elected official turnover;
 - d) To reduce individual discretion in dealing with drainage and ROW issues to ensure equal treatment in decision making;
 - e) To encourage use of Town resources and time in areas of greatest need;
 - f) Protect Town investment in roadways and ROW;
 - g) Provide public confidence in management of issues and use of taxpayer funded resolutions.

- 2) **PURPOSE OF ROADWAY DITCHES:** Town roadway ditches and ROW perform four primary functions:
 - a) Serve to drain the road base and sub-grade of water.
 - b) Serve to drain surrounding land uses of water.
 - c) Carry collected water to a sufficient outfall.
 - d) Assist in winter snow clearing by providing snow storage below the elevation of the road surface.

- 3) **LANDOWNER REQUIREMENTS FOR DITCH AND ROW MAINTENANCE:** The Town of Buchanan owns all Town roadway ditches and ROW areas. Landowners adjacent to roadway ditches and ROW are responsible for general maintenance. General maintenance includes mowing, weed removal, brush removal, improvements with no changes to existing grades, culvert replacement with no changes to existing grades and generally keeping the area clear of debris. Any weeds or debris within ditches or ROW shall not exceed a height of three feet as measured from the bottom of the ditch ground surface. Any culvert cleaning or maintenance under driveways will be the responsibility of the landowner.

Sump Pump Locations: The following rules shall be followed by landowners with regard to sump pump drains.

- a) No sump pump water shall be allowed to discharge onto public roadways, sidewalks or trails.
- b) No sump pump water shall be allowed to drain onto a neighboring property or parcel without an easement.
- c) Sump pump water can be allowed to discharge into roadway ditches or drainage easements.

Roof Drains and Downspouts: The following rules shall be followed by landowners with regard to roof drains and downspouts. These rules are provided to encourage proper stormwater management and provide flood control.

- a) No water shall be allowed to directly discharge onto public roadways, sidewalks or trails.
- b) No water shall be allowed to drain onto a neighboring property or parcel without an easement.
- c) No water shall be hard piped directly to discharge to roadway ditch or drainage easement.
- d) Water shall first disburse over or under a lawn or vegetated area before reaching a ditch or drainage easement.

Landowner Maintenance Exemptions: The following are exceptions to this policy.

- a) Land directly adjacent to roadway ditch and ROW is actively in agricultural use.
- b) Depth or slope of ditch makes maintenance particularly mowing hazardous or dangerous.
- c) Bottom of ditch is consistently saturated or filled with water. This does not exempt the landowner from completing maintenance up to the saturated or wet area.

- 4) **TOWN REQUIREMENTS FOR DITCH AND ROW MAINTENANCE:** The Town of Buchanan shall be responsible for general maintenance of Town roadway ditches and ROW areas where land directly adjacent is not occupied by a residential, commercial or industrial structure. Other maintenance or improvements will only be completed by the Town if criteria within Section 7 are met. Any remaining areas of the Town which are not maintained by the Town or are except from landowner maintenance shall be left in their natural state and monitored for maintenance.

Mowing: Mowing of roadway ditches and ROW will be completed at the discretion of the Town.

Culvert Cleaning: At the Towns discretion, cleaning or clearing of culverts may be completed as needed to remove blockages and improve stormwater flow. This cleaning shall primarily only be completed on culverts located under Town roads or other easements.

- 5) **DRAINAGE CONCERN REPORTING:** The following steps shall be followed for reporting and follow-up of any roadway ditch drainage or ROW issue.
- a) Landowner completes Drainage Concern Form or Town staff completes on their behalf. Form includes date, name, address, contact information and explanation of the problem.
 - b) Drainage Concern Form is provided to the Town Administrator/Clerk and entered into the Drainage Concern Tracking database for proper tracking of the issue until resolved. Database shall be maintained by the Administrator/Clerk or designee.
 - c) Administrator/Clerk provides Concern Form or information contained therein to a Town Supervisor, Town engineer or designee or the other internal staff as necessary.
 - d) Selected individual is then responsible for completing an on-site review of the issue and reporting findings and recommended resolution to the Administrator/Clerk. A site visit flag shall be placed in the area reviewed to show the landowner that Town review is in progress.
 - e) Drainage concern will then be tracked until a final resolution is provided which may include recommended actions by the landowner, Town, other individuals or group or to complete no action. Direct contact or written correspondence is required before a concern will be classified as complete. Before any work is completed by a landowner a permit must be issued by the Town.

6) **LANDOWNER DRAINAGE CONCERN RESOLUTIONS:** Depending upon site circumstances, improvements may be desired or necessary to address a drainage concern. The following options may be approved by the Town for completion by a landowner at their expense. Selection of an approved option is at the Town's discretion and the following matrix is only a guide.

ROW Characteristics	Type of Improvement										Town Board Issue	
	Regrading /Cleaning	Ditch Liners	Drain Tile/Piping	Sump Relocation	Filling or Urbanization	Rip Rap/Rock	Erosion Matting	No Changes				
Width of Ditch												
- Less than 3'		X			X							
- 3' to 5'	X	X									X	
- 5' to 8'	X										X	
- Greater than 8'	X											
Depth of Ditch												
- Less than 2'	X	X		X								X
- 2' to 3'	X	X	X									X
- Greater than 3'	X		X		X							X
Grade of Ditch												
- No grade		X		X								
- Minimal grade (0%-1%)	X	X	X									X
- Adequate grade (>1%-6%)	X											X
- Extreme grade (>6%)	X									X		X
Surrounding Topography												
- Generally flat (0%-2%)	X	X		X								
- Generally rolling (>2%-6%)	X											X
- Generally hilly (>6%)	X									X		X
Wetness												
- Dry	X											X
- Moderately wet	X			X								X
- Extremely wet	X	X		X								
Health and safety issue					X							X

Town will also take into consideration alterations completed by neighbors. As needed, neighboring landowners will have reviews completed even if not requested.

Additional Requirements and Guidelines: The following additional rules and guidelines shall apply.

- Any ditch filling project or approved use of drain tile or piping shall be no closer than one foot to any driveway or roadway culvert.
 - Ditch filling, use of ditch liners and use of rock in ditches will be allowed on a limited basis due to effects to water quality management in the Town.
 - Any improvements or changes to ditches or Town ROW shall require a permit from the Town.
- 7) **TOWN FUNDED DRAINAGE CONCERN RESOLUTIONS:** The Town of Buchanan will only fund those roadway ditch drainage and ROW issues which meet the following criteria:
- a) Immediate threat to public health and safety, considered an emergency situation.
 - b) Threat to public health and safety which could, if left unresolved, lead to an emergency situation.
 - c) Issue which is recognized as not benefiting just immediate adjacent residents but the community as a whole.
 - d) Issue is considered a serious detriment to quality of life in the Town and will affect current and future landowners for years to come if not resolved.
 - e) Issue which a landowner was required to resolve and has taken no action within the allocated timeframe. Town resolution will initially be funded by the Town and then reimbursed by the landowner.
 - f) Issue is recognized as having a direct benefit to immediate landowners and is a project which should be coordinated by the Town and then reimbursed by those landowners directly benefitting through special assessment or voluntary reimbursement.
- 8) **IMPROVEMENTS COMPLETED WITHOUT TOWN APPROVAL:** Any changes or alterations to Town road ditches or ROW completed by landowners not approved by the Town or expressly allowed as detailed in this policy may be removed at landowner expense. This may also include obstructions such as retaining walls, concrete mailboxes or similar hard scape features placed in Town ROW.

The Town may issue a written notice requiring removal within 30 days of the receipt of the notice or sooner if improvements are detrimentally affecting other landowners. If not removed within 30 or sooner as indicated, the Town may remove any and all changes made by the landowner and return the area to its original condition or improve as necessary to provide for proper drainage. All costs for completing this work may be directly billed back to the landowner and placed on the property tax bill as a special charge if not paid in full within 6 months. Landowners that are directly contributing to a drainage issue shall be the priority for enforcement. Neighboring landowners that may also be in violation of this policy, but are not direct contributors to the issue may not be required to make changes.

- 9) **DITCH FILLING:** A recommendation from Town staff or designee for ditch filling shall be brought before the Town Board for approval before filling is authorized. Residents and/or contractors must follow Town guidelines for ditch filling and provide a detailed plan for the project for the Board to review.

Appendix D

Town of Buchanan Drainage Study Survey and Analysis Report

OPEN HOUSE
2011 COMPREHENSIVE DRAINAGE STUDY
TOWN OF BUCHANAN
SEPTEMBER 13, 2011

Intent

The Town of Buchanan has experienced stormwater drainage issues for many years in various locations due to flat grades of roadway ditches, poorly constructed culverts/drain piping, property owners filling of ditches as well as natural filling, culverts heaving, and lack of rear yard drainage. This study is focused on the urbanized area of the Town west of De Bruin Road.

Purpose

The purpose of the study was to identify the urbanized "Problem Areas" west of De Bruin Road; other areas may be addressed at a later date. The scope of this study does not include investigating the entire Town, but rather specific areas based on Town records, general knowledge of the stormwater drainage in the Town, and resident complaints. This Study will:

- Create a ranking system for stormwater drainage problems
- Recommend a feasible solution to the problems
- Provide preliminary costs estimate to provide a magnitude of cost to assist in funding

Engineering Work Completed

The Engineering work completed to date consists of the following tasks:

- Reviewed existing drainage concerns to identify the "cause" and location of the concern.
- Developed a Ranking System to provide guidance on the severity of the concern. Section 3 of the Study.
- Completed a field survey of the elevations of selected areas to provide information to evaluate the problem.
- Evaluated the drainage problem and identify the responsible party for resolving the problem.
- Presented the preliminary findings of the Study at a Town Board Meeting.
- Finalize Study based on Town Board Meeting and Public Informational Meeting response.

Study Areas

Springfield Drive Area, Hank Drive Area, and Hickory Park Drive Area

Similarities for these sites include, multiple sub basins, flat slopes, history of drainage problems, residential complaints and shallow driveway culverts.

Options to Consider

While the existing topography and drainage facilities are relatively flat (< 1%) in these areas, the options to consider are as follows:

- "A" - Urbanization of roadway with storm sewer and curb & gutter. This option includes reconstructing the roadway with concrete curb & gutter and full roadway reconstruction which will be designed for on street pedestrian/bicycle facilities including filling of the roadside ditch.
- "B" - "Mini" storm sewer below the roadside ditches. This option includes constructing a smaller diameter storm sewer on each side of the road along the ditch bottom or slopes with yard drains including full roadway reconstruction with 11' lanes, culvert replacements and gravel shoulders, no on street pedestrian/bicycle facilities.
- "C" - Lining of the roadside ditches. This option includes constructing a concrete ditch liner on each side of the road along the ditch bottom. One estimate includes full roadway reconstruction with 11' lanes, culvert replacements and gravel shoulders, no on street pedestrian/bicycle facilities, while the other estimate does not include any roadway construction.
- "D" - Regrade the existing roadside ditches and replace the existing driveway culverts. This option includes regrading the ditch on each side of the road. One estimate includes full roadway reconstruction with 11' lanes, culvert replacements and gravel shoulders, no on street pedestrian/bicycle facilities, while the other estimate does not include any roadway construction.

*Three of the four options may result in stormwater treatment losses that may or may not have a significant impact on the Towns overall compliance with the WDNR regulations.

PDF on website

Town of Buchanan

N178 County Road N
Appleton, WI 54915
www.townofbuchanan.org

Town of Buchanan Drainage Study Survey & Analysis Report



October, 2011

Town of Buchanan Drainage Study Survey & Analysis Report

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Introduction

The Town of Buchanan sent postcards to all residential households located west of Debruin Road inviting residents to attend a Drainage Study Open House on September 13, 2011. The Town utilized its mailing list used for sending newsletters to residents. Therefore, postcards were not sent to vacant parcels, commercial or industrial parcels. One postcard was also sent to the management of the Gentry Drive Apartments and Buchanan Cottages, rather than to each resident within those developments. The postcard mailing noted that residents which who would be unable to attend the open house were encouraged to complete an on-line survey. Hard copies of the survey were available at the open house and at Town Hall. Notice of the survey was also included in the fall 2011 newsletter (mailed to all Buchanan residents) and placed on the front page of the website. No hard copies of the survey were mailed.

The three page drainage study survey (Appendix A) was part of the process to complete a Comprehensive Drainage Study. The survey included a total of 33 questions as well as two open ended questions. The survey questions were grouped into four categories including demographic/location questions, questions on existing drainage facilities, questions on future drainage facilities and questions on funding drainage facilities.

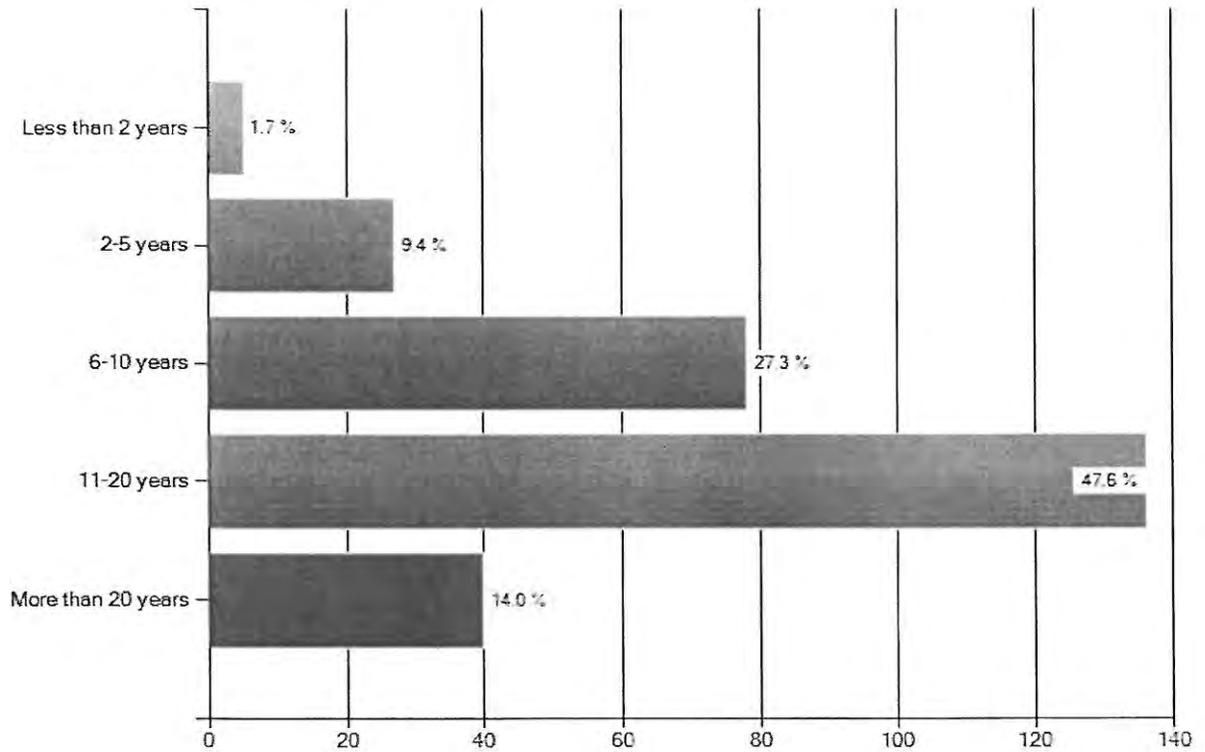
Survey Response Rate

A total of 287 surveys were completed and analyzed. Determining a response rate is not feasible due to the distribution of the survey and its availability on the Town website.

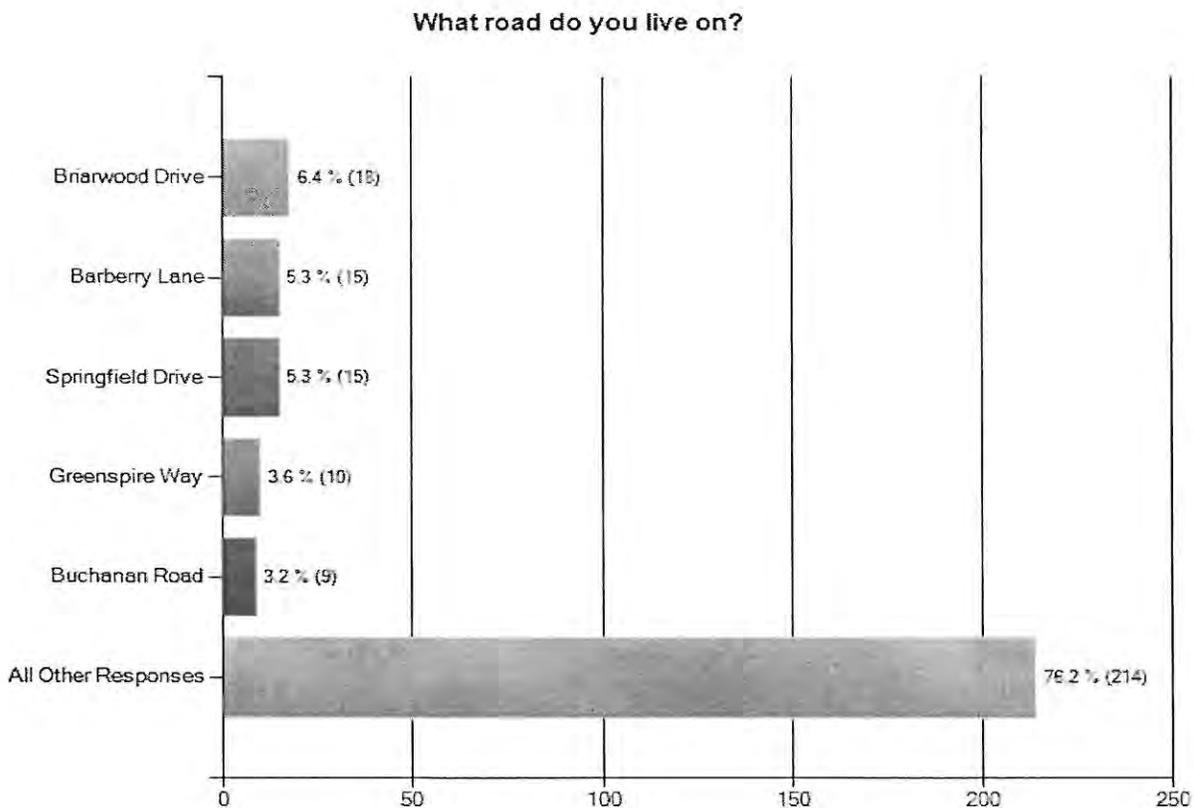
Respondent Characteristics

The majority of respondents have lived in the Town of Buchanan for 11-20 years (47.6%) followed by 6-10 years (27.3%).

How many years have you lived at your current residence in the Town of Buchanan?

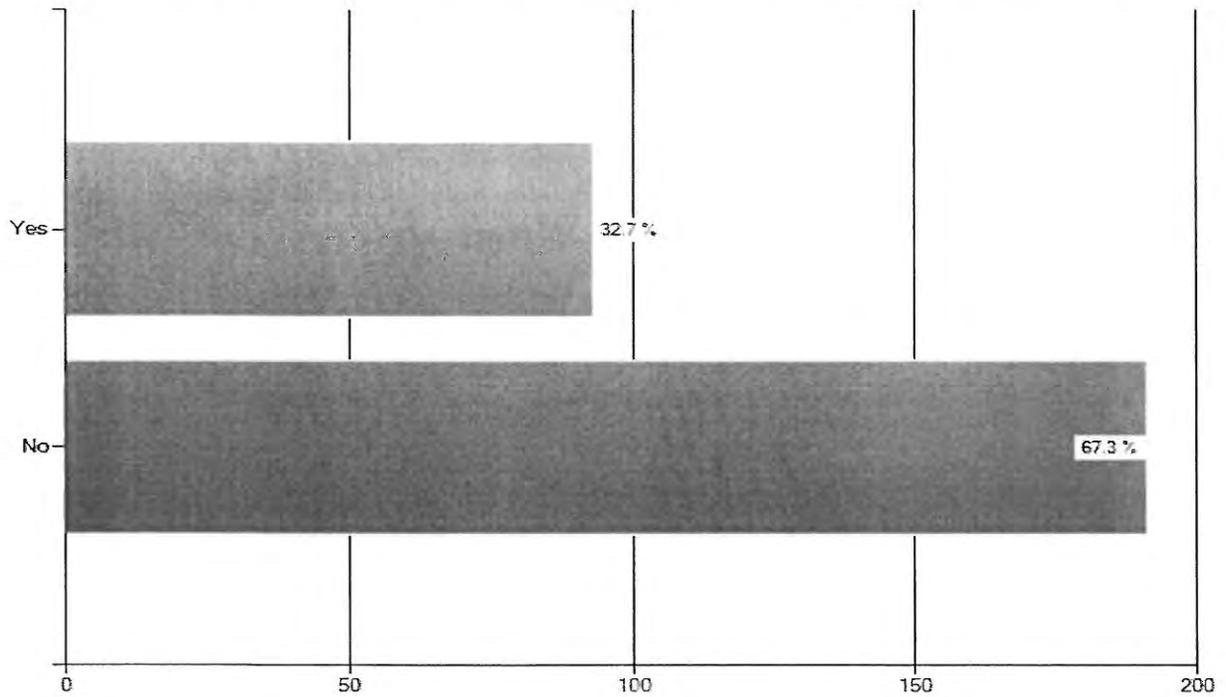


Residents were also asked to indicate which road they lived on. The roads with the top five responses are shown. This question was primarily asked to allow for further analysis by neighborhood as the Town proceeds with the Drainage Study.

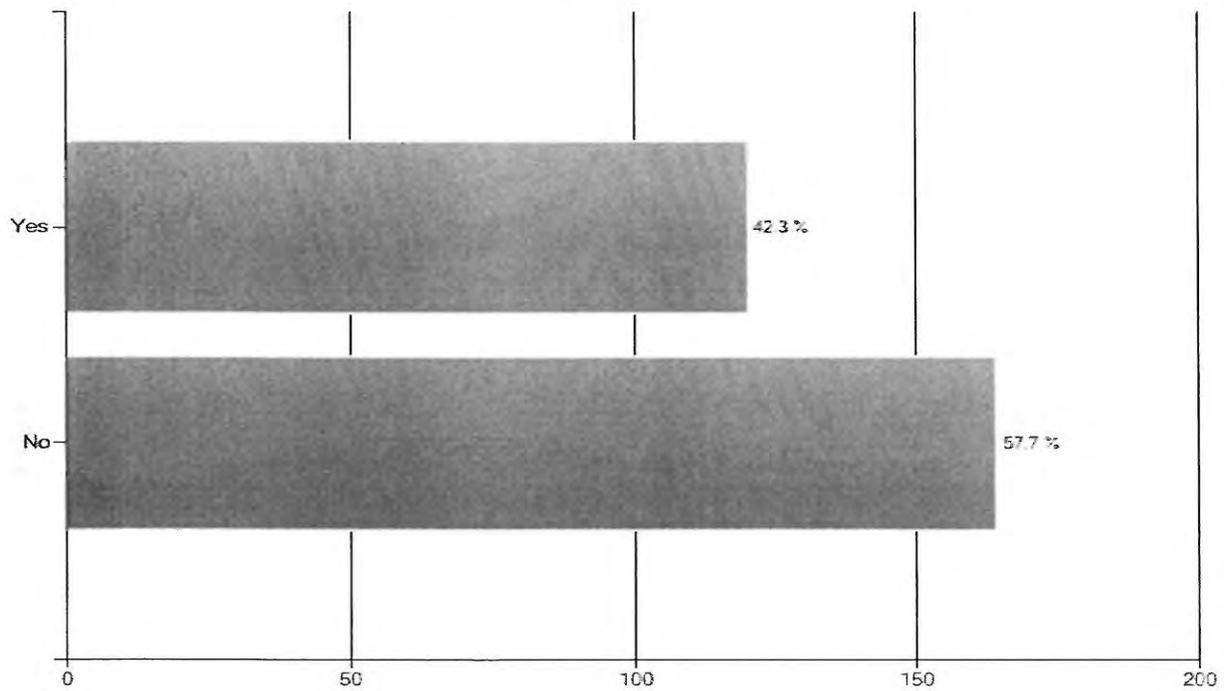


The next two questions asked about resident reporting of drainage issues to the Town and the presence of non-ditch drainage issues.

Have you ever reported a drainage issue to the Town at your current residence?

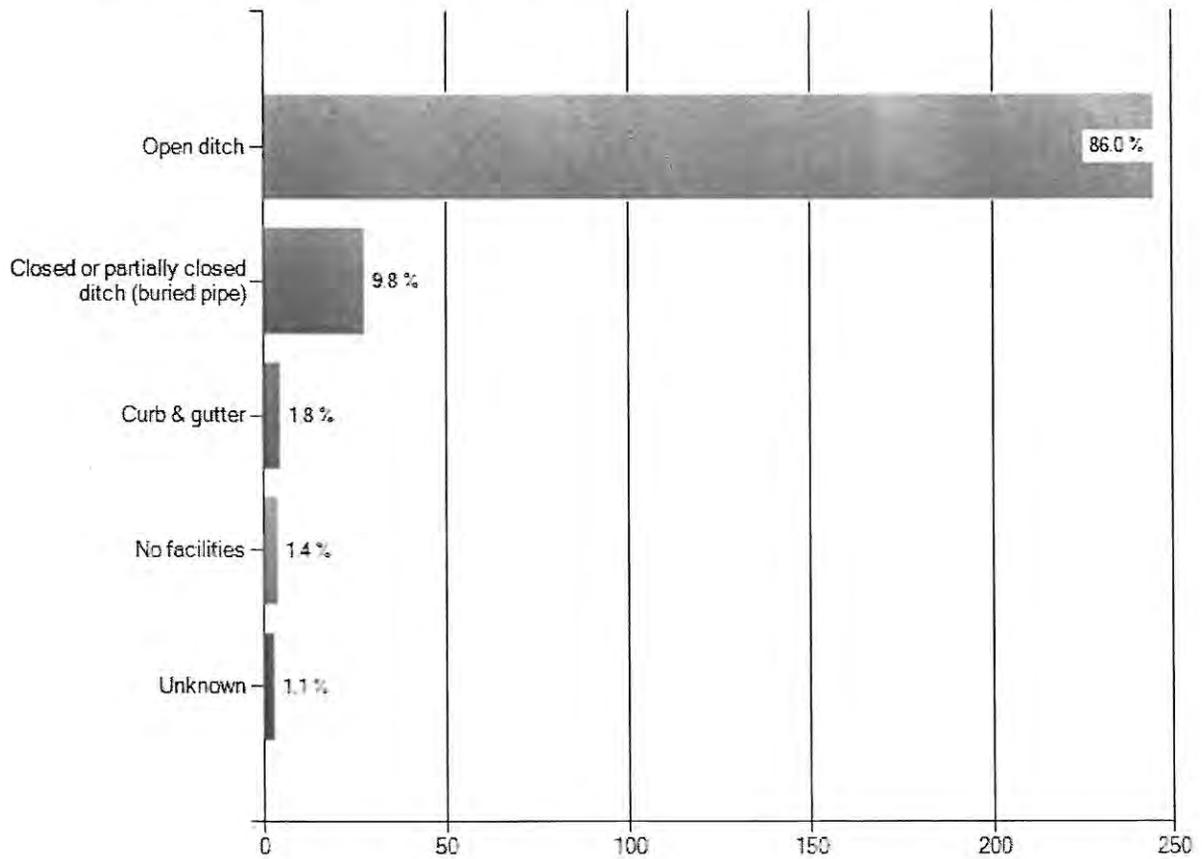


Do you have any side yard or backyard drainage issues?



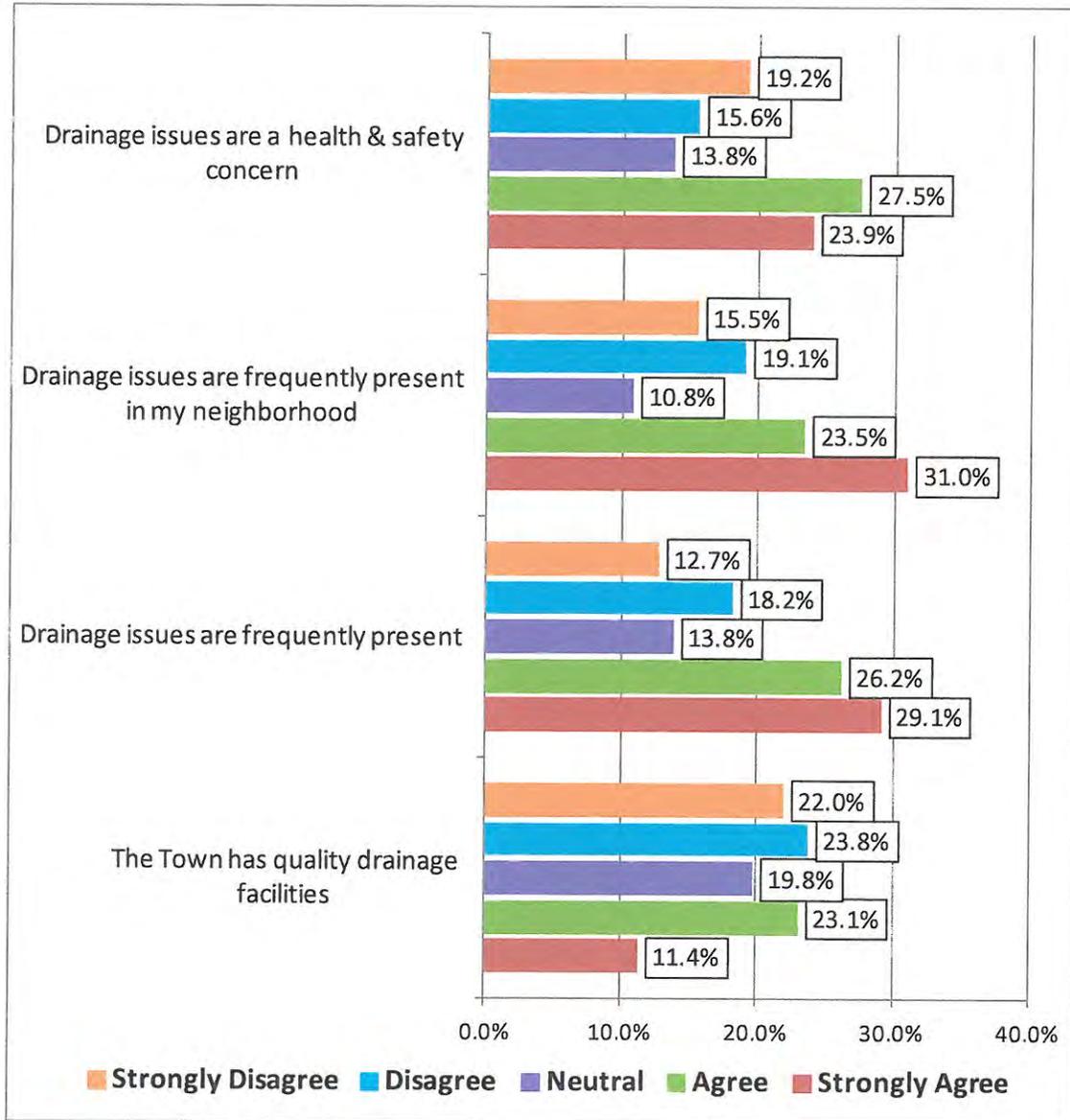
The vast majority of respondents (86.0%) have open ditches at their property adjacent the roadway. Less than 10% indicated they had a closed or partially closed ditch.

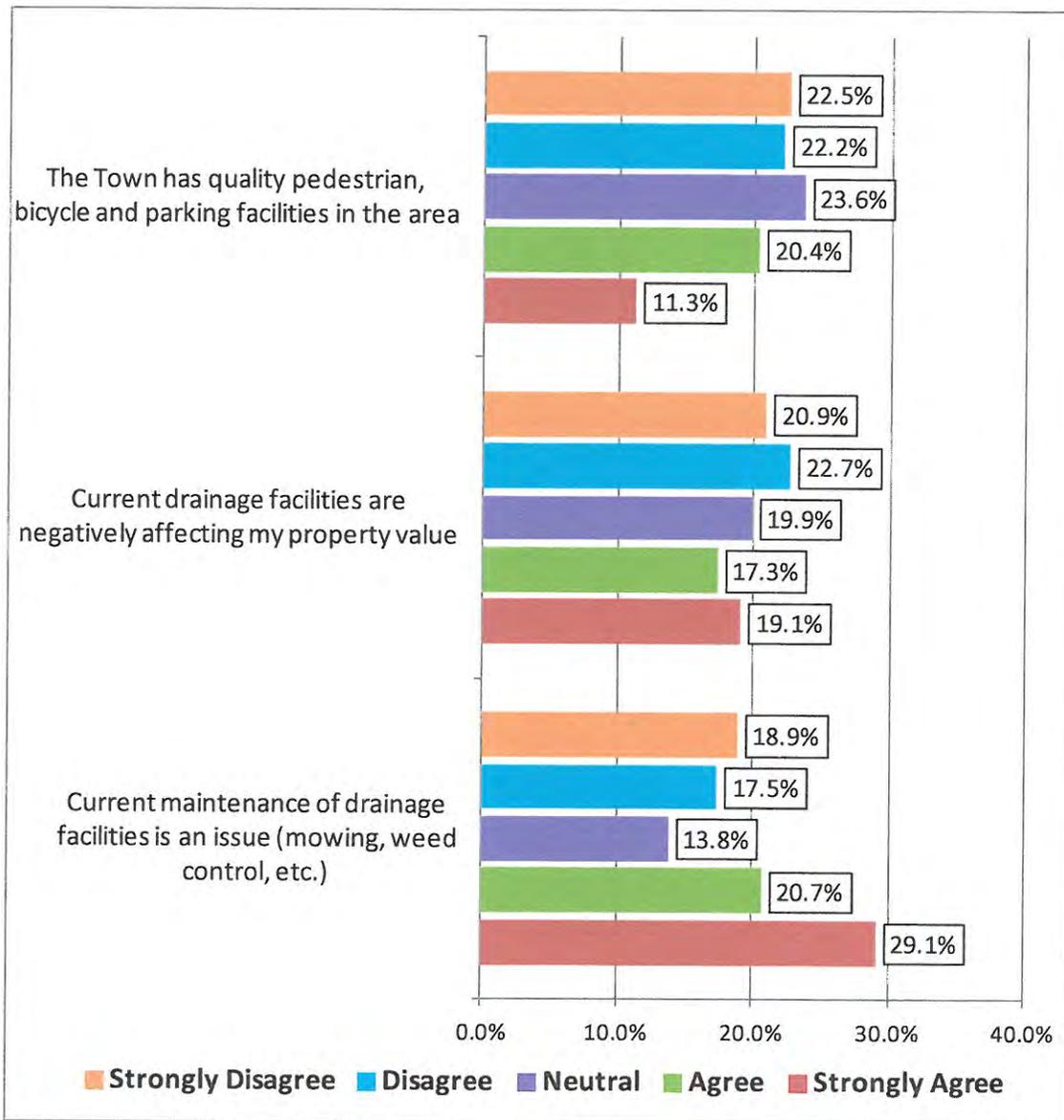
What type of drainage facility is present at your property adjacent the roadway?



Existing Drainage Facilities

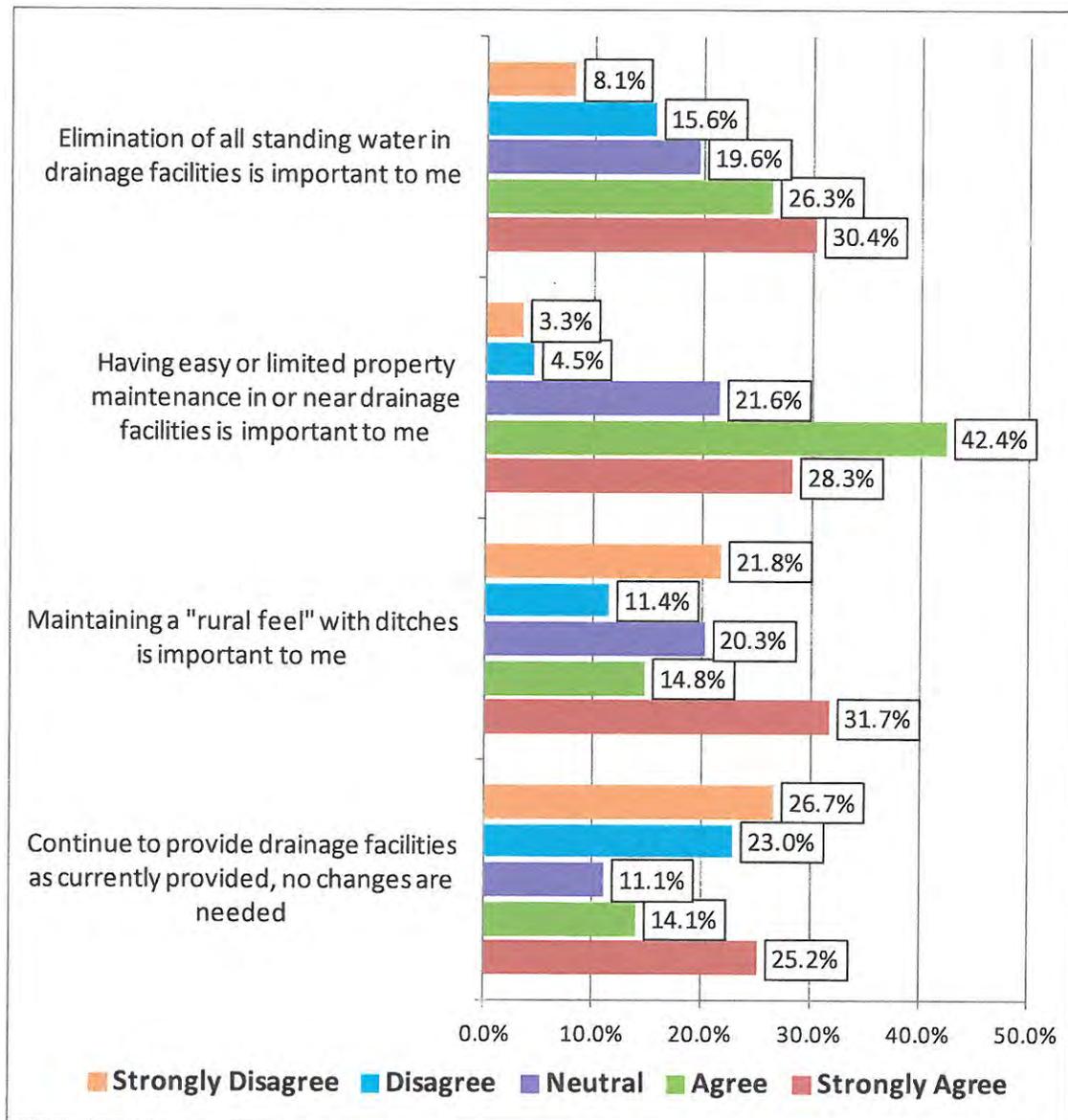
The next section of survey questions asked respondents to evaluate existing drainage facilities present at their property.

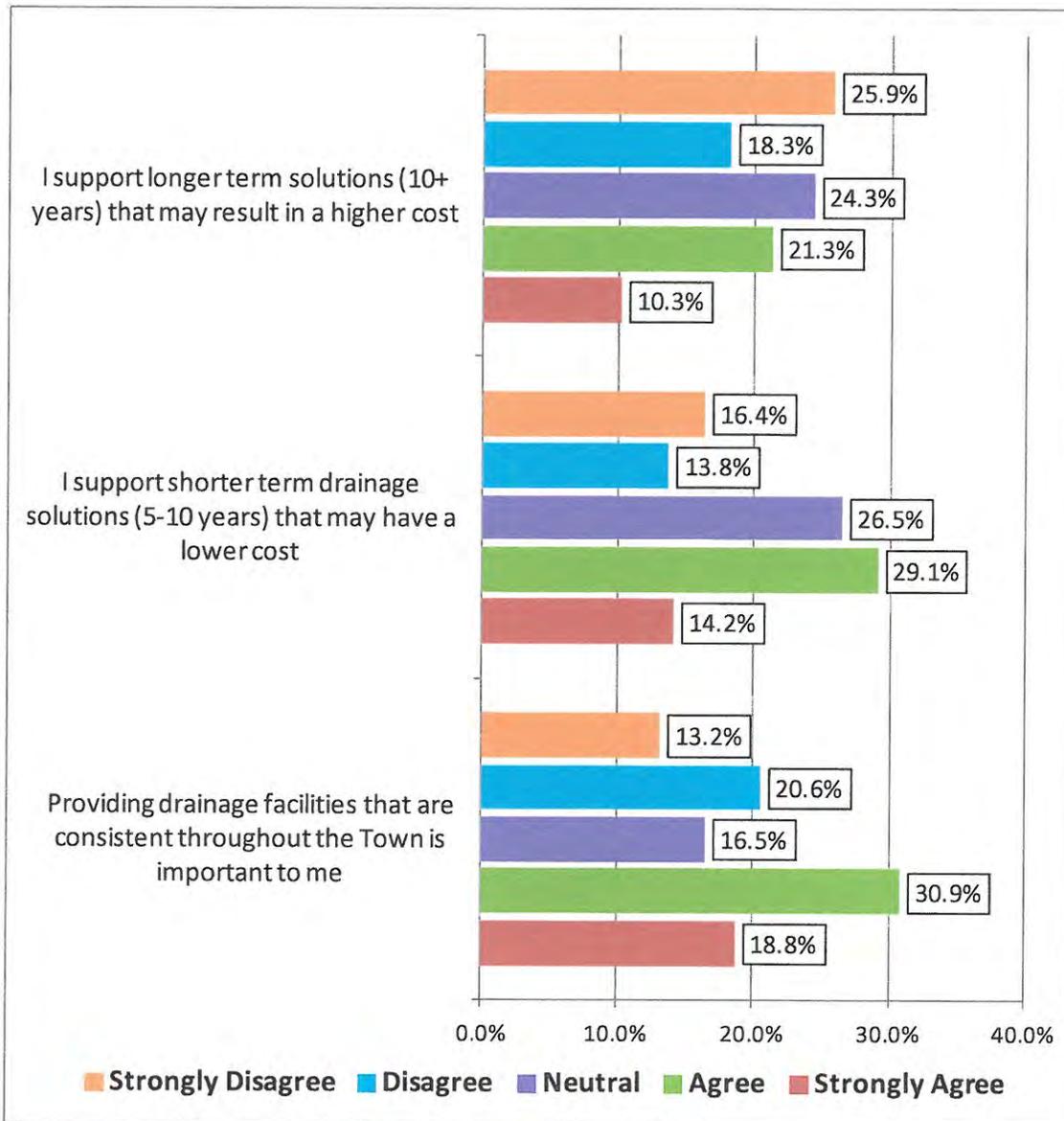


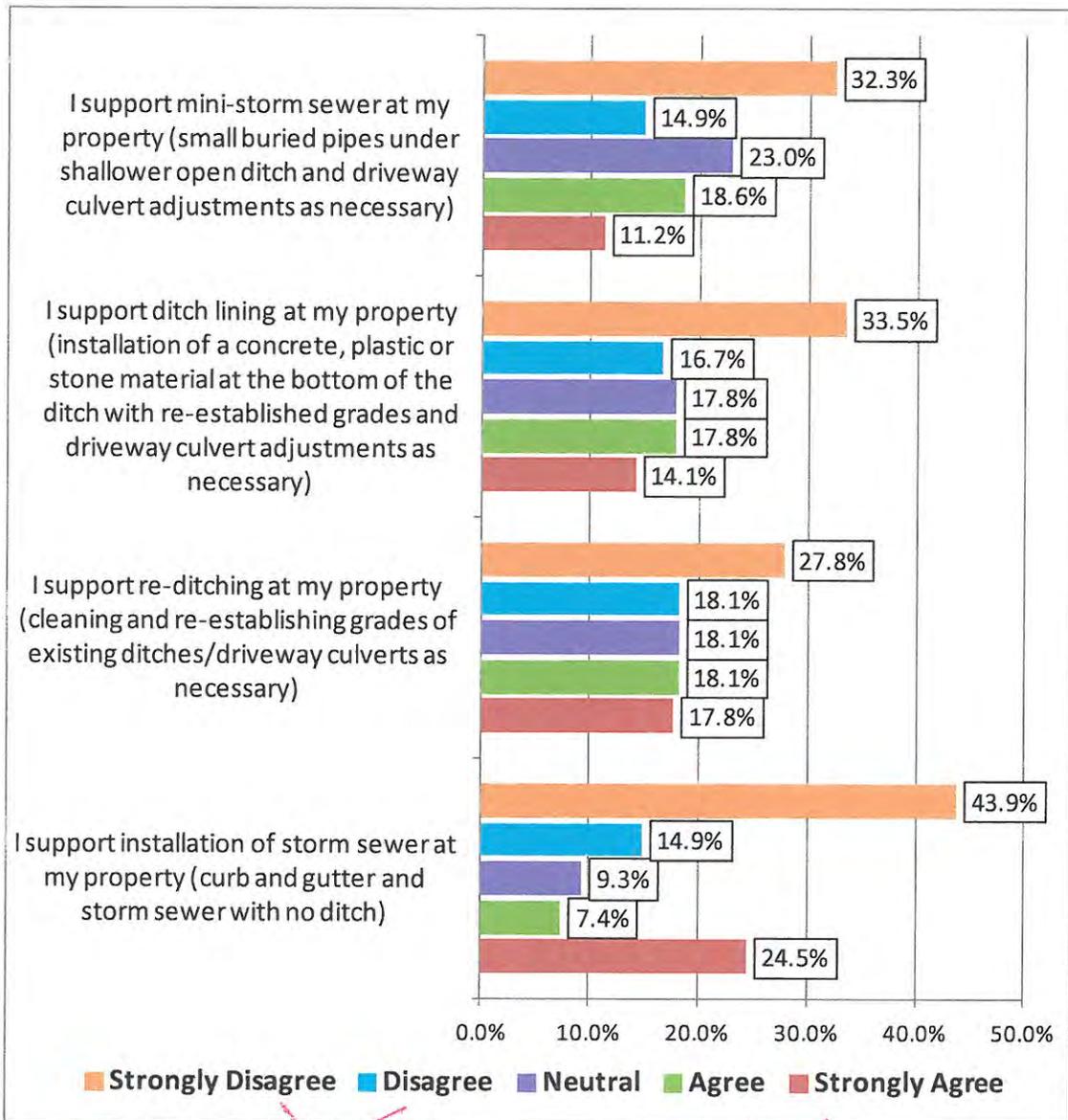


Future Drainage Facilities

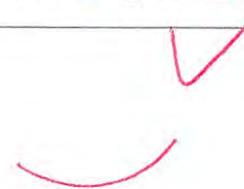
The next section of survey questions asked respondents for feedback on the future of drainage facilities.

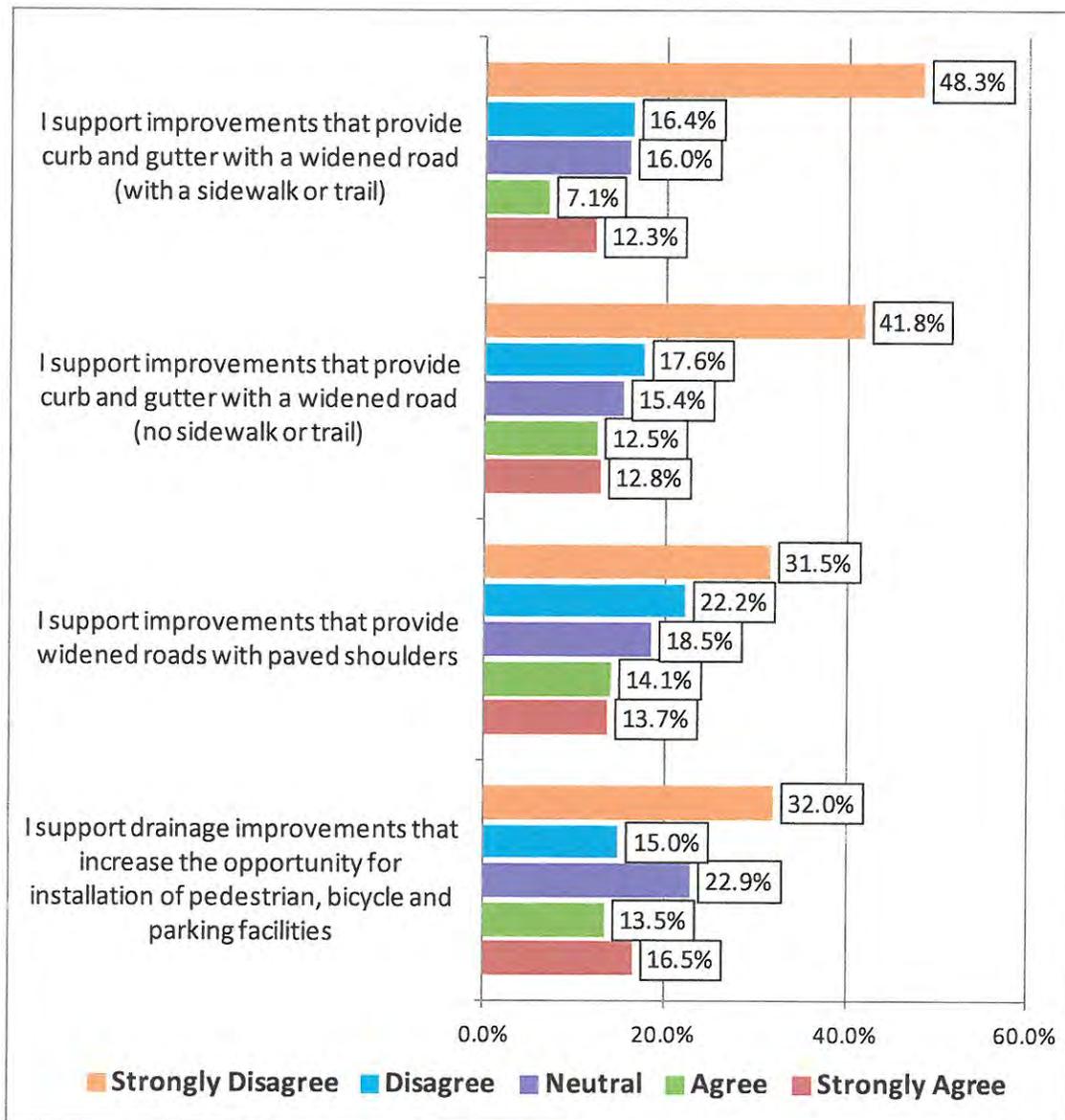






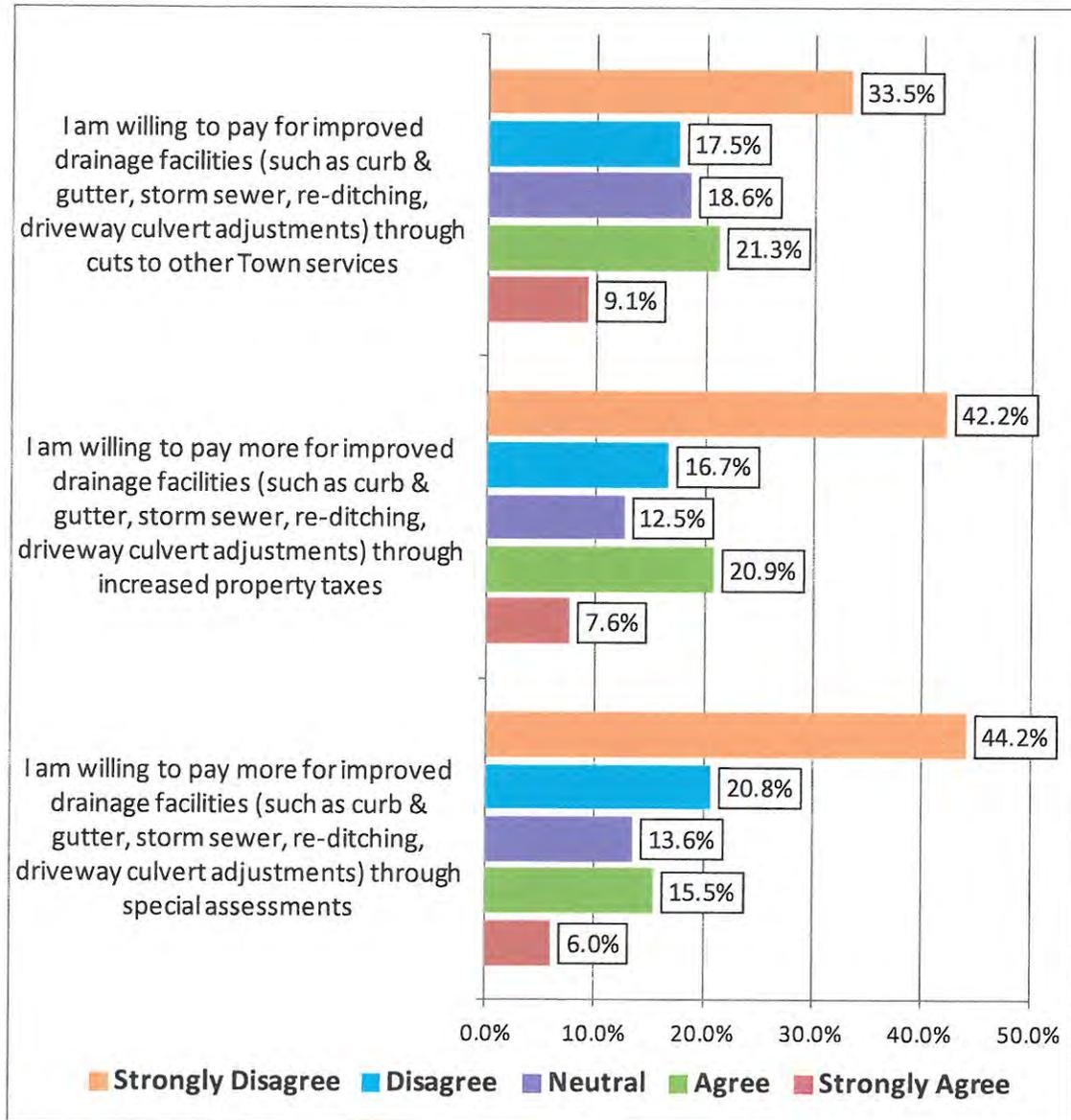
to review comments

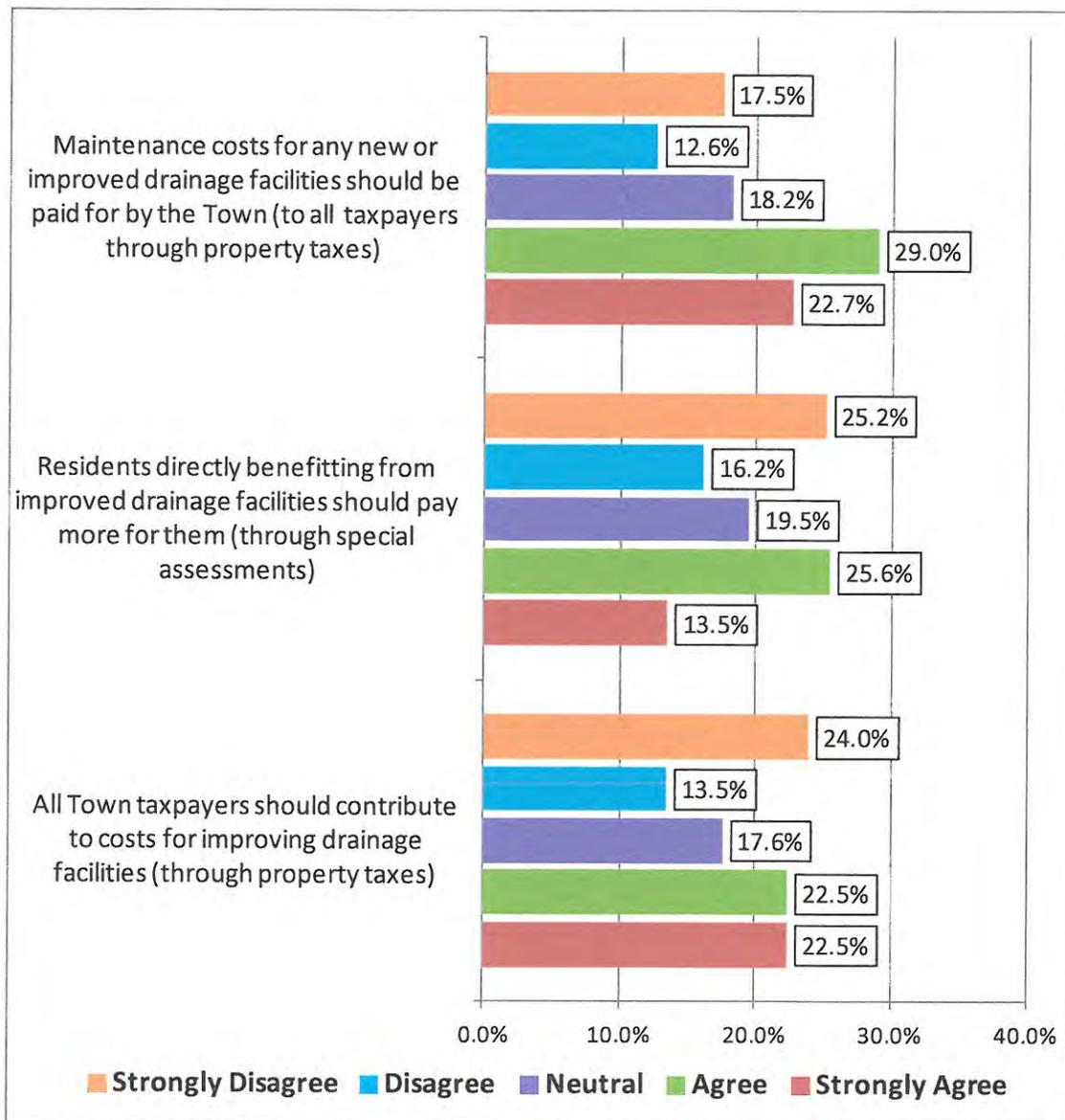




Funding Drainage Facilities

Six questions were asked regarding paying for the costs of drainage facilities.





Resident Completed Improvements

An open ended question was provided to residents to gain a better understanding of improvements that property owners have completed to their own property or in right-of-way to address drainage issues. Results to this open ended question can be found in Appendix B.

Additional Comments

Respondents were also provided an open ended comment section on the survey. See Appendix C for a full list of comments.

Appendix A, Drainage Study Survey Instrument

TOWN OF BUCHANAN DRAINAGE STUDY SURVEY



The Town of Buchanan has completed a Draft Comprehensive Drainage Study. Drainage (ditches) and stormwater issues have been identified by the Town Board as the #1 Town issue. With the assistance of the Town Engineer, the Town's goal is to identify and implement long-term solutions to the drainage issues commonly reported by residents. Now that the Draft Study is completed, the next step in achieving that goal is to gather public input. Your opinion is critical to resolving this complex problem and will help us determine the future of the Town.

1. How many years have you lived at your current residence in the Town of Buchanan?
 Less than 2 years 2-5 years 6-10 years 11-20 years More than 20 years

2. What road do you live on?

3. Have you ever reported a drainage issue to the Town at your current residence?
 Yes No

4. Do you have any side yard or backyard drainage issues?
 Yes No

5. What type of drainage facility is present at your property adjacent the roadway?
 Open ditch Closed or partially closed ditch (buried pipe) Curb & gutter No facilities

Please Rate the Following for Your Property	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Existing Drainage Facilities					
The Town has quality drainage facilities					
Drainage issues are frequently present					
Drainage issues are frequently present in my neighborhood					
Drainage issues are a health & safety concern					
Current maintenance of drainage facilities is an issue (mowing, weed control, etc.)					
Current drainage facilities are negatively affecting my property value					
The Town has quality pedestrian, bicycle and parking facilities in the area					
Future Drainage Facilities					
Continue providing drainage facilities as currently provided, no changes are needed					
Maintaining a "rural feel" with ditches is important to me					
Having easy or limited property maintenance in or near drainage facilities is important to me					
Elimination of all standing water in drainage facilities is important to me					
Providing drainage facilities that are consistent throughout the Town is important to me					

Please Rate the Following for Your Property	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I support shorter term drainage solutions (5-10 years) that may have a lower cost					
I support longer term solutions (10+ years) that may result in a higher cost					
I support installation of storm sewer at my property (curb and gutter and storm sewer with no ditch)					
I support re-ditching at my property (cleaning and re-establishing grades of existing ditches/driveway culverts as necessary)					
I support ditch lining at my property (installation of a concrete, plastic or stone material at the bottom of the ditch with re-established grades and driveway culvert adjustments as necessary)					
I support mini-storm sewer at my property (small buried pipes under shallower open ditch and driveway culvert adjustments as necessary)					
I support drainage improvements that increase the opportunity for installation of pedestrian, bicycle and parking facilities					
I support improvements that provide widened roads with paved shoulders					
I support improvements that provide curb and gutter with a widened road (no sidewalk or trail)					
I support improvements that provide curb and gutter with a widened road (with a sidewalk or trail)					
Please Rate the Following for Your Property	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Funding Drainage Facilities					
I am willing to pay more for improved drainage facilities (such as curb & gutter, storm sewer, re-ditching, driveway culvert adjustments) through special assessments					
I am willing to pay more for improved drainage facilities (such as curb & gutter, storm sewer, re-ditching, driveway culvert adjustments) through increased property taxes					
I am willing to pay for improved drainage facilities (such as curb & gutter, storm sewer, re-ditching, driveway culvert adjustments) through cuts to other Town services					
All Town taxpayers should contribute to costs for improving drainage facilities (through property taxes)					
Residents directly benefitting from improved drainage facilities should pay more for them (through special assessments)					
Maintenance costs for any new or improved drainage facilities should be paid for by the Town (to all taxpayers through property taxes)					

What, if any, improvements have you completed on your property to address drainage issues:

Provide any additional comments on Town drainage & stormwater facilities:

Thank you for participating in the survey!

Appendix B, Resident Improvements Completed

What, if any, improvements have you completed on your property to address drainage issues:

	Response Count
	176
answered question	176
skipped question	111

Page 5, Q1. What, if any, improvements have you completed on your property to address drainage issues:

1	None.	Oct 3, 2011 6:27 AM
2	I have no drainage issues, never did.	Sep 30, 2011 1:04 PM
3	We took care/cost of run off from the roadways onto our property.	Sep 30, 2011 9:37 AM
4	We have not made any improvements, but the Town has added riprap to the end of the drainage ditch between our property and the one north of us that was washing out on the end more each year. The soil and grass at the beginning of the riprap is now washing away and the soil under the riprap may be washing out because the riprap has lowered a foot or so.	Sep 30, 2011 7:50 AM
5	None.	Sep 30, 2011 7:34 AM
6	None.	Sep 30, 2011 7:32 AM
7	Installed culvert and covered. This was approved by Town Chairman in 2001 when lawn was put in. Approval was obtained for our's and neighbors property. Culvert contains a drainage pipe from lawn to culvert.	Sep 30, 2011 7:24 AM
8	Have buried pipe in ditch, works well. Ditch is in front of the house.	Sep 30, 2011 6:54 AM
9	n/a	Sep 30, 2011 6:50 AM
10	None.	Sep 30, 2011 6:41 AM
11	None	Sep 28, 2011 4:52 PM
12	None	Sep 27, 2011 5:11 PM
13	Replaced clogged underground gutter extensions.	Sep 27, 2011 1:34 PM
14	Have not had any issues.	Sep 27, 2011 7:59 AM

Page 5, Q1. What, if any, improvements have you completed on your property to address drainage issues:

15	I worked with my neighbors to have the water flow the best it can. It is a ditch, it is to hold water.	Sep 26, 2011 7:25 PM
16	subdivision has detention pond. no drainage issues in subdivision	Sep 26, 2011 6:28 PM
17	We have PVC pipe installed with some stone over it .	Sep 25, 2011 5:15 PM
18	the town addressed our particular drainage issue on the side and back a few years ago. The Garner Creek addressed issues by the creek.	Sep 25, 2011 1:49 PM
19	The property has no current drainage issues.	Sep 25, 2011 10:14 AM
20	Buried 6" drainage tile with gravel cover sloping 10 degrees every 100 ft. along the full length of the frontal property ditch. Buried 6" drainage tile with gravel cover, 6 ' under ground with three drains about 8' apart, sloping 10 degrees every 100 ft. along the back property line of my and my next door neighbor's property, to drain into the common south to north drainage ditch.	Sep 24, 2011 7:25 PM
21	We installed concrete lining with the use of a transom and due to the neighbors improperly installed culvert, water is still standing in our ditch.	Sep 23, 2011 4:37 PM
22	None. Drainage has never been a problem since we built in 1987!	Sep 23, 2011 3:37 PM
23	Started digging to make it drain until newsletter said we could not.	Sep 23, 2011 9:38 AM
24	None.	Sep 23, 2011 9:33 AM
25	None.	Sep 23, 2011 9:28 AM
26	None.	Sep 23, 2011 9:24 AM
27	We tried digging a small ditch and put Mississippi Rock in it. did not work at all. Took rocks out and put ditch back to original.	Sep 23, 2011 9:19 AM
28	Put liner at base of ditch with rocks on top of the liner.	Sep 23, 2011 9:08 AM
29	We had Corey survey our ditch and he stated we were okay or maybe a little higher by sump pump area but not to do anything because street needs repair first.	Sep 23, 2011 9:04 AM
30	I have installed concrete ditch liners in front of my home.	Sep 23, 2011 8:58 AM
31	I have added rock to my ditch, has helped alot.	Sep 23, 2011 8:54 AM
32	I have ran gutters and sump pump underground out to the ditch.	Sep 23, 2011 4:07 AM
33	Manuel digging of thin strip down ditch line to keep water flowing, removing and hauling away of excess sod to prevent standing water, as neighbor filled his ditch in so all water collects in ours. Keeping ditch free of cat tails.	Sep 22, 2011 7:31 PM
34	None needed.	Sep 22, 2011 7:06 PM
35	None!	Sep 22, 2011 2:17 PM
36	none	Sep 21, 2011 7:48 PM

Page 5, Q1. What, if any, improvements have you completed on your property to address drainage issues:

37	none	Sep 21, 2011 10:58 AM
38	none	Sep 21, 2011 10:27 AM
39	I worked with the McMahon project engineer on the Main Street Pond design to ensure that areas adjacent to my property and parts of my property could be properly pitched to allow for drainage of the area and to keep storm waters in the road-side ditch along Emons Rd. The results have been just as expected and the pond design is performing exactly as expected.	Sep 20, 2011 7:19 PM
40	None needed	Sep 20, 2011 4:26 PM
41	None: We haven't had any problems with drainage. The water runs down to the creek, where they installed/improved with a the larger sized culvert some years back. That improved the water flow greatly and haven't had any issues with water backing up. Job well done. Nothing needs to be done from there. I like the rural look. Been here since 1980. Please leave it alone.....Spend the money else where!	Sep 20, 2011 1:40 PM
42	none	Sep 20, 2011 12:52 PM
43	I have spent MANY hours trying to get the water to flow right. Installing drainage pipes, rocks and edging. This should have been done right the first time.	Sep 20, 2011 12:35 PM
44	I have paid to install a drainage pipe, fill for the ditch and sureyor the block ditch elevations. Because the ditch was full of water.	Sep 20, 2011 8:11 AM
45	Added stone to bottom of ditches and planted trees along Buchanan Rd ditch.	Sep 19, 2011 7:22 PM
46	Regrading of landscaping around our house.	Sep 19, 2011 9:42 AM
47	We made drainage improvements to our property 10 years ago out of our own pocket. We do not want to spend more money as we have not had any issues since.	Sep 19, 2011 8:31 AM
48	DITCH LINERS	Sep 19, 2011 7:18 AM
49	We are the original owners of our property. Both homes on either side of us already had their ditches graded, so we had no choice but to meet ours with theirs, then to the street culvert. This was at our expense, of course, to hire someone to properly grade the ditches, seed, cover with hay, and water these. This was a large expense to us for these two ditches that aren't even our property, but we are required to maintain them. We have more than fulfilled our obligation to these ditches. The Springfield side ditch never holds water for more than a day or two after rain, so we have no issues there. The Stillwater side holds water primarily in May and June, the rainy season, then it is bone dry for the rest of the summer.	Sep 18, 2011 4:54 PM
50	none	Sep 17, 2011 9:16 AM
51	15-18 years ago we reshaped the ditch to eliminate the wide flat bottom.	Sep 16, 2011 3:49 PM
52	None. I simply wait weeks for the water to evaporate and ground to dry. Really only an issue in the spring and fall.	Sep 16, 2011 9:43 AM
53	I put in a cement base in my ditch and a retaining wall on the house side of the	Sep 15, 2011 6:14 PM

Page 5, Q1. What, if any, improvements have you completed on your property to address drainage issues:

ditch. This eliminated most of my water problems without changing the slope of my ditch.

54	Have installed concrete ditching in front ditch of property, ditch on the side of property is kept trimmed and, clear of debris.	Sep 15, 2011 11:32 AM
55	Our ditch has drain tile to prevent standing water in ditch/yard. Water sits in tile/culvert most of the year.	Sep 15, 2011 11:28 AM
56	Dug a shallow trench from driveway to property line in ditch to assist with water flow. It works great and neighbors have followed suit with equal success. All that was required was sweat equity and time.	Sep 15, 2011 10:23 AM
57	I maintain my ditch to provide gravity drainage.	Sep 15, 2011 10:20 AM
58	Buried piping in ditch with stream rock. Ditch does fill and go over my road and driveway at times but dries out after the storm is past.	Sep 15, 2011 10:10 AM
59	Dug ditch out 12", installed 6" of 3/4" clear gravel, installed 2-4" perforated PVC pipes and covered with river rock.	Sep 15, 2011 9:56 AM
60	None.	Sep 15, 2011 9:52 AM
61	Buried culverts, front and side ditches. Keep vegetation growing in rear ditch to keep erosion down. Drainage from yards and roads are kept due to slant of yards on hilly area. Will look into permit for rip-rap stone in eroding areas.	Sep 15, 2011 9:50 AM
62	I and my neighbor have concrete channels that were installed by Seasonal Services and they are laser lined and work wonderful!	Sep 15, 2011 9:32 AM
63	Unable to make changes since property is located at the mouth of a creek culvert.	Sep 15, 2011 9:23 AM
64	The creek that run's along side my property (west) side has a concrete liner in it now. The problem is that algae grows on top of the concrete and slows the water down, and also stinks and attracts bugs. I have to every two weeks scrape the bottom to keep the water running smoother. When I built in 98 the old culvert that ran straight under Buchanan Rd. was 4' in diameter. When the Town and County resurfaced the road they tore out the 4' culvert, which I never had a problem with and replaced it with a 6' culvert, and also angled it to make it convenient to add four lots on the other side of the road. I now have a pond in my front & side & back yard every time it rains heavy. The water runs down the concrete ditch, but has nothing to divert the water into the culvert. Which then pools up in my yard & creates a swirl. When the water finally goes down or finally catches up, all the garbage ends up in my yard, and also takes weeks to dry up so I can cut the grass down there I checked with the DNR and found out it's illegal to change the direction of a navigable stream. Wo gave the Town or County permission to change the angle of that culvert? It sure benefitted the Town to add four lots on the other side of the road, but sure made a mess for me and my neighbors behind me. This has been going on for too long. I'm tired of calling the Town to look at this problem every time it rains. If something doesn't get done soon me and my neighbor have no choice but to take legal action. We know who's responsible.	Sep 15, 2011 8:31 AM
65	Bought back up sump pump. Added buried drain tiles.	Sep 15, 2011 6:32 AM

Page 5, Q1. What, if any, improvements have you completed on your property to address drainage issues:

66	We have ditch liner's & proper drainage	Sep 15, 2011 4:03 AM
67	None except mowing or weedwhacking ditch regularly	Sep 14, 2011 8:45 PM
68	Buried pipe to keep sump pump water flowing which was approved by the town.	Sep 14, 2011 7:14 PM
69	A signed, and valid exception from the town board to place a 16" culvert in the front of my property, filled with 4 ea of 19 yard dump truck loads of top soil. Completed in 2000.	Sep 14, 2011 7:05 PM
70	WITH a permit, we have a buried drainage pipe. We have had no drainage issues, nor have we caused any drainage issues for any of our neighbors.	Sep 14, 2011 6:58 PM
71	none	Sep 14, 2011 6:35 PM
72	I have buried a small plastic drain tile pipe with gravel in my ditch to help dry out the very bottom. The shape of my ditch has changed very little, and the grade and slope are almost the same as original. I can see the need for some changes in the town, like widening Hank Dr for walking, riding and parking because it has so much traffic on it and I do use it, but widening my court would be a waste of money. It just doesn't see enough traffic. Everyone in the town would benefit from widening high traffic roads so everyone should pay for it. We need to only widen high traffic roads.	Sep 14, 2011 5:52 PM
73	I have kept my ditch clean of any weeds and mowed and have no problems.	Sep 14, 2011 5:43 PM
74	We do not have any drainage problems on our street...never did...	Sep 14, 2011 5:37 PM
75	NONE	Sep 14, 2011 4:17 PM
76	I have an extended driveway on my property. This driveway needed a small culvert to allow drainage to the new Main Street pond. This culvert is completely on my property and is not on Town right-of-way.	Sep 14, 2011 10:53 AM
77	Ditches were recut 10 years ago.	Sep 14, 2011 10:48 AM
78	None, yet.	Sep 14, 2011 10:37 AM
79	I keep my ditch cleaned out, others do not.	Sep 14, 2011 10:35 AM
80	Weed grass barrier & small rocks - water flows and does not build up. Weeds do not grow.	Sep 14, 2011 10:32 AM
81	Most of my issues are with the Garners Creek group.	Sep 14, 2011 10:26 AM
82	2' x 2'x 1' concrete tile to prevent erosion to street culvert.	Sep 14, 2011 10:09 AM
83	None	Sep 14, 2011 10:03 AM
84	Question: All Town taxpayers should contribute to costs for improving drainage facilities, answered: If the whole Town benefits.	Sep 14, 2011 9:18 AM
85	None, prior owner buried drainage pipe in bottom of ditch.	Sep 14, 2011 9:02 AM
86	None	Sep 14, 2011 8:36 AM

Page 5, Q1. What, if any, improvements have you completed on your property to address drainage issues:

87	Yard contours Culverts Ditches	Sep 14, 2011 8:19 AM
88	None.	Sep 14, 2011 8:15 AM
89	Buried plastic pipes & covered with stone & dirt, planted grass.	Sep 14, 2011 8:13 AM
90	Installed ditch liners 10 years ago.	Sep 14, 2011 8:08 AM
91	None.	Sep 14, 2011 8:05 AM
92	Installed a ditch liner.	Sep 14, 2011 7:57 AM
93	Cut trenches in ditch to keep water flowing.	Sep 14, 2011 7:52 AM
94	None.	Sep 14, 2011 7:49 AM
95	8 years ago I approached the Town with a proposal to put a full culvert with storm cleanouts in my ditch. At the time I was told I could only put in a 4" drain tile, (no permit required). My neighbors and I did this. Four houses in a row, pitched correctly. Tile, stone, fabric, topsoil & sod. We have had no problems with our front yard ditches since. Drains perfectly and we can always cut the lawn! Now the Garners Creek Stormwater ditch in the back is a different story, always plugging and needing cleaning. Why did I have to pay for a liner in that ditch when it is used by everyone? An I am charged for upkeep every year on my taxes? You should be paying me for cleaning it and the easement in my yard! As far as walkers and bikers - they need to learn the entire road does not belong to them.	Sep 14, 2011 7:32 AM
96	None	Sep 14, 2011 7:31 AM
97	We are on the creek off Buchanan Road. We are north of Buchanan where no improvements have been made. We are experiencing major erosion problems and thus drainage issues.	Sep 14, 2011 7:26 AM
98	none	Sep 14, 2011 7:15 AM
99	concrete in ditch to keep front dry	Sep 14, 2011 6:43 AM
100	I have had issues with grass not growing in certain areas or being unable to be mowed as the standing water has forced. I have dug out certain areas and filled in others, and continue to do so on a regular basis as the yard erodes and changes over time. Our road culvert is buried about halfway with sediment now, and I probably won't dig that out because the water wouldn't flow at all. I am in the final stages of putting in a paver path and will make a small "bridge" to get over the ditch to get our mail so we don't have to walk around (corner lot)	Sep 13, 2011 7:48 PM
101	About 3 or 4 years ago we had a drainage pipe installed on the property line that affected 5 properties. The issue was the in the easement there was severe erosion and property damage. We are thankful that the town stepped up and addressed the issue. I do know that it was a difficult decision and that in the end it was taken care. We live on Maple Ridge Dr.	Sep 13, 2011 7:10 PM
102	we tried a plastic tube covered by gravel but that did not last long because of frost lifting the pipe. grass and weeds grew over gravel	Sep 13, 2011 5:55 PM
103	I have tried multiple solutions for the drainage problem (See below for problem).	Sep 13, 2011 5:41 PM

Page 5, Q1. What, if any, improvements have you completed on your property to address drainage issues:

I live at W2565 Fontana Way. I have attempted to run an extended hose out away from my lot. It simply killed grass, shrubs and caused flooding elsewhere. I considered running a buried hose out to the street but I do not have enough pitch and that is actually against the town code as I understand. Most of my solutions have only pushed the problem to surrounding properties and caused problems with my neighbors. My neighbor to the east runs his hose into my lot. I now run a 100ft UGLY hose out to my driveway to get rid of the water during the warm months and cut it back to about 10 feet during the winter so that it does not freeze. (It has frozen twice in the past causing my sump pump to vapor lock and leading to 2 replacements. I have had to replace it 1 other time due to use. My neighbor behind me threatened to call the town because I ran it out to the back 2 feet of my lot. I believe by looking at the plot map that was provided me that the drainage line runs along the back of the lot so I figured that was OK. I did not want to cause a problem so now it is out front to avoid problems. I would love for the town to contact me and give me feasible solutions to my problem. I am also open to absorb some of the cost of any solution. I can't deal with this problem anymore.

104	None	Sep 13, 2011 5:25 PM
105	None. Years ago I asked the town if I could have pipes installed and fill the ditch in and was told I could not even though some of the neighbors in my sub division have.	Sep 13, 2011 5:10 PM
106	Between my immediate neighbor and my home, grading was done to improve water flow; landscape fabric was placed over the grading and completed with stone. Drainage has greatly improved.	Sep 13, 2011 3:29 PM
107	Re-graded around our house. Built up grade around house. Both resolved our drainage issues.	Sep 13, 2011 2:45 PM
108	none!	Sep 13, 2011 12:29 PM
109	N/A	Sep 13, 2011 9:06 AM
110	My drainage issues are due to neighbors changing the grade of their drainage ditches or adding culverts which have raised the grade. There are no changes I can make since I have no grade on the drainage ditch running behind my house and the next lot has a higher grade therefore I can make no improvements without the town stepping up and changing the grade downstream. Drainage in front is a similar issue where the neighbor downstream has added rock and therefore raised the grade causing water to stand in the ditch on my property.	Sep 13, 2011 6:39 AM
111	We keep our ditches CLEAN, weeds and litter are always removed, if everyone did this there would be far fewer drainage complaints. We know because we have seen so many properties in the Sub division across the street attempt to make their ditches "pretty" by filling them with rocks, tiles, sod and ditch liners - it is only a matter of time before all these are congested with weeds or the fix rearranges the grade and their ditch no longer drains. Their are also those that think growing cattails in their ditches is an aesthetic addition to their property! What an eyesore and a drainage stopper.	Sep 12, 2011 9:37 PM
112	Multiple sump pump backup systems due to excessive water levels.	Sep 12, 2011 9:10 PM
113	routed the sump output away from low area	Sep 12, 2011 6:01 PM

Page 5, Q1. What, if any, improvements have you completed on your property to address drainage issues:

114	Professional landscaping improvements done at lot lines in an attempt to improve drainage. The landscaper surveyed the entire lot and was unable to make significant improvements due to my lot and my neighbors lot being flat (no pitch for drainage).	Sep 12, 2011 5:29 PM
115	Removed a large brush patch between my yard and my neighbors yard...improved the grading, and planted grass	Sep 12, 2011 4:38 PM
116	none	Sep 12, 2011 4:34 PM
117	We laid concrete pavers in our ditch to improve drainage. We have shallow ditches on three sides of our property plus the ditch with pavers in the front.	Sep 12, 2011 2:33 PM
118	Attempted to regrade the ditch in the front in order to help the flow of water and put down approximately \$800 worth of rock to help with maintenance due to the standing water (without doing this we had a large amount of standing water which resulted in long grass, mice nests, etc). We also twice a summer have to cut out the excess grass in the ditch in the backyard to maintain water flow. This is messy, stinky, labor intensive work.	Sep 12, 2011 2:02 PM
119	None..... I was here the day they set the pipe.... I knew I was in for mess.... the town was here, the developer was here and the builder was here. When I spoke up no one cared to listen.... so if a pond develops in the ditch let it be... nature will take care of it.. at some point... and if the timing is good we get an ice rink out of it....	Sep 12, 2011 12:54 PM
120	None, the drainage on our property is pretty good compared to most of the homes in our area.	Sep 12, 2011 6:47 AM
121	installed ditch liners on my own. town installed 8" drainage pipe with open ditch above pipe - drainage works fine in those two areas.	Sep 11, 2011 2:59 PM
122	None. The town approved a plan to add a liner to our shared ditch, but when estimates came in, it was too costly for just two homeowners to complete.	Sep 11, 2011 2:13 PM
123	None	Sep 10, 2011 2:59 PM
124	added drain tile, back yard doesnt drain well to front	Sep 10, 2011 7:33 AM
125	no improvements to drainage but I had to build a berm around my daylight windows to a high level so my house does not flood. My backyard fills with water every heavy rain. Thank the Firemen who helped me years ago with sandbags it helped stop a huge disaster...	Sep 9, 2011 1:52 PM
126	None But it did cost us \$3000+ because our home was built without ditches because none were required and the board decided we did. I should also add that they (the board) agreed at the time our home was built that a ditch was not required on the Fieldside Lane frontage but nothing mentioned about the Valleywood side. When the county came in they dug on the Fieldside Frontage NOT the Valleywood side. They (the county workers) asked who we we had ticked off on the board stating that a ditch was not necessary. Property Value???	Sep 9, 2011 12:26 PM
127	Retrenching the sump pump drain outlet to be closer to the edge of our lot.	Sep 8, 2011 5:23 PM
128	cleaning out cattail and silt from ditch	Sep 7, 2011 8:24 PM

Page 5, Q1. What, if any, improvements have you completed on your property to address drainage issues:

129	berm installation	Sep 7, 2011 4:39 PM
130	NA	Sep 7, 2011 3:58 PM
131	Regrade bottom of ditch.	Sep 7, 2011 3:31 PM
132	none	Sep 7, 2011 2:55 PM
133	Filled in a low spot in my ditch with a little dirt and grass seed.	Sep 7, 2011 2:22 AM
134	None	Sep 6, 2011 11:30 PM
135	I stomped down some high spots in the ditch and it now drains fine.	Sep 6, 2011 8:51 PM
136	we had to dig up the drain pipe that goes from the sump pump/downspouts to the ditch....roots were blocking it. We replaced it with a larger pvc pipe.	Sep 6, 2011 7:47 PM
137	None! Leave as is. If people would leave it the way it was there would not be a problem!	Sep 6, 2011 5:48 PM
138	re-graded ditch	Sep 6, 2011 3:57 PM
139	We have no drainage issues on our property and never have.	Sep 6, 2011 7:08 AM
140	None, ditches are ditches.	Sep 6, 2011 1:33 AM
141	I had a couple of spots in the ditch where water was not draining do to grade issues. I used a shovel, hoe, and a level to eliminate the raised spots. It was a simple easy fix at no cost to the town and only the cost of grass seed for myself. Problem solved.	Sep 5, 2011 8:39 PM
142	Tried adding dirt to the ditch to bring up the bottom. Water has been an issue since I bought the property 7 years ago.	Sep 5, 2011 6:27 PM
143	we had the back and side yards regraded because our basement was flooded multiple times. the regrading did help prevent the basement from flooding	Sep 5, 2011 9:39 AM
144	We have tried to dig and provide a better channel for the water to flow down our ditches. This has been unsuccessful as the water sits stagnate for months in the spring on the even-numbered side of Stillwater Trail.	Sep 4, 2011 3:18 PM
145	When our lawn was seeded in 1996 we personally paid for the landscaper to grade our ditches in a professional matter so we would not have drainage issues.	Sep 4, 2011 10:25 AM
146	None	Sep 4, 2011 4:10 AM
147	Routed downspouts to help with drainage as much as possible.	Sep 3, 2011 3:10 PM
148	None, just doing my best to keep the ditch open and clear for water to flow. Because I did have covered ditches in my neighborhood, I believe water has be moving underground from covered ditches that may be plugged or have poor drainage. Since I'm my elevation appears a little lower than others, my sump pump runs more frequently than my neighbors. I've had 2 sump pump failures in the last 5 years and both times I was out of town, which caused water damage. Once in July & once in November.	Sep 3, 2011 11:34 AM

Page 5, Q1. What, if any, improvements have you completed on your property to address drainage issues:

149	Backyard and side yards were regraded to improve drainage in 1997 when we completed the landscaping. Settling over the years has reduced the ability to drain, so we often have wet areas in the sides of the back yard. The houses around us were built after ours, and their foundations may have been set higher than ours.	Sep 3, 2011 10:31 AM
150	None yet. Plan to regrade per town recommendation.	Sep 3, 2011 9:55 AM
151	cement liner	Sep 3, 2011 7:48 AM
152	None	Sep 2, 2011 1:06 PM
153	I installed gravel in bottom of ditch.	Sep 2, 2011 11:41 AM
154	None	Sep 1, 2011 11:23 AM
155	Drain tile was added to ditch a while back, without the drain tile, ditch would be wet nearly year round. Ditch between Lavender and Pinecrest is wet ALL year, even in current drought, ditch still has standing water. That is not drainage, that is retention. Water backups in this area has caused property damage including killing trees and shrubs in the vicinity.	Aug 31, 2011 7:11 PM
156	i keep my culvert clear and mow the ditch	Aug 30, 2011 6:04 PM
157	None at this time.	Aug 30, 2011 3:07 PM
158	Ditch has been lined with pipe and stone.	Aug 30, 2011 12:03 PM
159	We have an open ditch on two sides of our property. As the homeowner benefiting from the larger area, we clean out peoples' garbage that they throw there, mow and weed the ditchline. During heavy rain, we have standing water in one area that recedes in time. Our neighbors who also have property backing onto Eisenhower do the same maintenance to the ditchline. Taxes are high enough, especially during these trying times and we're tired of of the whiners who are too often not responsible or paid up property owners trying to attain something for themselves on the backs of other residents. If there are drainage issues due to irresponsible building by developers, then they, who are destroying the natural area and gaining financially from their developments, should pay for any required work.	Aug 30, 2011 10:39 AM
160	2010 drainage pipe to front of property. Approved by the Town of Buchanan.	Aug 29, 2011 2:04 PM
161	None.	Aug 29, 2011 9:04 AM
162	None, was told the city would not allow digging out a trench in our ditch to improve water flow. Our backyard is consistently swampy after rain due to the neighbor behind us being built up 3 or 4 feet higher then surrounding propoerties. Not sure what my alternatives are back there. Was told to wait for the study results.	Aug 29, 2011 6:30 AM
163	Landscaping, grading, mudjacking	Aug 29, 2011 5:27 AM
164	Landscaping to help with backyard drainage issues.	Aug 29, 2011 3:41 AM
165	Lined the ditch with rock, regularly remove / trim the grass to ensure a good flow of water	Aug 28, 2011 5:50 PM

Page 5, Q1. What, if any, improvements have you completed on your property to address drainage issues:

166	Placed a drain tile plastic pipe beneath gravel in ditch in front of house to prevent standing water. It worked just fine for 8 yrs now. Don't need curbs, gutters and sidewalks.	Aug 28, 2011 3:54 PM
167	None	Aug 28, 2011 3:12 PM
168	added drainage tubing under ditch/ leveled , sloped, and rocked bottom.	Aug 28, 2011 1:30 PM
169	My wife and I have spent \$750 to \$1,000 on landscaping materials to mask the standing water issue. The water is still present, but is hidden by the stone that we have laid throughout the ditch. We live on a corner lot, so we have issues coming from two ways. When I purchased this property, I was willing to pay out of my own pocket for culverts and the leveling out of the ditches. The town told me that I could not do this in my subdivision, but yet two houses down the road from me on Marion is a house with buried culverts.	Aug 28, 2011 10:25 AM
170	some installation of drain tile (graded and buried) to address backup of water in ditch - original drainage/survey maps indicate our property to be highpoint with drainage to flow in both directions from our driveway. Subsequent development impeded the proper flow that used to occur - causing standing water, stench, and rodents forcing action. Additional issues in backyard due to similar changes of initial graded flow (by others) are still outstanding.	Aug 27, 2011 10:13 PM
171	We consistently mow our ditch to try to keep the weed growth down however the ditches are continuing to erode more and more so the grade is getting steeper every year to mow it. The house across the street put drainage ditches in their yard years ago and now there is always flooding of the street on Countryayre and Springfield leading to breakdown of the asphalt.	Aug 27, 2011 3:25 PM
172	None yet,But have priced out a concrete open pavers 2' X 7' to be layed on 3-4" compacted bed of gravel.Was just by to pick up a Resident Issue/Concern form and was told about this meeting.I am looking for the towns direction and level of concern involving Main St. While the open water in our back yards now is nice (could be nicer with some green plantings) The open water in our front yard ditches needs to be addressed.The town has never reset our ditch line in 15 years.	Aug 27, 2011 12:18 PM
173	A drain tole in the ditch that fronts my home.	Aug 27, 2011 11:41 AM
174	Put 8 yards of dirt around our house. Keep it mowed and put gravel in ditch where there was standing water.	Aug 27, 2011 10:30 AM
175	I stayed even with the culverts with success. Some in the sub-division have added stone, pipe, fill and what-ever to get the ditch to flow causing others to back up. Every ditch that is higher than culvert grade should be dug out and every ditch lower than culvert grade should be filled to grade. Any ditch with sitting water should not be allowed to run their sump pump to the ditch or the down-spouts from their home	Aug 26, 2011 2:55 PM
176	Removed built up soil from the bottom of the ditch. Regraded the ditch and added rock to ease the flow of water.	Aug 25, 2011 3:01 PM

Appendix C, Additional Comments

Provide any additional comments on Town drainage & stormwater facilities:

	Response Count
	161
answered question	161
skipped question	126

Page 5, Q1. Provide any additional comments on Town drainage & stormwater facilities:

1	Everything is fine now.	Oct 3, 2011 6:27 AM
2	For those that have a real issue with drainage, I think it's reasonable to address the issues on case by case bases. I don't want "sweeping changes" for uniformity or "just because". I don't know anybody on this entire street with a drainage issue...if there, I would like to know what their definition of "issue" is. If you have any questions please let me know. Darryn Davidson	Sep 30, 2011 1:04 PM
3	Water problems and their solutions must not endanger the rural feel of the community.	Sep 30, 2011 9:37 AM
4	This same drainage ditch collects water from about 30 lots in the plot. Our side of the ditch is very steep and there is no way to cut the grass safely. This could be eliminated if a drainage pipe was added from the street ditch to the creek. It could be on top of the present ditch on the upper end and be level with the creek on the lower end. This would eliminate the deep ditch on one end and the need for riprap on the other end. This ditch holds water in it for some time after each rain and is difficult to cut the grass. There is a creek that flows across the back of our lot that the water from the area all the way from Calumet Street drains into. Last year when we had 2" rain, the creek water level was only 12" to 18" below the bottom of the patio doors and the finished floor of our basement. Any improvements the Town makes to solve the Town drainage problems for other homeowners may increase the volume of water in the creek which could ultimately flood our basement. The volume of water has already been increasing after rains and the past few years the shoreline has been eroding. The Garners Creek Commission has approved to upgrade the shoreline in 2012 to stop erosion. In order to prevent flooding, the Town will have to work with the Garners Creek Commission on any changes in drainage which increase the volume of water flow in the creek. Please call us on this if you need more information.	Sep 30, 2011 7:50 AM
5	Due to the economy and high cost of living at this time it could effect the ability of the homeowners in this community to keep their home. The problem is not the road as much as it is the abiltiy of the ditches to keep up with the sump pumps going constantly for the homeowner to keep water out of their basements.	Sep 30, 2011 7:38 AM

Page 5, Q1. Provide any additional comments on Town drainage & stormwater facilities:

6	Let the people who have a problem fix the problem themselves with help from Town but pay cost themselves.	Sep 30, 2011 7:34 AM
7	If property residents have a problem fix problem if they want to pay cost of improvements.	Sep 30, 2011 7:32 AM
8	If possible, charge those responsible for improper drainage easements to fix them. We have drainage problems in backyard due to neighbor's landscaping.	Sep 30, 2011 6:54 AM
9	Frankly, 30+ complaints per year, based on total number of households in Buchanan is not a huge number.	Sep 30, 2011 6:50 AM
10	I think curb, gutter and sidewalks would be a positive step for the Town to take. Currently, the roads are so narrow that I feel they are extremely dangerous for walking, biking, or children playing. When I take my baby and dog for a walk, I constantly feel the need to dodge oncoming traffic by walking as far onto the grass along the road as possible, which is not easy to do with a stroller. Also, it's hazardous for driving when there are cars parked along both sides of the street. I think that property owners would take more pride in the walking area in front of their houses if there were curb, gutter, and sidewalks. Right now, I've seen garbage and broken bottles left by the garbage collectors, and even dead birds, be neglected for weeks, probably because property owners feel that it's in the "street." This is also where people walk, and it's gross, and unsafe, in the case of broken bottles, to be forced to dodge garbage and bird carcasses, while walking. I feel curb, gutter, and sidewalks would decrease this neglect.	Sep 29, 2011 11:02 AM
11	I fully support curb and gutter. I understand that the history of this town, but as a resident for 15 years, and seeing how nice and clean curb/gutter appears, I think it would benefit all of property values.	Sep 28, 2011 4:52 PM
12	I feel that drainage is a town issue not a neighborhood issue. The water that flows through my ditch after a storm is not my water, my water already flowed through and is in somebody else's ditch. I'm stuck with other people's water in my ditch...:) "see what I'm saying" We as a town share the burden for having proper drainage, not individual streets or neighborhoods. Town parks is a great example, should just that neighborhood pay for the park...I think not, we all benefit. A difference would be if a street or neighborhood wanted sidewalks in an isolated or no traffic area. I feel that the people wanting those sidewalks should pay for it not the town as a whole. But with that said if the town decided to put sidewalks on Eisenhower, Emmons or Buchanan Rd's, that I consider a town issue because of the great benefits to all. Lastly we all have to remember where we live, IN A TOWNSHIP not in a city or a village. That is one of the biggest reasons why I purchased a home in the TOWN of Buchanan. Thank you for allowing us to post on this matter. Respectfully, James Schaut w2951 Springfield drive	Sep 27, 2011 5:11 PM
13	I have no problems and do not wish to fund properties that have problems.	Sep 27, 2011 4:53 PM
14	Has anybody evaluated the impact on Garners Creek if additional water is funneled into it? How much water can the creek safely handle? On heavy rainfalls I can hear it roaring in my back yard. The Town board has done a good job on its approach to addressing the drainage issue. Thank you and keep up the good work.	Sep 27, 2011 7:59 AM
15	There may be some places that need help, but I like the feeling of the town with ditches. This is why we live here. If I waited curb and gutter, I would have	Sep 26, 2011 7:25 PM

Page 5, Q1. Provide any additional comments on Town drainage & stormwater facilities:

bought a house in the city. Thanks

- | | | |
|----|--|-----------------------|
| 16 | I believe the best option to improve drainage in problem areas is to re-grade existing ditches to meet a comprehensive drainage plan. Installing storm sewer and curb/gutter will probably increase the suspended solids flowing through the system and result in spending significant money to re-do our storm water management plan to meet new DNR regs, | Sep 26, 2011 6:50 PM |
| 17 | We are a rural township. If property owners have drainage issues, they should pay to repair (not entire township). | Sep 26, 2011 6:28 PM |
| 18 | I want to make clear that I believe that special assessments, if necessary, should be to ALL parties benefitting from that drainage area. In our case, drainage from 35 homes came through our yard to the creek. Assessing just these few houses that took the brunt of this water would be patently unfair. All 35 homes should be assessed. If you choose to use general tax funds to address drainage also, that would be acceptable to me provided it not be used as an excuse to put in sewer and gutter and so on. We are not in the city and I don't want sidewalks, gutters and sewers, and the associate cost. We would only want the bare minimum work done to adequately address the issues and maintain the suburban/non-city feel of our area. | Sep 25, 2011 1:49 PM |
| 19 | Would it be prudent to compare current drainage issues with the originally approved Grading and Drainage Plans and "compliance" of said plans, (and any modifications which have been made by homeowners/property owners or their landscapers which affect/violate that compliance and create drainage issues) be corrected at the expense of those individual homeowners? How can we be guaranteed any of the recommendations made will actually solve drainage issues in our town and not create new problems in the Town of Buchanan or neighboring towns? In tough economic times, I support the status quo (i.e., leave the system as is). | Sep 25, 2011 10:14 AM |
| 20 | Drainage has been an issue for the development where I live since the beginning and has only gotten worse over time due to many of the factors outlined in the study. However, it is the failure of the Township to take accountability for monitoring and controlling the correct installation of drainage & stormwater facilities, according to the engineered drainage plans, by both the developers and homeowners within the development that has led to the situation at hand. Nevertheless, the time is now to take the action that frankly is long overdue. What and how it should happen is the debate, but in any case, the financial liability should absolutely be shared between the Township and the impacted homeowner's. | Sep 24, 2011 7:25 PM |
| 21 | We moved to the Town of Buchanan because we liked the lack of curb and gutter and also street lights. I would not be happy with having to pay for something that does not need fixing in my neighborhood! | Sep 23, 2011 3:37 PM |
| 22 | It would be great to have a wider roadway for bikes and walkers. During the winter the roads are barely wide enough for two cars, so walking is out of the question. With all the new houses with kids and pets it would be safer to walk with a wider road, but please no sidewalks this is a town. | Sep 23, 2011 1:45 PM |
| 23 | Our lawn and ditch was put in by professionals when we built our home and we have maintained and kept the weeds etc. cut but are upset with the water problems that continues every year and as we get older it is harder to maintain. Why were these new plans approved by the Town and now we have the problem. | Sep 23, 2011 9:53 AM |

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I think therefore that the Town is responsible for correcting the problems. We are willing to pay our fair share but the Town has to accept the responsibility for some of these problems. We can't ignore this problem, we see Kimberly putting in water, storm sewers, curb and gutter on the Emons property and would like to know how that is handled financially. Maybe people will want to annex their property to another Town if the problems are not resolved. We pay around \$4,000.00 a year on taxes now and we do not want taxes to keep going higher. Every spring the water goes all over the road and we have to call so the Town can open up the culvert under the road, we have had this problem every year. Whatever decision is made-just fix it right so the water drains properly. Your engineer told our neighbors the Verstegens that their ditch was okay and we know the water stays when it gets to their property-it has to be too high or the water would flow thru.

24	If you, (the Town), fix the ditches the way they should have been. We don't need bike lane and curb! There's a depression, where do you live, peolpe don't have a lot of money. Wake up!	Sep 23, 2011 9:38 AM
25	We did not have standing water issues in our backyard until the subdivision behand us was built in the City of Kimberly. The ditch issues have been a problem since we built in 1996.	Sep 23, 2011 9:33 AM
26	The "drainage study" postcard sent residents was misleading - residents should be made aware that "drainage" may include curb and gutter, etc. and great expense!!	Sep 23, 2011 9:28 AM
27	We realize some work needs to be done. However, for us personally, if the cost would be substantial it would ruin us financially (One of us is on disability and the other works for a very low rate of pay due to previous job loss).	Sep 23, 2011 9:24 AM
28	The Town really didn't do a very good job at all when homes were being built here. They should have made sure everyone that was putting in a yard was doing it correctly. We don't have it as bad as most because we live on the west side of Springfield Drive. But feel sorry for all the residents that live down from us. What a mess. In this economy we cannot afford to take on any extra cost to be repairing our ditches. We have one chil in college and another on his way and one more after that. Like everyone, times are way too tough right now. Having trouble paying for gas, food, clothing the way it is. Please don't make us have to pay for your mistake!	Sep 23, 2011 9:19 AM
29	I am living on retirement income and can't afford to pay more property taxes or assessments. Leave things as they are!!! If you have to do something use Optin #4 for financing!!	Sep 23, 2011 9:08 AM
30	Enforce your rules. Fix our road - falling/crumbling/pot holes - highly used area from Main to Eisenhower! Thanks for listening. P.S. How long is it going to take to replace fences on Eisenhower?	Sep 23, 2011 9:04 AM
31	This is a town wide issue for many years. Things (drainage) were not done correctly when the roads/house lots were established. All residents should have to pay for any corrections needed.	Sep 23, 2011 8:58 AM
32	Individual property owners could fix their ditches by adding drain tile and rock at their own expense.	Sep 23, 2011 8:54 AM
33	Economic times are hard and lam on a limited income. I lived in Buchanan my	Sep 23, 2011 4:07 AM

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whole life. If I wanted curb and gutter along with the expense I would move to a village or city. These issues should have been addressed when areas were being developed. The land developer at that time should have paid for what was needed in that area. I dont have money to be paying for curb and gutter or storm sewer. With the slump in real estate to think this would increase our property value is a joke. If and when the economy turns around is when the problems should be addressed again. Dont financially hurt people who are already hurting that dont have a problem.

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|----|---|-----------------------|
| 34 | we are already paying for Gardners creek | Sep 22, 2011 7:06 PM |
| 35 | We bought a house here because we like the way it is! If someone has a drainage issue, they should address it themselves and not drag others into it. | Sep 22, 2011 2:17 PM |
| 36 | I don't understand why the town hired a different engineering firm to study drainage when most of the area in questions lies within the boundries of the Gardners creek storm water facility. While serving on this board, I was told our series of open ditches provides the town with excellent drainage at a very low maintainable cost. I can't believe one of the options made available is curb and gutter, which help little in reducing our total suspended solids which was mandated by the DNR through NR216? I would hope our elected officials take advice from gardners creek which best solves our small drainage issues. | Sep 21, 2011 7:48 PM |
| 37 | We do not support any change to the ditch. We have lived at our home on Stillwater Trail for over 12 years. During that time we have learned to live with the sometimes wet ditch conditions. The ditch is not a health hazard nor a safety issue. It may remain wet but adequately drains in the event of a large storm. Even if it fills with water, after the storm it quickly subsides. I have seen the same or worse conditions in Appleton where they have curb and gutter. I do not feel that it is fair to try to make the property owners pay for the expense when whoever graded these subdivisions did it improperly to begin with. It is not our fault that it was done incorrectly. I feel that the expense, if any, should be spread out to everyone in the town through taxes. The Garner's Creek/Stormwater cost is spread out among all taxpayers. I am not affected by that but yet is on my tax bill. How is this situation any different? This is a slow economic time in our country. People are struggling to keep their jobs, pay their mortgage and put food on the table. This is an unnecessary cost for everyone. It has done no damage for the last 15 years. Why now, when times are hard are you asking people to come up with thousands and thousands of dollars that no one has? Spending money to improve the ditch that has been in this condition for the last 15+ years should not be something that any resident of Buchanan should have to worry about paying for. Also, many people are not even aware that this is under consideration. Only 3 of the residents on my block knew anything about it. There should have been a letter sent out stating the problem, the report and the time of the meeting. It is a known fact by people in the marketing field that post cards are considered by the general public to be junk mail. A lot of people never even saw the postcard. How can such an important decision be made when the very people it affects are uninformed. This amount of money is life changing to many families these days. Even the least expensive option is way above what a lot of people can afford. And who is to say that after spending that money, the situation will be improved at all? Also, there are people who still do not have access to the internet to fill out this survey. It is not fair to them because this will affect them too. For example, one of my neighbors is retired and does not have access to the internet. Bottom line I hope that you will take all these things into account before spending the money we don't have. | Sep 21, 2011 10:58 AM |

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- 38 When considering options for solutions to drainage issues, the town should consider a balanced approach that provides solutions that are appropriate for the particular area and no solutions or change where none is needed. The town should also consider the environmental impact that hard drainage solutions such as stormsewer will have on water quality and control. The Garners Creek watershed commission has completed several quality facilities in the town that have made a significant improvement on run-off control. Natural grass ditches significantly enhance the effectiveness of those facilities. Putting in all hard-surface drainage throughout the town would drastically and negatively impact water quality and drainage. Many of the issue at the intersection of Main St., Emoms Rd. and Springfield have been resolved since the Main Street Pond construction. Please consider this project as an example of how drainage issues can be solved and also consider that many of the complaints that have been reported in this area are from before the pond was completed. Sep 20, 2011 7:19 PM
- 39 We never had to do anything, due to the natural lay of the land, the way god intended , all the water drains naturally to the creek. Years ago we never had traffic to worry about. We had nature at its best, the reason we moved here. Now no farm land, and the "city " Is trying to move out here and enforce there way of life on us. We do not LIKE it one bit. Leave us alone to enjoy what little nature is left. NO curb and gutter, NO drainage problem here at all. Move your sub-divison somewhere else, and spend your moneoury on something else, like education for the kids, and feeding the hungry. Emons do not own us. And we love our place, and hate all your houses and duplexes. REALLY this is all the news we have around here????? REALLY come one. Think about it and use the college education you thinks is so great! Sep 20, 2011 4:26 PM
- 40 The town of buucanan should have addressed this issue when the sub divisions were first built.Poor drainage and lighting should be fixed with town finances. Sep 20, 2011 12:52 PM
- 41 It was very obvious when we moved here in 2001 that the job done was done very poorly. This should NOT be the responsibility of the homeowner as it should have been done right the first time with the town overseeing the construction of the ditches. Where does the responsibility for this joke of a drainage system lay? Surely not with the home owner. A lot of these questions may be answered differently after knowing the full facts of this drainage problem. We have ditches on two sides of our home and paying for this will mean we have to sell our home. If it will even sell with this problem. Sep 20, 2011 12:35 PM
- 42 The Town needs to look at each case by case problem. If the town made the house owners remove the 4" culverts and gravel over the top of the culverts. Is is was cause grade problems. The Town needs to watch the constuction that cause grade problems. Sep 20, 2011 8:11 AM
- 43 Ten years agoe, I started mowing the road ditch along Buchanan Rd. Now all of the residents on Tree Line Court mow their ditches along Buchanan Rd. It looks great and doesn't cost the town anything. With the current economy, we can not afford more taxes! Sep 19, 2011 7:22 PM
- 44 The major reason most people moved here in the first place was much lower taxes than the City of Appleton. Additionally the rural feel was an added attraction. I don't believe anyone would benefit from having a sidewalk in our short street - we have no problem with the many children in the area. In this time of declining property values you will likely put many people "under water" on their loans since with dramatic costs for these drainage "improvements" added to their loans people will not be able to recover this on the sale of their property - it will Sep 19, 2011 1:00 PM

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ruin the stable economic structure of this community. BAD IDEA!!!!

45	I do not see the need on a cost to benefit ratio. Curb and gutter, sidewalks, etc. are all completely unnecessary!!!!!!!!!! Part of the appeal of our neighborhood was the rural feel, and why we built in the subdivision, as we asked about these types of upgrade before purchasing. We were told it would "Never Happen". I feel as if we were lied to during the purchase process by Town of Buchanan representatives.	Sep 19, 2011 9:42 AM
46	If town members feel that this is a necessary project to undertake, it should NOT be at the expense of the property owners affected. It is no fault of ours that these subdivisions were not properly graded/inspected when they were developed. The Garner's Creek Stormwater cost is spread among all taxpayers and this should be too. As homeowners affected, the cost of solely bearing the cost of a ditch regrade would put us and every neighbor who we talked to in a financial bind. Of the 12 homeowners on our street, in the past 3 years, 5 have lost his/her job and have had to take a lesser paying job. Others are concerned that they may lose theirs too and are not looking for ways to spend money. Also, property values are decreasing by 3% annually. As far as our neighbors and we are concerned, this project comes down to cost and who is paying for it. If we have to pay for it solely, we would prefer nothing be done. Being located on an approximately 120' by 130' corner, the lowest cost, short-term option would cost us \$21,205. Really? For something that, in our opinion is no better than we have now. The highest cost option would be \$53,750. Really? Are we to believe that our property value would increase from 153,000 (not counting the 3% decrease for each of the past several years) to \$206,750 simply by revamping the ditch? Realtors are telling us absolutely not! We and our neighbors absolutely cannot afford this and should not have to bear the cost to fix a drainage problem simply because it happens to fall in a ditch, that is not our property, that happens to flow past our houses.	Sep 18, 2011 4:54 PM
47	people should not be allowed to create their own man made drainage system to drain the water from their own yards. this causes more water to drain and collect in the neighboring yards which causes flooding of the drainage ditch	Sep 17, 2011 9:16 AM
48	I think the town is over reacting. Individual property owners should be expected to make reasonable accomadations to maintain their ditches. In rare cases where drainage problems cause flooding it may be necessary for the town to participate in resolving these problems.	Sep 16, 2011 3:49 PM
49	Think long term. Would be great to have a bike trail in my area!	Sep 16, 2011 9:43 AM
50	As long as the town inspects the ditches when they are put in and monitors them afterwards. They should then not allow people to add to thier ditch hight so there would be no problems with draining. Make the developers responsible for the drainage before lots can be sold.	Sep 15, 2011 6:14 PM
51	Three homes on Woodstock Lane have an issue with flow do to, homes 281,289, have filled in the ditch and, upkeep is poor.Home 295 still has a ditch and, is kept up, if 281,289 were re-ditched there would be proper flow and, no problems.The way it is right now, whenever it rains heavily,281 and 289 get partialy flooded.This ditch has been dug out in the past, but has not been kept up.Property owners should be part of the solution, not part of the problem.	Sep 15, 2011 11:32 AM
52	Based on the open house, the only two logical options in my opinion are either complete curb and gutter or nothing but continue to maintain and do minor ditch	Sep 15, 2011 11:28 AM

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repairs. There is standing water all over the place in the lavender downs area, the roads suck and are too narrow to even walk your dog or ride a bike without making cars move to the other lane. I think Emons for example is dangerous to walk or ride on because of this. Complete curb and gutter with decent roads will dramatically improve the appearance of the subdivision, improve home values and provide a real benefit to everyone affected. the other options are just wasted money in my opinion, since I don't see any benefit to me and still end up with ditches, especially at the estimated costs. If I have to spend 7-8k, I'd rather spend 11 and have it done right. Take a look at some of the concrete roads and curbs in Appleton such as my parents road Edmund Drive, 40 years old and they still look practically new. Do it once right and be done for a long long time. The costs seem high to me, a million dollars a mile? I think town money should be focused on drainage issues. This should have been done correctly to begin with and town should be at minimum partially responsible. Understanding complete funding from the town is likely not possible, special assessments make sense to those receiving the upgrades to pay the balance.

53	We have enough ponds. Pedestrian, bicycle and parking facilities: Who cares, this is a Town. No changes needed in my neighborhood. Drainage solution 5-10 years of 10+ years: Depends on cost? My neighborhood doesn't have a problem.	Sep 15, 2011 10:20 AM
54	Even if there is poor drainage in some areas of the Town, I and my neighbors would much rather spend our money on living expenses and NOT the ditch. Thank you for listening.	Sep 15, 2011 10:10 AM
55	Hybrid financing option. Several areas of local roadway drain very poorly with long standing stagnant water. Drainage would be adequate if roadway was repaired/replaced.	Sep 15, 2011 10:04 AM
56	Individual neighborhoods should be involved in localized changes. How will changes mess up sump pump operations?	Sep 15, 2011 10:00 AM
57	The property owners who filled in their ditches without permission should have to pay more for screwing up the ditch grade in the first place.	Sep 15, 2011 9:56 AM
58	Turned in two concerns already. Our ditch was regarded by the Town some years ago and it's still on the map in orange, why?	Sep 15, 2011 9:52 AM
59	Several areas have been improved by the County/Town. Very helpful work. Keep going on existing areas that have not been improved.	Sep 15, 2011 9:50 AM
60	If everyone was given 60 days to make their ditches even and lined with everyone else's and if they do not comply then the Town can do the work and charge them. Some people have weeds and cattails growing and just leaving a cess pool mess. Everyone needs to get on the same page and even so the drainage works properly. Re-ditching with no roadwork, driveway and culvert replacement is a good option.	Sep 15, 2011 9:32 AM
61	My ditch is filling in above my driveway due to blocked culvert. Aquatic plants are clogging the culvert.	Sep 15, 2011 9:23 AM
62	It's terrible!	Sep 15, 2011 6:32 AM
63	Make each neighbor responsible for being in compliance	Sep 15, 2011 4:03 AM
64	good since second pond went in down the street	Sep 14, 2011 8:45 PM

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- 65 First and foremost, we would like to know when the drainage issue in the Town has now become the responsibility of the homeowner? When we purchased the property, we bought under the assumption that our property value would increase over time and not become a flood zone. With what is proposed, the Town is turning my property into a property with no saleable value. With this in mind, we strongly oppose any changes to the current drainage provided. It is our understanding that any changes made to the current drainage will only move water faster to the drainage ditch (Garners Creek) in our backyard. With no plan in place by the Town of Buchanan to address the amount of water from the Town of Harrison that flows through Sprangers pond into the drainage ditch (Garners Creek) through our backyard, the Town should have thought this through before homeowners invested lots of money into purchasing their properties. This area cannot handle that amount of water flowing that quickly. The homeowners along Barberry and Briarwood from Greenspire to Block have already paid once to have this area dug down 5' to improve drainage and prevent flooding. The area from Greenspire to Block with 1" or more of rain becomes 8-15 ft. wide and 4' or more deep with water flowing very fast. The water has come very close to coming over the road at Greenspire, Hickory Park and Block. This is a safety concern not o mention flooding. With water moving and arriving more quickly and no plan or change made to the water flow from the Town of Harrison, we believe this area will now flood and property values decline. The cost of this to the taxpayer is ridiculous and lots of money spent that does not add value to our property. The Town needs to go back to the original developer and engineer that approved all this. Obviously once again the issues at hand were done for short term and not to handle all the water that is now flowing. You can't keep putting a bandaid on it thinking someone else will pay for it. The Town obviously made some big mistakes and now wanst the homeowner to foot the bill. This is blindsiding us. Sep 14, 2011 7:14 PM
- 66 Given the state if the economic climate in Wisconsin, and our town, the financial burden is not feasible. We are struggling to keep our house, let alone an assessment because someone wants curb and gutter. Sep 14, 2011 7:05 PM
- 67 We have no drainage problem and want no changes-even if we incurred no charges. Our family is struggling to recover from my husband being out of work for 6 months. Any financial cost, no matter how long the time frame for payment would put us in a financial crisis. We just did the math on the options being considered and the costs are between \$10,000 and \$20,000 (which was the cost of our lot 13 years ago). This is unreasonable and we should not be forced to absorb this cost! We have no interest in adding sidewalks to our neighborhood that would eliminate the playing area for our children and cause privacy issues to the front rooms of our home. Our children are old enough to bike on the street and therefore would not benefit from sidewalks. In addition, having to clear the sidewalks in the winter would be a hardship for our elderly neighbors. We have NO interest in living in a construction zone while these so-called improvements take place. We are happy with our neighborhood as is. Please do not force these changes. Sep 14, 2011 6:58 PM
- 68 the residents that have water problems are the residents that have filled their ditches, or have planted them with schrubs preventing proper flow. Therefore those residents, should pay to have a backhoe dig out their ditches to original. Problem solved! Sep 14, 2011 6:35 PM
- 69 Apparrantly the town and developer screwed this up to begin with and we should not be held liable especially in this type economy ! If anything is to be done it should be paid for by cuts in other services and any type grants that are Sep 14, 2011 5:43 PM

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available. These bids shown on the hand out seem very high when I checked with some contractors. If everyone has the ditch cleaned out and the grade is improved then that in itself would be a good improvement. People should not be allowed to grow cattails and let the ditch become a mess. Concrete liners that some have installed are great for the water flow and maintenance of the ditches

...

70	LEAVE THIS AREA ALONE EVERYBODY HAS SOME STANDING WATER ON BIG STORMS. NO CURB AND GUTTER CAN FIX A 100 YEAR STORM.	Sep 14, 2011 2:57 PM
71	The addition of the Main Street pond significantly improved drainage in the area of the Main Street and Emons Rd. intersection. Many of the issue reports may have been from before the pond was completed.	Sep 14, 2011 10:53 AM
72	Get it taken care off!!	Sep 14, 2011 10:48 AM
73	What services do we get now?	Sep 14, 2011 10:35 AM
74	All Town taxpayers should contribute to costs for improving drainage facilities - a percent of total cost.	Sep 14, 2011 10:26 AM
75	Spring thaw clogged culvert with ice causing street over topping/refreezing almost every year.	Sep 14, 2011 10:09 AM
76	Needs to be re-assessed.	Sep 14, 2011 8:36 AM
77	Additional consideration should be given to make sure large pave areas meet drainage standards. Holy Spirit Church's parking lot for example - not constructed per drainage plan.	Sep 14, 2011 8:19 AM
78	Standing water, neighbors have "improved" without approval.	Sep 14, 2011 8:15 AM
79	Re-direct water going to Garners Creek via main road ditches.	Sep 14, 2011 8:13 AM
80	Have all home owners correct the pitch on their ditch!	Sep 14, 2011 8:08 AM
81	Developers should be held accountable for proper drainage!	Sep 14, 2011 8:05 AM
82	Regarding would be a plus.	Sep 14, 2011 7:52 AM
83	Leave our ditches alone!!!	Sep 14, 2011 7:49 AM
84	Water sits in all areas around our house. Multiple payments would be nice.	Sep 14, 2011 7:34 AM
85	I understand that this is a problem for the town. I am not sure what the solution for drainage issues are. Is it a possibility to go back to the subdivision developers to pay for the poor drainage engineering? The question I have is how did this happen, is this the fault of the private developers or the town. I want to partake in further debate and have a clear understanding as to what this will cost. I strongly oppose curb and gutter. I moved to Buchanan because the area gave me feel for living in the country rather than the city. Please do not put in curb and gutter.	Sep 14, 2011 7:31 AM
86	Storm sewer would be my first choice. Choices C1, C2, D1, D2 would not be a permanent fix because of the lack of appropriate grade. Option B would last longer however the cost to improve to option A is so minimal I think it would make the most sense to fix the problem permanently and fix it correctly. The	Sep 14, 2011 7:22 AM

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	Town needs to pick up the tab as it was the Town who approved the developers lack of appropriate slope.	
87	Erosion on Garners Creek.	Sep 14, 2011 7:15 AM
88	we have no problem here on railroad st and we do not have the money to pay for it. Having us pay for curb and gutter would force us out of the township, than we might as well live in kimberly thats across the road	Sep 14, 2011 7:15 AM
89	I believe this Town has a policy against direct drains into ditches that need to be enforced. Take a walk down Hank Dr. Most houses have their gutters diret drain to ditches. Since you said the presentation would be at 7 p.m., I am greatly disappointed to arrive at 6:50 p.m. and find out that the presentation was already over - Gov't Officials at their best!!!	Sep 14, 2011 7:14 AM
90	last three houses on Woodstock lane to Emons dont seem to have a ditch in their backyard our water runs very slowly into their yards and most of the summer our ditch and 4 ft into our yard is wet. The culvert pipe is to small and remains frozen in the spring causing water to run over the culvert and back up into our yard	Sep 14, 2011 6:43 AM
91	In the 13 years we have been here, our yard and ditch has changed its shape. We had a pretty significant dip in our front yard from settling around our water pipe (I'm assuming, that's where the pipe is buried). Our ditch has widened in spots from the standing water that has shaped it over time and being soft ground gets moved around by the lawn mower. There are a few spots of thicker grass where the water stands, and I'm not sure if that creates a flow problem on top of the existing problem. Just from eyesight, it doesn't actually look as thow I could ever get my water to flower, without just filling the end of our lot / beginning of the neighbor's, as I don't believe there is enough slope to effectively get the water to flow consistently over a long period of time across our two lots and into the rest of the cul-de-sac, but of course that would be up to a surveyor to truly decide.	Sep 13, 2011 7:48 PM
92	I feel that keeping the rural look is important. The more we can slow the water down allow open ditches do what tehy are intended to do it will be best. The issues seem to be in the grade of all teh ditches and property lots that are grade out of spec. It would seem reasonable that the least invasive the solution can be the more it will be accepted. It was quite apparent at teh meeting that everyone wants their problem solved and they do not want an assessment or a tax levy. I research teh Town budget an dthere is not large pools of mony available to transfer into this area. The Town runs with two full time employees and a very low budget.	Sep 13, 2011 7:10 PM
93	i do not want to pay extra money for a fix because it should have been done right the first time we paid for it. the town should pay.... if it is gonna cost us money then just leave it alone.	Sep 13, 2011 5:55 PM
94	I stopped by to attend the meeting but the hall was very full and there was no parking available unless I wanted to park down the street. I presume by taking the survey that there was going to be a lot of discussion on bigger issues. I felt that this was a better way to go. I will follow up with a phone call in the next few days. My street has 1/4 curb but the storm sewer ends at the west end of the cul de sac. When they built this house they dug the initial pit in front before they found out there was no storm sewer. They sealed the pit and cut another one on the west side of my house. I never knew about the problem until the day I	Sep 13, 2011 5:41 PM

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moved in when they had a 40 ft piece of drain pipe duct taped to the sump pump pipe so that they could cut the grass. Since then I have had water problems. My sump pump runs every day of the year, 24-7, driest part of the summer and coldest part of the winter. My basement flooded three times. I have replaced the grass every spring and about \$600 in shrubs because of the water flow because I have the hose cut back to 10 feet in late fall, winter and spring so it does not freeze. They buried a bobcat in the side of my yard in the middle of June when they installed my patio. I am always at least 3 weeks behind anyone else with the first cut/work on the lawn in the spring. TOO WET! The ugly pipe is there all year and I have to move it whenever I have to do anything in that area. As far as property value is concerned, I would have to disclose all this to a potential buyer which I would think would drop my value by at least \$20,000 maybe more. I don't expect you to pay for it, but I sure could use someone to explain why someone would allow for curb to be put in a subdivision without any storm sewer or ditch? and WHAT do I do about it now?

95	None	Sep 13, 2011 5:25 PM
96	Fill the ditches in!!!!	Sep 13, 2011 5:10 PM
97	The maintenance in my backyard, where storm water flows to a common waterway behind the properties is a consistent issue. It is nearly impossible to keep the area mowed and clean of algae and debris. At times in the heat of summer, there is a distinct stench that comes from the water. Plus, annually, it needs to be re-edged to maintain proper water flow which is a messy, heavy and irritating process.	Sep 13, 2011 3:29 PM
98	leave as is! make the people take out what they have done!	Sep 13, 2011 12:29 PM
99	The town did not hold the original developer to the original drainage plan and now that development is basically complete and there are drainage issues...the suggestion seems to make the home owners foot the bill. We are already paying big taxes and have an assessment for a drainage project on the tax bill. it is time for the town to look for other means to fund this since it what their issue originally by not holding the developer responsible for incomplete drainage ways. Don't over complicate by trying to add curb and gutter unless that holds other benefits that will not cost the tax payers more in the future. Storm grates are not the answer if it burdens the home owners to clean out grates for drainage (which I have had at past residences.) The issue comes down to proper sloping and drainage ways and the town needs to take care of that first. If land owners start changing grades in the future causing issues upstream, then the home owner that changed the grade must be held responsible for corrective actions. But to put it on the home owners without the town properly sloping the drainage ditches to begin with...that is preposterous!	Sep 13, 2011 6:39 AM
100	Some years ago the town re-dug and sloped many of the "back yard" ditches to improve drainage; there are many homes that have kept this improvement in place and it definitely facilitates drainage when we get rainstorms and winter melts. We also live near a few people who totally ignore their ditches, all kinds of debris, tree limbs, weeds etc are clogging their ditch impeding drainage. We believe if the rules for maintaining the ditches on people's property were enforced it would be better than trying to make a new policy or considering sidewalks etc which will not help when the drainage is not the front yard issue. Property owners who have messed with their front yard ditches and subsequently affected their neighbors drainage should be made to correct the problem and not at my expense.	Sep 12, 2011 9:37 PM

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101	I'm a single parent and could not afford the cost to completely eliminate the drainage problem in this town. While I would like to see some improvement, I believe the cost to eliminate it would be overwhelming to many home owners in this community. It would be heart breaking to see my neighbors put thier houses up for sale because of increased property taxes or the added cost to fix the ditches. Thank you.	Sep 12, 2011 6:51 PM
102	unplanned drainage facilities in the neighborhood create high and low areas that lead to standing water. property owners in low areas have little or no way to resolve the issue; this issue needs a wholistic solution and I'm glad you're investigating options. Thank you very much.	Sep 12, 2011 6:01 PM
103	After a moderate rain half of my back yard is standing water for days due to the inadequate grade that was allowed to be done when the houses in my neighborhood were built. My response to question 9 was an attempt to correct this. There needs to be minimum standards for ditch maintenance that are enforced. I mow the grass in my ditch but my neighbor chooses not to mow his consistently resulting in tall grass which prevents the water from flowing to the corner. On another note, Hopfensperger Road and Block Road need to be improved with wider roadway, curb, gutter, and sidewalks. I have witnessed many near-accidents between cars and pedestrians/cyclists.	Sep 12, 2011 5:29 PM
104	I very strongly support widening the roads and putting in curb and gutters. I also like the idea of sidewalks. There are a lot of pedestrians in our neighborhood, and it's only a matter of time before someone is seriously hurt by a car because of the narrow roads, lack of sidewalks, and walking/biking at night.	Sep 12, 2011 4:38 PM
105	The trail to the Van Handel Drive park entrance should have a concrete base laid, with a slight taper on sides and about 24" wide with grass up the sides. All trees cut down on the sides, this is very tacky looking and also creating another problem, this used to be cut and trimmed years ago. Why not now? The culvert is too small going under Van Handel Dr. and going under the park walkway for the volume of water coming from all sides. It needs DITCHING AND CONCRETE CULVERTS.	Sep 12, 2011 2:33 PM
106	The work that has been done to put holding ponds in is good... Lived in Carol Stream IL at one time... and lived on a holding pond... it was great.. The idea that you can have 5 houses on a court with good drange through a ditch is crazy... problem is that I did not see it coming when we purchased the lot to build a house. Within two years and all the housing being establish has caused a drainage problem. What one neighbor does to fix the problem causes a neighbor down the road to have a bigger problem.. That is why I don't do anything... I like my neighbor... for the most part like my house and the property it's on the town is good... not perfect by good...If I ever moved it would be due to a change of work location and required or the fact that I hate have a dirty old ditch in my front yard.... Now I live on a corner lot... and would be willing to pay for the drainage improvement through an assesment to fill it in put storm sewer in curb for drainage. (Twn of Menasha did a good job at this...) I would not be will to pay for both sides of my lot... that would not be fair.... I would also be in favor of sidewalks / bike paths on major roads that link up to other tails or less busy roads for pedestrians. Suggustions would be CTY N, KK, Emons, Buchanan Road, Noe Road with crossing at major intersections. Walkers and bikers should have the right to safe passage on our Town Roads and at this time they don't.	Sep 12, 2011 12:54 PM
107	I would suppoprt doing something inexpensive to correct the drainage issues on	Sep 12, 2011 6:47 AM

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certain properties, but not all homes need improvement. Definitely do not want curb and gutter.

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| 108 | if town needs to fix certain drainage issues i strongly disagree with special assessments to the property owners. this has been a town problem for many years (things were not done correctly to begin with) so any corrections need to be paid for with cuts and property taxes. | Sep 11, 2011 2:59 PM |
| 109 | This has been an on going problem for us. We regret ever purchasing this house as the sump pump runs all day / every day even in dry months. We have issues with Muskrats, dead animals, insects and erosion. We were told we could trap any vermin on our own, but we have a young child and that seemed like a dangerous task to undertake on our own. We have had numerous estimates trying to come up with a band-aid solution, but they are all too expensive and are not long term. We are concerned that all of the above will be an issue when we try to sell this property. | Sep 11, 2011 2:13 PM |
| 110 | the drainage ditch lined with concrete in our back yard is a disaster, water is always standing as the culverts that run under block road are higher than the level of the ditch. Thick algae grows always. Also the volume of water running in the ditch and being stopped by the very small pipe that runs under block road has nearly flooded my house a number of times. It makes no sense that the pipes that move water under the roads are backwards. 3 large pipes bring the volume of water from south of kk to the ditch in the backyards up the road that then flows through two reasonable size pipes under the next road while all the stormwater from our area adds to it and then it has to drain through a single small pipe under block road! I am no engineer but in this case one would only have to apply common sense to think HEY! This is backwards and it does not work | Sep 9, 2011 1:52 PM |
| 111 | The deep grade of the ditches should be applicable to only properties that benefit from them. They are NOT necessary at all properties and drainage would be bettered by the elimination of the deep ditch. Just because it is there doesn't mean it should stay there. The road "is not" going to break up just because a property doesn't have a ditch where drainage was never an issue to begin with. Because it is there doesn't mean it should stay there. The town needs to "grow up" the board needs to look toward the future and not be so narrow minded. | Sep 9, 2011 12:26 PM |
| 112 | We are just really tired of the standing water/drainage issue and would like something done in the immediate future. | Sep 9, 2011 11:54 AM |
| 113 | Dear Sir, We live at N254 Pinecrest Blvd. The drainage on Pinecrest Blvd is FINE, no work is needed. My concern is the "Non-existent" swale on our back lot line going north to Emmons Road. When the sub-division was built behind and to the north of our land, we were told by Mr. Dave Schmalz from McMahan Associates, the Town Engineer at that time, that there would be a swale or drainage ditch from our land north to Emmons Road to assure good drainage from our land. That never happened! Every time it rains we have standing water on the north-east corner of our land. There are two (2) junction boxes in that area for Wisconsin Electric and Time-Warner and it is NOT uncommon to have the standing water higher than the bases of those boxes. We have had to replace at least 8 trees because the standing water killed them. Please have someone contact us and review this situation. Thank you, Chuck and Debbie Hanson N254 Pinecrest Blvd. Appleton, WI 54915 920-428-0111 September 9, 2011 | Sep 9, 2011 9:17 AM |

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114	Not only is there an issue with the ditches not being graded properly, but drainage guidelines were not followed when yards were landscaped stopping water in backyards to back up and create standing water.	Sep 8, 2011 5:23 PM
115	get a plan and follow it and quit doing a little here and a little there of work get in an area and finish it.	Sep 7, 2011 8:24 PM
116	We have excellent drainage on our property.	Sep 7, 2011 3:58 PM
117	Grades should have been set by the town before the farmland was first plotted out.	Sep 7, 2011 3:31 PM
118	leave it as is. people can move.... this is how it was when we build and that is why we build so we did not have worry about sidewalks!	Sep 7, 2011 2:55 PM
119	Ditches play a key role in sediment reduction and controlling water flow in our creek. They also provide a storage area for snow that would otherwise pile up causing dangerous visibility issues if we had curbs and no ditches.	Sep 7, 2011 2:22 AM
120	Leave our ditches alone!!! The road width is also good as is!!	Sep 6, 2011 11:30 PM
121	The current system is fine for the town. We are a town not a city!! I do not want to pay for this through higher taxes or property assesments. The current ditches serve a purpose in soaking up water and collecting snow. Drainage pipes, curb/gutter ect. are only going to put more water directly into the small stream behind my house causing flooding concerns with even moderate rains. All that water will now flow directly into that stream without a chance for the ditches to soak it up and slow the flow.	Sep 6, 2011 8:51 PM
122	Neighbor's drain pipe under driveway is smaller than all other driveways, in heavy rains, and in the spring, the water backs up in the northeast corner of our lot. Other than that issue, we have no problems with the drainage in the town.	Sep 6, 2011 7:47 PM
123	It is not our front ditch that is the issue except when they dig for utilities & do not put the ditch back the way it was! Our back lot line has always been a problem - the water does not flow....it backs up in our yard & other neighbors yards & floods the utility boxes. Told the town when we first moved in - nothing was ever done. The water should run west to east to large ditch on Main street & now into retention pond. It does only when our yard is already deep & flooded. Should have put trail in on emons for bikers & walkers before new subdivision went in. Went to meetings - voiced my concern again nothing ever was done. 4 way stop on Emons & woodstock to slow traffic - again a big NO on that. I have very little faith in the Town for any changes.	Sep 6, 2011 6:14 PM
124	I have lived here for 23 years and I am not paying for someone else's draining issues. They should check these things out before they buy property. It is called the price of owning a home. I do not want sidewalks or curb and gutter. Do not come out here to live if you want things that are available in the city. People should pay for their own drainage problems. There are many of us who have none.	Sep 6, 2011 5:54 PM
125	People bought the house or built the house knowing there was not curb, gutter or sidewalks. If they did not like that idea they should not have chosen to live here!	Sep 6, 2011 5:48 PM
126	Ditches are a part of our Town identity, we don't need curbs. It is important to keep the ditches to gather the snow in winter and help soke up the water in the	Sep 6, 2011 1:33 AM

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spring and summer.

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| 127 | I moved to the town for the rural feel. If I wanted to live in the concrete jungle of curb and gutter with higher taxes I would have chosen to live in Appleton. I have spoken to many of my neighbors who feel the same way and if we are forced to pay for filling in the ditches and putting in curb and gutter we are going to move. Most drainage issues with the ditches can be easily fixed by regrading to a proper slope. After a heavy rain or spring thaw the bottom of the ditch may be soft, but that is part of having a ditch. It is not cause to turn our town into the city of Appleton. | Sep 5, 2011 8:39 PM |
| 128 | Most of your issues listed have to do with front ditches. Also what should be addressed are back yard ditches. The part of Block road that should be addressed is Schmalz landscaping(the north end of their field) Come and take a look at what happens there after a storm. The water can flow like a fast running stream that is feet deep and 7-10 yards wide. I am tired of trying to contact them to do something about the backup at the north end of their field. With time all the dirt has filled in the ditch because of the runoff, making the flow of water impossible. Talk to Schmalz about providing better upkeep of their ditch, so homeowners don't have to fear of flooding in their houses. | Sep 5, 2011 9:43 AM |
| 129 | we are really, really tired of the standing water in our front yard ditch. our neighbors on both sides had screwed up the drainage in their ditches such that the water sits in our ditch instead of draining to the north as it should. we welcome any improvements the town proposes to fix this problem. we have considered on numerous occasions of moving to a community with curb and gutter so avoid dealing with the ridiculous ditch problem that we have. the school district is what keeps us here. | Sep 5, 2011 9:39 AM |
| 130 | I live at the end of Skyview court for 17 years and have never had a water issue. I met the surveyer and explained to him how the water runs in the area. When the ditch between our houses was put in I was here with the developer and excavating firm. We have never had an issue even with a water easment around my whole yard and 3/4 of the court draining my way. Therefore there is no need for improvements in our area. Thanks | Sep 5, 2011 7:36 AM |
| 131 | We live on the odd-numbered street address side of Stillwater Trail. Our ditches cannot keep up with heavy rains in the spring, along with melting snow and ice. Our ditches were not constructed at the correct grade and are a messy, wet, nuisance until at least July. They are impossible to mow until it really dries out usually in July. This needs to be fixed by the town. We have paid the same amount of property taxes as our neighbors across the street (even-numbered house numbers) whose ditches were done correctly the first time. The even-numbered side of Stillwater Trail dries out well after every rain. Why should we be assessed extra in property taxes because the job wasn't done right on our side in the first place? It would be an injustice to assess more taxes/fees to us on the odd-numbered side of Stillwater Trail. It should be a shared expense by all in the Town of Buchanan. | Sep 4, 2011 3:18 PM |
| 132 | When the building explosion started in the latter part of 1980s, continuing on in the 1990s and into the new decade, I do not think the Town did a very good job of planning for this drainage issue. This is something that should have been handled when all the construction was going on versus trying to fix it now. The economy was much better back then and you want us to pay for this now? | Sep 4, 2011 10:25 AM |
| 133 | I live on a corner lot not that has deep ditches on two sides. I would prefer to see | Sep 4, 2011 4:10 AM |

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an underground drainage system be installed with shallower ditches. We have standing water in one ditch most of the summer and also our house sump pump runs throughout the year which adds to the wetness in the ditch. By going with shallower ditches, this would also still give the snowplows a place to put the snow in the winter and not create an additional snow removal issue or cost if there becomes too much snow in a given winter. I like the small rural town feel but would like a safer area for children to ride their bikes more safely. Hoffensberger is our side road as is quite busy at times.

134	Everyone should be treated the same. No ditches can be covered up. The ones that are covered should be opened back up for better drainage. So what about the ones that are covered and pipe/tubing is plugged - partially plugged causing for poor drainage.	Sep 3, 2011 11:34 AM
135	Our ditch is not graded properly to allow proper drainage. We often have standing water in our ditch. Our sump pump currently drains to the ditch through a buried pipe - wondering how this would be impacted or where it would need to drain if curb and gutter were installed.	Sep 3, 2011 10:31 AM
136	Concrete liners or shallow buried pipes (at the owners expense) leaving 90%+ of the ditch retention capacity remaining would eliminate 95% of the concerns residents have. The other 5% would require adjustment of their culverts in addition to the above. Curb and gutter does not make sense when our country may be headed for another recession and the percentage of homes projected to be under water on their mortgage is expected to hit 48% in 2011. Times are tough. Everyone wants this fixed but also doesn't want to pay for it. The town has done an excellent job of staying out of debt. Keep it that way for now and revisit curb and gutter when economic times improve. Offer more flexibility to owners in the interim (dont tell us to regrade and offer no other solution when a simple shallow 4" pipe would allow our ditches to dry out - which is all most really want to make them happy) Thanks for taking the time to collect all this info. I think our town representatives are doing a great job!	Sep 3, 2011 9:55 AM
137	Issue with property at w2422 Snowberry Dr. as this property has filled in the ditch and only installed two very small drain tile type pipes approx 4 inch in size, These small pipes plug with debris and algae causing all properties west of this area to back up and cease water flow . Back up occurs until the water level reaches above the filled ditch causing insufficient drainage and great potential for flooding of homes and roadway. This needs to be addressed. Insurance carrier has advised that if flooding due to this blockage the town would be responsible for flood damages to the adjacent properties.	Sep 3, 2011 7:48 AM
138	I requested and recieved approval after an assessment of my ditch to regrade and line with gutter blocks but did not because I shared the ditch with my neighbor and they were not interested. His side is where the drainage problem is with a small stinky pond that cannot be mowed and is a mosquito breeding ground. It has expanded to my side and we now share the same problem. I am interested in any type of improvement.	Sep 2, 2011 1:06 PM
139	Have standing water on Kilsdonk Court after rain and snow melts. Needs drenching.	Sep 1, 2011 11:23 AM
140	I think trying to repair/regrade ditches is a waste of time and money, been tried before with little impact. I'd rather keep what we have then spend money trying to improve ditches. However I think extra expense in special assessments or maybe taxes is acceptable if quality underground drainage like curb and gutters	Aug 31, 2011 7:11 PM

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or wash-ways are implemented. Curbs or alike will improve resale and aesthetics where ditches provide no benefit other than reducing standing water, which I don't believe is possible in every situation. Not to mention most areas around Buchanan do have underground drainage, and in my area there is no reason to attempt to retain a "rule" appearance, it's the suburbs now in my area.

141	certain area's seem to be more obvious/constant the others (like a couple of homes on Emmons Rd) that are constantly full of water and it never seems to go anywhere. One concern not related to drainage is the lack of street lighting. It seems very dangerous with people out walking or biking once it starts to get dark out, you just can't see them or even where the next corner is to turn on to.	Aug 30, 2011 7:05 PM
142	Even though I don't live on Block Rd (but use it frequently) I'd like to see any improvement plans put this road as a top priority for re-paving and creating room for walkers and bicyclists.	Aug 30, 2011 5:52 PM
143	We have had a flooding problem from day one when we bought this residence. The house was built JUST above the water table, which was down at that time, and in the spring EVERY YEAR so far we have flooding in our basement, this has been a very costly investment and is a HEALTH concern because of the MOLD that can be created from the water. The builder should have known of this problem from the start as well as the inspectors should have been watching so that the basement would have been above the water table in the spring time. If I were to sell my HOME this WILL be a major NON SELLING POINT!!! I believe the value of my home has DECREASED because of this situation. Drainage of the water tables is a MAJOR concern for development in the Darboy area! Thank You for your concern in this matter. David Krabbe N194 Eastowne LN Appleton, WI 54915 (920)-993-9536	Aug 30, 2011 3:07 PM
144	After heavy rains, the ditches near my house occasionally overflow.	Aug 30, 2011 7:13 AM
145	One of your questions you ask about preserving the 'rural feel'. Where was the consideration for the 'rural feel' when you put the Tractor Supply and Daycare Center in front of our houses? I think that term has no meaning whatsoever considering we have urban sprawl gone mad right across the street. The landscaping next to Tractor Supply is an eyesore...as well as the empty Sonic building. I feel bad for the people that live at the end of Pincrest. But I realize we also have to make money...just not sure it was planned out that well. Thanks for providing the survey and asking our thoughts.	Aug 29, 2011 3:29 PM
146	My sump pump is CONSTANTLY running.	Aug 29, 2011 2:34 PM
147	I have no drainage issues in my yard or in neighboring yards. I would love to see curb & gutter and sidewalks.	Aug 29, 2011 9:04 AM
148	I am all for ANY improvement to the current situation - and I'm open to funding that through any means necessary (assessment, taxes, etc).	Aug 29, 2011 6:30 AM
149	We have a drainage flow that runs through our property. We have to pay more for permits for everything we do on our property, as it is considered wetland. For example, we had to pay \$150 for a permit to build a fence that cost less than \$100 for materials ... all to protect our children from getting killed on a County N. Yes, the money is worth our peace of mind. We cannot theoretically build anything on our property because of the wetland status. We cannot alter the flow of drainage through our property, and therefore cannot get across it to mow the lawn on the other side. We suffer the consequences of excess rain. So while we	Aug 29, 2011 5:44 AM

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are sympathetic to the drainage issues that are out there, we don't believe we should have to help pay for it, considering there is little sympathy for our situation and any improved drainage will most likely mean more water flowing through our property.

150	My front ditch consistantly fills with water when it rains hard, because my neighbor only put in one 6 inch drain pipe instead of the two required.	Aug 29, 2011 3:41 AM
151	I would like more information on the potential costs associated with the proposals and the taxes associated with the proposed changes.	Aug 28, 2011 6:50 PM
152	Making consistent curb / gutter improves the overall property value for the entire town. This should be a shared town expense that is recovered over the long term. With today's market, it would be very harmfu to attempt to recover this through short term property assessments.	Aug 28, 2011 5:50 PM
153	In 2007 I provided evidence to the town that the Hickory Park subdivision is draining water onto my property against town rules. I was summarily re-directed via letter to a private contractor to repair "my" drainage problem at my own cost. The drainage easement that runs through my property was dry during the entire time we lived here prior to Hickory Park being built. Now, since Hickory Park has multiple buried culverts (Against town rules, I believe) that direct drainage on to my property, I have a swamp in my yard that has continually running water, even during the driest of summers. The taxes we currecntly pay the town should be more than sufficient to take responsibility for its easements. We can continue with open ditches if the town takes the responsibility to properly re-grade and line the ditches. We do not need stormsewer, curb, and gutter. We cannot absorb the costs during these tough economic times. The town can use existing funds to repair the damage that exists. It is the town's responsibility. If the tax assessment for the entire town must increase slightly to repair our drainage issues, so be it, but individual assessment are unacceptable. I reside at N242 Meadowbreeze Ct. Jeff Switz	Aug 28, 2011 3:12 PM
154	I would have to say that Darboy has to have the worst drainage in the state. It is everywhere. East of Cty. N, West of Cty. N, North of KK, and South of KK. I am sorry, but it is quite rediculous. People are unable to mow their ditches even in the driest part of the summer. Two houses down from me, I have a neighbor that has cattails growing. I used to live in the country, but I guess I still do. Some areas areas are so bad, that even with a little downpour water is running across the streets, which is quite a safety issue for drivers. This is especially an issue over on Springfield, which is where my brother lives. I would rather have to pay some money and have a nice, clean neighborhood than to have things the way they are now.	Aug 28, 2011 10:25 AM
155	We are all paying for the "creek" fee on our taxes to help the people who built on the ravines. Now its their turn to help pay for our issues.	Aug 28, 2011 4:54 AM
156	Back part of my property always wet and hard to cut. Water stands for a long time as well in ditch. We have had ducks swimming in the ditch for 2 weeks in the spring!! N130 County Trunk N	Aug 27, 2011 6:03 PM
157	The culvert by Springfield Park is actually dangerous in that a child could bike over it and get hurt. There is no direct access to the park for families except for going through ditches that are hard for strollers and bikes to navigate. Whenever it rains a good amount there are definite drainage problems in the area of the park near the swings and the spring drainage in all ditch areas is a disaster we	Aug 27, 2011 3:25 PM

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constantly worry we are going to have flooding in our house. All of the culverts in the Springfield, Countryayre and Just About Lane corners have been hit by the snowplows and are degrading to the point of they are very bent in and dangerous with sharp edges, also the erosion along the ditches is causing lack of water flow so the water is standing alot rather than moving along and draining out.

158	Storm sewers with half-curbs ,not full curb and gutter, no sidewalks and no street lighting.	Aug 27, 2011 11:41 AM
159	Our taxes are to high as it is. Cut other programs, don't raise taxes.	Aug 27, 2011 10:30 AM
160	Some people just don't care what their neighbor thinks of their fill in job to give their drainage water to their neighbor so they can stay high and dry even during a downpour.	Aug 26, 2011 2:55 PM
161	The culvert pipes under most driveways have raised up and the topsoil in most yards of newerstructures have thrown off the grade of the ditches. The new pond on Emmons road was a great idea and has solved all spring flooding problems. Thank You	Aug 25, 2011 3:01 PM