

BOARD OF COUNTY COMMISSIONERS
SARPY COUNTY, NEBRASKA

RESOLUTION APPROVING AND AUTHORIZING CHAIRPERSON TO SIGN THE 2009 ANNUAL NPDES
PERMIT REPORT

WHEREAS, pursuant to Neb. Rev. Stat. §23-104(6) (Reissue 2007), the County has the power to do all acts in relation to the concerns of the County necessary to the exercise of its corporate powers; and,

WHEREAS, pursuant to Neb. Rev. Stat. §23-103 (Reissue 2007), the powers of the County as a body are exercised by the County Board; and,

WHEREAS, the County of Sarpy has obtained an NPDES-MS4 Permit concerning storm water runoff in the Papiro Creek Basin pursuant to the National Pollutant Discharge Elimination System, Phase II storm water regulations; and,

WHEREAS, the permit requires the approval and submission of an Annual Report and attachments to the Nebraska Department of Environmental Quality.

NOW, THEREFORE, BE IT RESOLVED, By the Sarpy County Board of Commissioners that the 2009 Annual Report as required by the National Pollutant Discharge Elimination System, Phase II storm water regulations, as presented to this Board, is hereby approved.

BE IT FURTHER RESOLVED that the Chair, Joni Jones, is hereby designated the Cognizant Official for the purposes of said documents, and the Chair and Clerk are hereby authorized to sign said documents on behalf of Sarpy County, Nebraska to take such actions as may be necessary under the terms of said Permit.

DATED this 30th day of March, 2010.

MOVED by Tom Richards, seconded by Rusty Hike, that the above Resolution be adopted. Carried.

YEAS:

NAYS:

ABSENT:

[Signature]
[Signature]
Tom Richards
Tatuck J. Thomas

none

Joni Jones

ABSTAIN:

none

Attest

SEAL



[Signature]
County Clerk

Approved as to form:

[Signature]
County Attorney

NPDES PERMIT FOR SMALL MUNICIPAL STORM SEWER
DISCHARGES TO WATERS OF THE STATE LOCATED IN
DOUGLAS, SARPY, AND WASHINGTON COUNTIES OF
NEBRASKA

NPDES PERMIT NUMBER NER200000

2009 ANNUAL REPORT

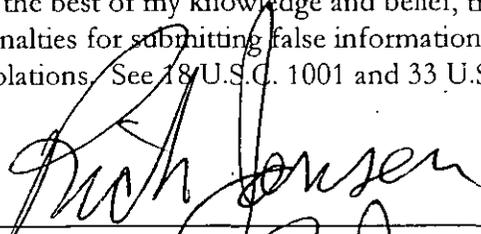
Submitted by:

Sarpy County, Nebraska
1210 Golden Gate Drive
Papillion, NE
68046

April 1, 2010

Report of Certification

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for known violations. See 18 U.S.C. 1001 and 33 U.S.C 1319, and Neb. Rev. Stat. 81-1508 thru 81-1508.02."

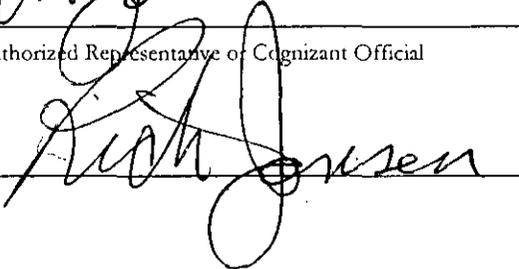


Signature of Authorized Representative or Cognizant Official

March 30, 2010

Date

Joni Jones
Printed Name



Chair, County Board of Commissioners

Title

A. BACKGROUND

On August 1, 2004 the Nebraska Department of Environmental Quality (NDEQ) issued a National Pollutant Discharge Elimination System (NPDES) permit (NER200000) for Small Municipal Storm Sewer discharges to waters of the state located in Douglas, Sarpy, and Washington Counties of Nebraska. The Phase II communities of the Papillion Creek Watershed Partnership (PCWP) currently authorized to discharge municipal storm water under this permit are Bellevue, Boys Town, Douglas County, LaVista, Papillion, Ralston and Sarpy County.

The NPDES permit requires that the co-permittees submit by April 1 each year an Annual Report documenting the status of all the general programs and individual tasks contained in the Storm Water Management Plan (SWMP). This document is being submitted by Sarpy County to meet that requirement and covers the period from January 1-December 31, 2009 of permit year five. A new permit was issued October 2009 and the co-permittees working under the renewed permit through the PCWP are Bellevue, Boys Town, La Vista, Papillion, Ralston and Sarpy County.

B. COOPERATIVE AGREEMENT

The co-permittees entered into an inter-local agreement in 2001 and a continuation agreement in 2004 that established a framework for meeting the permit requirements. A continuation agreement in 2009 was approved by the following entities Bellevue, Boys Town, La Vista, Papillion, Ralston, Sarpy County, Gretna, the Papio Missouri Natural Resources District and City of Omaha. That agreement identifies the lead organization and the participating partners for each SWMP element. The agreement also establishes a basis for cost-sharing to meet the Phase II permit requirements of the co-permittees.

C. PERMITTEE COORDINATION

In 2001, the PCWP began as a planning committee and to assist the Phase II communities in addressing their permit application requirements. The focus of the continuation agreement reached in 2004 is on the implementation of the SWMP as incorporated in the general NPDES permit. The 2009 agreement focused on an overall watershed plan and addresses water quality and water quantity for the participating members as well as a renewal of the NPDES permit and updated SWMP.

The PCWP has held monthly meetings since August 2001. The meetings help to coordinate activities, and identify needs consistent with the goals of the PCWP, and implement the NPDES permit's SWMP.

1. Public Education and Outreach

1.A. Create and distribute informational brochures on the proper disposal of household hazardous waste and the availability of the Household Hazardous Waste Facility. Year 2-5: Print and distribute brochures.

The Douglas-Sarpy County regional household hazardous waste (HHW) facility, UnderTheSink (UTS) opened in June 1, 2005. Brochures are available at the facility for distribution, and can be printed from the website www.underthesink.org. Brochures contain information about the site, materials accepted and not accepted, hours of operation, and alternative use products.

Keep Omaha Beautiful again assisted the PCWP with distribution of 8 different types of brochures and informational cards throughout 2009 about proper paint disposal, alternatives to HHW, and how to

manage HHW in and around the home. They were present at events/meetings/booths where the cards and brochures were available. Informational stands at the point of purchase were placed throughout the region in the commercial outlets listed below:

- Advanced Auto Parts -- 3 locations
- Auto Zone -- 2 locations
- Chicano Awareness Center
- Express Yourself
- Home Depot
- Indian Creek Nursery
- Mexican Consulate
- Midwest Bilingual
- Omaha Public Libraries -- 13 locations
- One World Health
- O'Reilly's Auto Parts -- 2 locations
- Sherwin Williams
- Spanish Chamber of Commerce
- Sunrise Nursery
- Westlake Hardware
- Weiner Paint
- Whole Foods Market

Overall 4,900 brochures were distributed in 2009. Also in 2009, Under the Sink conducted 18 tours and had 10,666 drop offs totaling 766,246 lbs of material which is an average of 3,775 lbs per day. A total weight of 217,070 lbs of HHW was shipped offsite. Total oil collection in 2009 was 8,400 gallons of which 1,800 gallons were sold to Safety Kleen and the remaining oil was burned in the waste-oil boiler. The recycling totals from 2009 include:

- Steel from paint and aerosol cans: 78,160 lbs
- Latex paint used with Posi-Shell at Sarpy County Landfill: 21,450 gal
- Oil-based paint and flammable liquids used as industrial fuel: 15,785 gal
- Antifreeze recycled: 1,100 gal
- Automotive batteries: 12,503 lbs
- Fluorescent bulbs: 3,172

ReStore totals are as follows:

- People who took free useable items for their own use: 5,311
- Weight of non-paint items taken: 74,171 lbs
- Gallons of free paint taken: 7,699 gal

This permit requirement has been met.

1.B. Provide information concerning best management practices at public educational events such as Earth Day. Year 1 through 3 develop materials and implementation plan. Year 4 through 5: Print and/or broadcast announcements.

KOB represented the PCWP at different events/meetings/ booths where they provided brochures and information. Numerous organizations and agencies assisted the PCWP in outreach efforts in 2009. Outreach events and meetings are listed in Attachment A.

The PCWP also makes best management practices information available through the PCWP website (www.papiopartnership.org). Additionally, through the City of Omaha website (www.omahastormwater.org) all residents within jurisdictions of the co-permittees of the PCWP can access information as to how they can improve water quality by actions they take at home along with activities for children. There is also public information available on the demonstration storm water best management practices that have been implemented in areas of the City.

This permit requirement has been met.

1.C. Issue public service announcements related to storm water protection on local TV, radio or print outlets. Ongoing all years.

In addition to the distribution of educational brochures and public outreach events, Keep Omaha Beautiful, Inc. contracted with KFAB, a local radio station, to broadcast 8 public service announcements in September 2009.

This permit requirement has been met.

This permit requirement is on schedule for completion

1.D. Initiate a storm water drain-stenciling program to improve public awareness concerning illegal dumping. Develop Standard specifications which require stenciled or adhered markers be provided for new concrete storm drains. Year 2-5: Implement drain marking program.

A number of drain marking efforts are currently underway in the Papillion Creek Watershed. Keep Omaha Beautiful works with a number of volunteer groups and provides all the materials necessary to apply discs to inlets. In 2009, Keep Omaha Beautiful, Inc. coordinated 168 people to mark and clean storm sewer inlets. In total, 1,533 storm grates were cleaned resulting in 153 bags of litter collected. The table below summarizes inlet marking activities for 2009.

Month	Disks Placed
April	140
May	223
June	421
July	390
August	521
September	700
Total	2,395

This year KOB, Inc also used a GIS tracking system to better direct the volunteers to areas that had not been marked. The City has approximately 110,000 storm drains, using the GIS system should make tracking those inlets which have been marked or need marking easier to manage.

This permit requirement has been met.

2. Public Participation and Involvement

2.A. Create and operate a system for handling phone calls and email for storm water-related concerns in the Watershed (general information, complaints, reports of illegal dumping, etc.). Year 2-5: Maintain stormwater hotline and website email notification.

The City of Omaha continues to maintain a phone line, 444-3908, for handling stormwater calls. Clerks are available during regular business hours to handle calls for the City and the PCWP. The clerks answering the hotline are required to complete a form when answering the calls so that all the required information is collected. The form is tied to a database that stores all calls received and provide a mechanism for tracking calls. A representative from the City of Omaha will use the information stored in the database to direct the call to the appropriate Partnership representative or their designee.

There were no illicit discharge complaints received via the Papiio Partnership website (www.papiiopartnership.org) or the hotline in 2009. Public complaints can be logged into the erosion website (www.PCWPErosionControl.org).

This permit requirement has been met.

2.B. Participate in organizing and holding public meetings on Papillion Creek Watershed Plan updates and to solicit feedback for management policies, proposed BMPs, financial reports, etc. Organize and hold a public meeting each year.

The PCWP held monthly meetings in 2009 and the minutes for all of those meetings are available on the PCWP website at www.papiiopartnership.org.

In 2007, and as a follow up to the Stormwater Management Policies drafted in 2006, the PCWP contracted with HDR Engineering, Inc. for a "Phase IV" study that would compare and contrast the potential implementation of Low Impact Development (LID) BMPs, regional detention, and/or a combination approach, to address stormwater quality and stormwater quantity issues in the watershed. The findings of the Phase IV study were completed in 2008 and study results were used to amend the original Stormwater Policies (per permit requirement 5.C) that had been originally considered in 2006. A copy of the revised Stormwater Policies adopted by co-permittees of the PCWP is included as Attachment B.

This permit requirement has been met.

2.C. Implement a Stream Clean Up Day. Identify stream segments in need of cleanup and request volunteers from the local area, public groups, and representatives from local area business and developments. Year 2-5: Conduct one clean-up day each year.

The PCWP partnered with Keep Omaha Beautiful, Inc. (KOB) to organize the 2009 Stream Clean up day on September 12th. There were a total of 251 participants who collected 105 bags of litter during the day. A total of 451 volunteer hours were logged during this event. The water courses that KOB targeted were:

Lake Zornisky
Walnut Creek
Elmwood Creek
Standing Bear Lake
Gene Leahy Mall
Hitchcock Park
Stollie Prairie Creek
West Papio Stream
Hanscom Park
Fontenelle Park
Levi Carter Lake

This permit requirement has been met.

2.D. Enhance the existing PCWP website so that the public is able to email comments or complaints, and complete surveys that solicit comments and suggestions on Watershed Planning. Year 2-5: Email form for comments and suggestions on website.

In 2007 the website was redesigned and made to be compliant with ADA requirements. All of the previous website features, including but not limited to, the contact information for PCWP representatives (including links to the respective PCWP representative's websites) and the illegal dumping/illicit discharge report form, were retained. PCWP meeting minutes, upcoming meetings and outreach opportunities, PCWP permits, reports, and studies are also available on-line as well as general information about the PCWP and about watersheds, best management practices, and stormwater management in general. An online form is available that the public can complete if they have questions/comments regarding the stormwater management policies. Additional enhancements were added by the Papio Missouri River NRD in 2009 to update the information on the website and to include the current PCWP interlocal agreement, watershed management plan, implementation plan and stormwater policies. All of which were adopted by the PCWP co-permittees in 2009. The number of visits to the website for 2009 was not available at the time this report was submitted.

The City of Omaha has developed and deployed a website, www.omahastormwater.org dedicated to the City's Stormwater Management Program. From the website industries within the PCWP can access the necessary documents to apply for a permit as well as access resources to help them maintain compliance. Developers and engineers can access the necessary documents to apply for Construction and Post-Construction Stormwater permits.

Residents can access information as to how they can improve water quality by actions they take at home. Children's activities are also available on the website. There is also public information available on the demonstration storm water best management practices that have been implemented in areas of the city. The public can access information related to the monitoring program. Additionally there is an online complaint or comment form available to the public.

There were 1,425 visits and 7,600 page views in 2009. The three most popular areas in terms of page views were the home page followed by the Industry page and finally the Post Construction page.

This permit requirement has been met.

3. Illicit Discharge Detection and Elimination

3.A. Dry-weather inspections of all known, major storm water outlets (i.e., those with diameters of 36" or greater). Inspections will include flow estimations, physical characteristics examinations and, if necessary to identify sources of pollutants, screening for additional pollutants. Inspect storm water outlets and those that discharge to lesser tributaries or other storm conduits in response to suspect conditions and/or complaints. Year 1 through 2 – Identify and initially inspect existing stormwater outfalls in named creeks within the permitted area. Year 3 through 5 – Investigate new or newly discovered stormwater outfalls in named creeks and report observations in the Annual Activity Report.

No known new outfalls in named creeks found.

This permit requirement is on schedule for completion.

3.B. Develop an ordinance to prohibit illicit non-storm water discharges accompanied by appropriate penalties and enforcement procedures. Year 2: Pass ordinance by end of year. Year 3 through 5: Implement and enforce ordinance.

Sarpy County enforces the Storm Water Regulations and tracks violations as necessary.

This permit requirement has been met.

3.C. Develop a sewer system map of major storm water outfalls and identify the names of respective receiving waters. Mapping will be GIS based. Years 1 and 2 – Complete mapping for existing stormwater outfalls in named creeks. Years 3 thru 5 – Maintain system for incremental new construction.

The Sarpy County GIS Department continues to maintain the mapping system for storm water outfalls in named creeks.

This permit requirement has been met.

3.D. Implement a BMP/water quality-tracking database (decision support system), including protocols for sharing resources within the Partnership and training staff. Ongoing all years.

As part of the PCWP's initial planning effort initiated in 2001, HDR Engineering, Inc. developed a BMP/water quality-tracking database for the PCWP. The Papio-Missouri River NRD will maintain the database and train interested PCWP members as to how to enter data and generate analytical/comparative reports. Data will be used to assist future BMP evaluations by providing information regarding cost per unit treated, and average annual maintenance costs.

This permit requirement is on schedule for completion.

3.E. Investigate and seek resolution concerning any dry weather discharges of potentially polluted wastewater sources by notifying the source that they must discontinue discharging, and initiate enforcement action consistent with adopted ordinance. Ongoing all years.

Dry weather discharges identified, as the outfalls are inspected (see 3.A above), will be investigated with respect to the source of the discharge. The Physical Characteristics Examination (PCE) will be completed as part of the inspection process and, if there is reason to believe that the discharge is allowable under the stormwater ordinance/regulation, the investigation will be terminated. If the PCE indicates that there may be an illicit connection, a more comprehensive investigation will be undertaken that may involve sampling the discharge, tracing the line upstream to identify potential sources, and questioning potential dischargers. If a potential source is identified, information will be provided regarding the impact to human health and the environment to resolve the problem. The proposed comprehensive stormwater ordinance/regulation will provide for enforcement action, when voluntary compliance cannot be achieved. When the ordinance/regulation is passed the resolution process will shift from education based to penalty based. Until the ordinance/regulation is passed, the NDEQ will be relied upon for necessary enforcement.

This permit requirement is on schedule for completion.

4. Construction Site Runoff Control

4.A. Develop and implement stormwater management and erosion control ordinance for construction sites down to 1 acre in size. Provisions will be included for design and specification review, for enforcement and penalties, for Erosion and Sediment Control requirements consistent with design criteria that meets the requirements of NDEQ's NPDES storm water permit for construction sites, and for waste disposal with respect to discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site. Year 2: Pass ordinance by end of year 2. Year 3 through 5: Implement and enforce ordinance.

Continued to review storm water and erosion control plans as required.

This permit requirement has been met.

4.B. Participate in the implementation of a Contractor Certification Program by conducting annual instruction. Year 1 – 4. Provide one voluntary class per year.

The PCWP has partnered with the Douglas-Sarpy County Extension Office to host annually an Erosion Control Workshop. The meeting was held in February 4, 2009 and 248 people attended the workshop.

This permit requirement has been met.

4.C. Develop and implement a construction site inspection program that included procedures for reporting and resolving deficiencies, notifying NDEQ of non-complying sites, and procedures for referral to NDEQ of non-complying sites that are not responding to local enforcement actions. Identify priority sites based on the nature of the site in terms of size, topography, soil characteristics, receiving waters, and history. Implementation in years 3-5.

Grading permits are required for all developments in the Papillion Creek Watershed and are tracked electronically on the PCWP's web based system (www.PCWPErosionControl.org). Omaha inspectors will review weekly site inspection reports from the permittees, make periodic inspections to verify the permittee reports, notify the permittees when deficiencies are noted, and notify the permitting authority when enforcement is necessary. Priority sites are determined by the construction phase, with the initial site work being the highest priority. The goal of the construction site inspection program is to achieve voluntary compliance, but referrals will be made to NDEQ for non-complying sites not responding to local enforcement actions.

Violations processed in 2009 are referenced in Attachment C. The table below summarizes PCWP construction inspections for 2009.

	City Inspection Reports	Private Inspection Reports
Phase I Sites (>5 acres)	814	5793
Phase II Sites (<5 acres)	615	3810
Total	1429	9603

This permit requirement has been met.

5.0 Post-Construction Runoff Control

5.A. Develop requirements for BMP Inspection and Maintenance in the storm water ordinance required in BMP #4.A.: Year 2: Pass ordinance by end of year 2. Year 3 through 5: Implement and enforce ordinance.

Continued to enforce all storm water regulations, including inspection and maintenance requirements.

This permit requirement has been met.

5.B. Implement procedures for post construction site inspection. Identify priority sites based on the nature of the site in terms of size, topography, soil characteristics, and receiving waters. Years 3 –5 Begin inspection activities.

Omaha has developed guidance documents and inspection forms for BMPs that are available to the PCWP members and are located on the PCWP website (www.papiopartnership.org). Priority sites will be identified based on their proximity to receiving water.

This permit requirement is on schedule for completion.

5.C. Develop and implement a Watershed Master Plan of strategies that include a combination of structural and/or non-structural BMPs that reduce the impact of urbanization on storm water run-off and improve water quality along with other needs, including green space, parks and recreation, urban planning, aesthetics, and public safety. Year 2: Amend comprehensive or master plan. Year 3 to 5 – Revise local ordinances and regulations to support master plan strategies and implement strategies.

Additional public input, the Stage IV study by the PCWP, and evaluation of options continued into 2009 as the PCWP sought consensus on overall stormwater management policies. In 2009, most of the PCWP members adopted the watershed management plan, implementation plan and stormwater management policies which address both water quality and water quantity issues. Local ordinances and regulations are being amended to implement these strategies.

Most PCWP members adopted a water quality ordinance to control the first half inch of stormwater runoff on site.

Sarpy County signed the PCWP interlocal agreement on August 18, 2009 by resolution 2009-232. Watershed Plan, Watershed Plan 3 year implementation plan, watershed policies, collection of storm water fees and other requirements specified in the interlocal agreement were immediately enforced upon signature of the interlocal agreement. On March 17, 2010 the Sarpy County Planning Commission recommended approval to incorporating the text of the interlocal into the Sarpy County Zoning and Subdivision Regulations. The Sarpy County Board will consider the text amendments on April 13, 2010.

This permit requirement is on schedule for completion.

6. Pollution Prevention/Good Housekeeping for Municipal Operations

6.A. Manage vehicle maintenance facilities to comply with the No Exposure Status as identified using NPDES form 3510/11 on an annual basis. Ongoing all years.

NPDES forms 3510/11 for Sarpy County maintenance facilities have been submitted. Training for all Fleet Service mechanics is done annually.

This permit requirement is on schedule for completion.

6.B. Inspect storm sewer conduits, channels and catch basins and remove sediment and debris as needed to maintain an efficient system within permitted area. Transport said materials to the municipal solid waste landfill for disposal. Ongoing all years.

Type	Number Inspected (est.)	Number Cleaned (est.)
Conduits	0	0
Channels	7	1
Catch Basins	6	18
Storm drain inlets	239	52
Erosion Inspections/Maintenance	716	98
Storm Sewer System Maintenance	8	8
Flared End Sections	0	0
Outlets	0	0
Manholes	0	0
Headwalls	0	0
Junction Boxes	0	0
2009 expenditures (all types – inspections & cleaning)	\$325,604	

Sarpy County requested information on these activities from Sanitary and Improvement Districts (S&IDs) within Sarpy County. The information contained in the table above represents the data from those S&IDs that responded to our information request.

This permit requirement is on schedule for completion.

6.C. Develop and implement a training program for employees to prevent pollutant runoff from municipal operations. This would include training for general operation and maintenance activities, schedules, inspections, controls on the discharge of pollutants from streets, proper maintenance of salt/sand storage areas, waste cleanup and handling from transfer stations, etc. Identify responsible departments and personnel for training on operation and maintenance program. Year 2-5: Conduct training annually for employees.

Staff from the Sarpy County Highway, Fleet Services, and Maintenance Departments attended a stormwater training seminar in Douglas County on December 18, 2008. Sarpy County staff was scheduled for a training seminar at the end of 2009. Due to inclement weather and lack of participation, training was cancelled. Sarpy County is currently looking for another training opportunity.

This permit requirement has been met.

6.D. *The applicant will conduct street cleaning on an ongoing basis, so as to reach all paved streets at least once every other year. Ongoing all years.*

Miles of Streets Cleaned in 2009 (approximate)	2009 Expenditure	2010 Budget (proposed)
144.78	\$51,545	\$53,395

Sarpy County requested information on street sweeping from Sanitary and Improvement Districts (S&IDs). The information contained in the table above represents the data from those S&IDs that responded to the information request.

This permit requirement is on schedule for completion.

7. Storm Water Monitoring Plan

7.A. *Participate with in-stream monitoring of named creeks in the Papillion Creek Watershed. Pollutant parameters to be analyzed will include BOD5, TSS, ammonia-nitrogen, nitrate-nitrogen, total nitrogen, soluble and total phosphorous, turbidity, pH, fecal coliform, E. coli, and Physical Characteristics Examinations. Year 2-5: Conduct monitoring.*

The City of Omaha has taken the lead role for the stormwater monitoring elements 7.A and 7.B. The City sampled four sites in the Papillion Creek Watershed in conjunction with NDEQ's Basin Rotation Monitoring Program. Samples were collected one day a week from May 13 through August 12, 2009. Samples were analyzed for the following parameters: fecal coliform, e coli, nitrate / nitrite nitrogen, Kjeldahl nitrogen, nitrite nitrogen, ammonia, total nitrogen, total phosphorus, dissolved phosphorus, pH, COD, BOD, TSS, TDS, temperature, DO, specific conductivity, and turbidity. Quality control/quality assurance measures were followed as described in the Sampling and Analysis Plan (submitted to NDEQ April 1, 2005). Sample results are presented in Attachment D. Data qualifiers follow NDEQ's recommended practices.

The data collected serves as a base for comparing data collected in subsequent years when we are able to evaluate how concentrations are changing over time. With only a limited set of data at this time, it is difficult to draw any conclusions regarding the implementation of the Stormwater Management Program's impact on water quality.

This permit requirement has been met.

7.B. *Participate in wet weather monitoring of a set of stormwater outfalls identified in coordination with the water quality-monitoring program established under BMP 7.A above. Composite samples that represent the peak flush of discharge will be obtained for all parameters, except pH and the bacterial counts for which grab samples are required. Flow estimations as well as the intensity, timing and duration of any recent storm water events will be recorded. The in-stream water quality testing results, as well as watershed characteristics will be considered in selecting the monitoring site(s). Also BMP assessment monitoring may be substituted in lieu of storm sewer outfall testing. Year 2-5: Conduct monitoring.*

Due to construction delays of the post-construction stormwater monitoring stations, laboratory testing was not completed. However, flow was monitored for part of the year and that data is available, and will be useful in collecting future samples. The samples taken in 2010 will be flow proportioned composites rather than time composites as collected in previous years. This should result in higher quality data which can be used to better calculate pollutant loadings.

This permit requirement has been met.

8. Fiscal Expenditures

1. Pursuant to the Papillion Creek Watershed Partnership Interlocal Cooperation Agreement, Sarpy County contributed \$55,000 to the Partnership Watershed Fund in the current fiscal year (July 2009 through June 2010) and will contribute \$55,000 in the upcoming fiscal year (July 2010 through June 2011). The Fund pays for the current cost of planning and implementation of Sarpy County’s NPDES Phase II Stormwater Permit requirements.

The Sarpy County Administrator is responsible for implementing Sarpy County’s NPDES Phase II Stormwater Permit requirements and the majority of expenditures, including the aforementioned annual payments to the PCWP, are budgeted by the department.

The Sarpy County Administrator has the responsibility of coordinating Sarpy County activities to implement the SWMP and ensure the County meets its NPDES Phase II Stormwater permit requirements. The estimated administrative expenditures for 2009 and anticipated 2010 budget amounts are listed below. These include an estimated amount for administrative expenditures from other departments, including, but not limited to, the County Board of Commissioners and County Administration, County Attorney’s Office, County Engineer’s Office, Purchasing Department, and County Clerk’s Office.

1.

Administrative	2009 Expenditures	2010 Planned
Partnership Meetings/Coordination	\$840.00	\$864.00
Planning, review, and preparation	\$1,710.00	\$1,761.00
Public Education/Outreach	\$226.00	\$249.00
Annual Administrative Total	\$2,776.00	\$2,874.00

2. Operation and Maintenance

The 2010 estimated budget figures were not available at the time of preparation of this annual report. It is anticipated that these budget figures will be included in future reports.

Operation and Maintenance	2009 Expenditures	2010 Budgeted
Sediment/Erosion Control Program	\$0	
Material Disposal	\$0	
Creek/Open Channel Maintenance	\$0	

Street Sweeping	\$573.56	
Street /Right of Way Cleaning	\$5,313.99	
Unimproved Street Maintenance	\$151,024.56	
Public Education/Outreach	\$0	
MS4 Planning	\$0	
Bridge Maintenance and Rehab	\$0	
Sewer Maintenance	\$0	
Annual O&M Total	\$156,912.11	

9. Changes in MS4 Area

There were 4 annexations by cities (Papillion, Gretna and Bellevue) and 3 de-annexations which altered the MS4 area.

List of Attachments

Attachment A. Listing of public outreach events. Per SWMP item 1.B.

Attachment B. PCWP 2009 Stormwater Management Policies. Per SWMP items 2.B.

Attachment C. Violations processed in 2009. Per SWMP item 4.C.

Attachment D. In-stream monitoring of named creeks. Per SWMP item 7.A.

Attachment E. Changes in MS4 area.

Sarpy County Board of Commissioners

1210 GOLDEN GATE DRIVE
PAPILLION, NE 68046-2895
593-4155
www.sarpy.com

ADMINISTRATOR
Mark Wayne

DEPUTY ADMINISTRATOR
Scott Bovick

FISCAL ADMIN./PURCHASING AGT.
Brian Hanson



COMMISSIONERS

Rusty Hike
District 1
Joni Jones
District 2
Tom Richards
District 3
Pat Thomas
District 4
Rich Jansen
District 5

MEMO

To: Sarpy County Board

From: Lisa A. Haire

Re: National Pollutant Discharge Elimination System (NPDES) Permit 2009 Annual Report

On March 30, 2010 the County Board will be asked to approve and authorize the chairperson to sign the attached Annual Report for the 2009 National Pollutant Discharge Elimination System (NPDES) Phase II Permit concerning storm water runoff in the Papiro Creek Basin.

Do not hesitate to contact Mark Wayne if you have comments or questions.

March 25, 2010

Lisa A. Haire
593-1565
lhaire@sarpy.com

cc: Mark Wayne
Scott Bovick
Rebecca Horner
Deb Houghtaling

Attachment A

Date	Program	Location	Topic	Outreach Activity
1/7/2009	PUBLIC INVOLVEMENT/PARTICIPATION	Papio NRD	Watershed Policy	SPECIAL INTEREST GROUP MEETING
1/14/2009	PUBLIC INVOLVEMENT/PARTICIPATION	Papio NRD	Watershed Policy	SPECIAL INTEREST GROUP MEETING
1/30/2009	PUBLIC EDUCATION/OUTREACH	King Elementary	Recycling Program / Litter Reduction	RECYCLING/HHW PROMOTION
1/30/2009	PUBLIC INVOLVEMENT/PARTICIPATION	Papio NRD	Watershed Policy	SPECIAL INTEREST GROUP MEETING
2/4/2009	CONSTRUCTION RUNOFF	Holiday Inn Convention Center	Sediment and Erosion Control	EVENT
2/20/2009	PUBLIC EDUCATION/OUTREACH	Bancroft Elementary	Recycling Program / Litter Reduction	RECYCLING/HHW PROMOTION
2/23/2009	PUBLIC EDUCATION/OUTREACH	Benson West Elementary	Recycling Program / Litter Reduction	RECYCLING/HHW PROMOTION
2/25/2009	PUBLIC EDUCATION/OUTREACH	Montessori Children's Room	Recycling Program / Litter Reduction	RECYCLING/HHW PROMOTION
2/26/2009	PUBLIC INVOLVEMENT/PARTICIPATION	Papio NRD	Watershed Policy	SPECIAL INTEREST GROUP MEETING
3/9/2009	PUBLIC EDUCATION/OUTREACH	Blessed Sacrament School	Recycling Program / Litter Reduction	RECYCLING/HHW PROMOTION
3/26/2009	PUBLIC INVOLVEMENT/PARTICIPATION	Papio NRD	Watershed Policy	SPECIAL INTEREST GROUP MEETING
3/31/2009	PUBLIC INVOLVEMENT/PARTICIPATION	Papio NRD	Watershed Policy	SPECIAL INTEREST GROUP MEETING
4/1/2009	PUBLIC EDUCATION/OUTREACH	Lothrop Magnet School	Recycling Program / Litter Reduction	RECYCLING/HHW PROMOTION
4/2/2009	PUBLIC EDUCATION/OUTREACH	Boyd Elementary School	Recycling Program / Litter Reduction	RECYCLING/HHW PROMOTION
4/10/2009	PUBLIC EDUCATION/OUTREACH	Chalco Hills Rec. Area	MORE Nature Nights	EVENT
4/16/2009	PUBLIC EDUCATION/OUTREACH	Sandoz Elementary	MORE Nature Nights	EVENT
4/20/2009	PUBLIC EDUCATION/OUTREACH	Crescent Elementary	MORE Nature Nights	EVENT
4/23/2009	PUBLIC EDUCATION/OUTREACH	Franklin Elementary	MORE Nature Nights	EVENT
4/27/2009	PUBLIC INVOLVEMENT/PARTICIPATION	Papio NRD	Watershed Policy	SPECIAL INTEREST GROUP MEETING
4/30/2009	PUBLIC INVOLVEMENT/PARTICIPATION	Papio NRD	Watershed Policy	SPECIAL INTEREST GROUP MEETING
5/14/2009	PUBLIC EDUCATION/OUTREACH	Lothrop Magnet School	MORE Nature Nights	EVENT
5/15/2009	PUBLIC INVOLVEMENT/PARTICIPATION	Papio NRD	Watershed Policy	SPECIAL INTEREST GROUP MEETING

Target Market	Attendance	Comments	Partnering Organizations
Partnership Members	10	Subcommittee Meeting	PCWP
Partnership Members	27	Partnership Meeting	PCWP
First Grade Students	33	School presentation by Kendra Sullivan to elementary students.	PCWP, KOB
Partnership Members	12	Subcommittee Meeting	PCWP
Engineers, Developers, Graders	248	Workshop for engineers, developers and graders to educate them about NPDES Phase II regulations, Omaha's Grading Permit Program, and sediment and erosion control BMPs.	City of Omaha, NDEQ, DSC Extension, DC, WC, NRCS, GPC, PMRNRD, USACE, PCWP
Elementary School Students	34	School presentation by Kendra Sullivan to elementary students.	PCWP, KOB
Elementary School Students	85	School presentation by Kendra Sullivan to elementary students.	PCWP, KOB
Elementary School Students	22	School presentation by Kendra Sullivan to elementary students.	PCWP, KOB
Partnership Members	22	Partnership Meeting	PCWP
Elementary School Students	76	School presentation by Kendra Sullivan to elementary students.	PCWP, KOB
Partnership Members	18	Partnership Meeting	PCWP
Partnership Members	11	Subcommittee Meeting	PCWP
Elementary School Students	65	School presentation by Kendra Sullivan to elementary students.	PCWP, KOB
Elementary School Students	49	School presentation by Kendra Sullivan to elementary students.	PCWP, KOB
Westside Boys and Girls Club	125	After school event promoting outdoor nature based play.	PCWP, MORE Nature
Elementary School Students	325	After school event promoting outdoor nature based play.	PCWP, MORE Nature
Elementary School Students	50	After school event promoting outdoor nature based play.	PCWP, MORE Nature
Elementary School Students	350	After school event promoting outdoor nature based play.	PCWP, MORE Nature
Partnership Members	9	Subcommittee Meeting	PCWP
Partnership Members	23	Partnership Meeting	PCWP
Elementary School Students	350	After school event promoting outdoor nature based play.	PCWP, MORE Nature
Partnership Members	25	Partnership Meeting	PCWP

6/11/2009	PUBLIC EDUCATION/OUTREACH	Central Park Elementary	Recycling Program / Litter Reduction	RECYCLING/HHW PROMOTION
6/11/2009	PUBLIC INVOLVEMENT/PARTICIPATION	Papio NRD	Watershed Policy	SPECIAL INTEREST GROUP MEETING
6/24/2009	PUBLIC EDUCATION/OUTREACH	Adams Elementary School	Recycling Program / Litter Reduction	RECYCLING/HHW PROMOTION
6/25/2009	PUBLIC INVOLVEMENT/PARTICIPATION	Papio NRD	Watershed Policy	SPECIAL INTEREST GROUP MEETING
7/6/2009	PUBLIC EDUCATION/OUTREACH	UNO Kids Camp	Recycling Program / Litter Reduction	RECYCLING/HHW PROMOTION
7/7/2009	PUBLIC EDUCATION/OUTREACH	Central Park Elementary School	Recycling Program / Litter Reduction	RECYCLING/HHW PROMOTION
7/30/2009	PUBLIC INVOLVEMENT/PARTICIPATION	Papio NRD	Watershed Policy	SPECIAL INTEREST GROUP MEETING
8/27/2009	PUBLIC INVOLVEMENT/PARTICIPATION	Papio NRD	Watershed Policy	SPECIAL INTEREST GROUP MEETING
9/12/2009	PUBLIC EDUCATION/OUTREACH	Area Lakes and Streams	Stream Clean Up Day	EVENT
9/13/2009				
9/18/2009	PUBLIC EDUCATION/OUTREACH	Papio NRD	Watershed Education	EVENT
	PUBLIC INVOLVEMENT/PARTICIPATION	Papio NRD	Watershed Policy	SPECIAL INTEREST GROUP MEETING
9/24/2009	PUBLIC EDUCATION/OUTREACH	Yates Alternative School	MORE Nature Nights	EVENT
9/24/2009	PUBLIC INVOLVEMENT/PARTICIPATION	Papio NRD	Watershed Policy	SPECIAL INTEREST GROUP MEETING
10/8/2009				
	POST-CONSTRUCTION RUNOFF	Scott Conference Center	Post Construction Management	EVENT
10/22/2009	PUBLIC INVOLVEMENT/PARTICIPATION	Papio NRD	Watershed Policy	SPECIAL INTEREST GROUP MEETING
11/13/2009	PUBLIC INVOLVEMENT/PARTICIPATION	Papio NRD	Watershed Policy	SPECIAL INTEREST GROUP MEETING
11/19/2009	PUBLIC INVOLVEMENT/PARTICIPATION	Papio NRD	Watershed Policy	SPECIAL INTEREST GROUP MEETING
12/17/2009	PUBLIC INVOLVEMENT/PARTICIPATION	Papio NRD	Watershed Policy	SPECIAL INTEREST GROUP MEETING

Elementary School Students	30	School presentation by Kendra Sullivan to elementary students.	PCWP, KOB
Partnership Members	10	Subcommittee Meeting	PCWP
Elementary School Students	100	School presentation by Kendra Sullivan to elementary students.	PCWP, KOB
Partnership Members	18	Partnership Meeting	PCWP
Elementary School Students	90	School presentation by Kendra Sullivan to elementary students.	PCWP, KOB
Elementary School Students	75	School presentation by Kendra Sullivan to elementary students.	PCWP, KOB
Partnership Members	24	Partnership Meeting	PCWP
Partnership Members	14	Partnership Meeting	PCWP
Omaha Area Residents	251	Annual Stream Clean Up day where volunteers pick up litter along area streams.	PCWP, KOB
Omaha Area Residents	3500	Annual event targeting children and families educating them in a fun atmosphere about water quality and conservation issues.	PCWP, Nebraska Game and Parks, National Park Service, USACE, Coast Guard Auxiliary, Upper Big Blue NRD, UNL Douglas/Sarpy Extension, Fontenelle Nature Association & many more
Partnership Members		Subcommittee Meeting	PCWP
Elementary School Students	125	After school event promoting outdoor nature based play.	PCWP, MORE Nature
Partnership Members	22	Partnership Meeting	PCWP
Engineers, Developers	183	Workshop for engineers and developers to educate them about post construction ordinance requirements.	PCWP, UNL Douglas Sarpy Extension
Partnership Members	20	Partnership Meeting	PCWP
Partnership Members	10	Subcommittee Meeting	PCWP
Partnership Members	12	Partnership Meeting	PCWP
Partnership Members	17	Partnership Meeting	PCWP

PAPILLION CREEK WATERSHED STORMWATER MANAGEMENT POLICIES

POLICY GROUP #1: WATER QUALITY IMPROVEMENT

ISSUE: Waters of the Papillion Creek Watershed are impaired.

“ROOT” POLICY: Improve water quality from all contributing sources, including but not limited to, agricultural activities, urban stormwater, and combined sewer overflows, such that waters of the Papillion Creek Watershed and other local watersheds can meet applicable water quality standards and community-based goals, where feasible.

SUB-POLICIES:

- 1) Water Quality LID shall be required on all new developments and significant redevelopments.
- 2) Protect surface and groundwater resources from soil erosion (sheet and rill, wind erosion, gully and stream bank erosion), sedimentation, nutrient and chemical contamination. Buffer strips and riparian corridors should be established along all stream segments.
- 3) Preserve and protect wetland areas to the fullest extent possible to maintain natural hydrology and improve water quality by minimizing the downstream transport of sediment, nutrients, bacteria, etc. borne by surface water runoff. Reestablishment of previously existing wetlands and the creation of new wetlands should be promoted. Any impacted wetlands shall be mitigated at a 3:1 ratio.
- 4) Support NDEQ in an accelerated TMDL development process that addresses potential pollutant sources in a fair and reasonable manner based on sound technical data and scientific approach.
- 5) Implement Best Management Practices (BMPs) that reduce both urban and rural pollution sources, maintain or restore designated beneficial uses of streams and surface water impoundments, minimize soil loss, and provide sustainable production levels. Water quality basins shall be located in general conformance with an adopted Papillion Creek Watershed Management Plan.

REFERENCE INFORMATION

DEFINITIONS:

- 1) Low-Impact Development (LID). A land development and management approach whereby stormwater runoff is managed using design techniques that promote infiltration, filtration, storage, evaporation, and temporary detention close to its source. Management of such stormwater runoff sources may include open space, rooftops, streetscapes, parking lots, sidewalks, medians, etc.
- 2) Water Quality LID. A level of LID using strategies designed to provide for water quality control of the first ½ inch of stormwater runoff generated from each new development or significant redevelopment and to maintain the peak discharge rates during the 2-year storm event to baseline land use conditions, measured at every drainage (stormwater discharge) outlet from the new development or significant redevelopment.
- 3) Best Management Practice (BMP). “A technique, measure or structural control that is used for a given set of conditions to manage the quantity and improve the quality of

PAPILLION CREEK WATERSHED STORMWATER MANAGEMENT POLICIES

stormwater runoff in the most cost-effective manner." [Source: U.S. Environmental Protection Agency (EPA)]

- 4) Total Maximum Daily Load (TMDL). A calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources. Water quality standards are set by States, Territories, and Tribes. They identify the uses for each waterbody, for example, drinking water supply, contact recreation (swimming), and aquatic life support (fishing), and the scientific criteria to support that use. A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and non-point sources. The calculation must include a margin of safety to ensure that the waterbody can be used for the purposes the State has designated. The calculation must also account for seasonal variation in water quality. The Clean Water Act, Section 303, establishes the water quality standards and TMDL programs, and for Nebraska such standards and programs are administered by the Nebraska Department of Environmental Quality. [Source: EPA and Nebraska Surface Water Quality Standards, Title 117].

PAPILLION CREEK WATERSHED STORMWATER MANAGEMENT POLICIES

POLICY GROUP #2: PEAK FLOW REDUCTION

ISSUE

Urbanization within the Papillion Creek Watershed has and will continue to increase runoff leading to more flooding problems and diminished water quality.

ROOT POLICY

Maintain or reduce stormwater peak discharge during development and after full build-out land use conditions from that which existed under baseline land use conditions.

SUB-POLICY

- 1) Regional stormwater detention facilities and other structural and non-structural BMPs shall be located in general conformance with an adopted Papillion Creek Watershed Management Plan and shall be coordinated with other related master planning efforts for parks, streets, water, sewer, etc.
- 2) Maximum LID shall be required to reduce peak discharge rates on all new developments and significant redevelopments as identified in the Papillion Creek Watershed Management Plan.
- 3) All significant redevelopment shall maintain peak discharge rates during the 2, 10, and 100-year storm event under baseline land use conditions.

REFERENCE INFORMATION

DEFINITIONS

- 1) Low-Impact Development (LID). A land development and management approach whereby stormwater runoff is managed using design techniques that promote infiltration, filtration, storage, evaporation, and temporary detention close to its source. Management of such stormwater runoff sources may include open space, rooftops, streetscapes, parking lots, sidewalks, medians, etc.
- 2) Water Quality LID. A level of LID using strategies designed to provide for water quality control of the first ½ inch of stormwater runoff generated from each new development or significant redevelopment and to maintain the peak discharge rates during the 2-year storm event to baseline land use condition, measured at every drainage (stormwater discharge) outlet from the new development or significant redevelopment.
- 3) Maximum LID. A level of LID using strategies, including water quality LID and on-site detention, designed not to exceed peak discharge rates of more than 0.2 cfs/acre during the 2-year storm event or 0.5 cfs/acre during the 100-year storm event based on the contributing drainage from each site, measured at every drainage (stormwater discharge) outlet from the new development or significant redevelopment.
- 4) Peak Discharge or Peak Flow. The maximum instantaneous surface water discharge rate resulting from a design storm frequency event for a particular hydrologic and hydraulic analysis, as defined in the Omaha Regional Stormwater Design Manual. The measurement of the peak discharge shall be at the lower-most drainage outlet(s) from a new development or significant redevelopment.

PAPILLION CREEK WATERSHED STORMWATER MANAGEMENT POLICIES

- 5) Regional Stormwater Detention Facilities. Those facilities generally serving a drainage catchment area of 500 acres or more in size.
- 6) Baseline Land Use Conditions. That which existed for Year 2001 for Big and Little Papillion Creeks and its tributaries (excluding West Papillion Creek) and for Year 2004 for West Papillion Creek and its tributaries.
- 7) Full Build-Out Land Use Conditions. Fully platted developable land use conditions for the combined portions of the Papillion Creek Watershed that lie in Douglas and Sarpy Counties that are assumed to occur by the Year 2040, plus the projected 2040 land uses within the Watershed in Washington County; or as may be redefined through periodic updates to the respective County comprehensive plans.

PAPILLION CREEK WATERSHED STORMWATER MANAGEMENT POLICIES

POLICY GROUP #3: LANDSCAPE PRESERVATION, RESTORATION, AND CONSERVATION

ISSUE: Natural areas are diminishing, and there is a need to be proactive and integrate efforts directed toward providing additional landscape and green space areas with enhanced stormwater management through restoration and conservation of stream corridors, wetlands, and other natural vegetation.

“ROOT” POLICY: Utilize landscape preservation, restoration, and conservation techniques to meet the multi-purpose objectives of enhanced aesthetics, quality of life, recreational and educational opportunities, pollutant reduction, and overall stormwater management.

SUB-POLICIES:

- 1) Incorporate stormwater management strategies as a part of landscape preservation, restoration, and conservation efforts where technically feasible.
- 2) Define natural resources for the purpose of preservation, restoration, mitigation, and/or enhancement.
- 3) For new development or significant redevelopment, provide a creek setback of 3:1 plus 50 feet along all streams as identified in the Papillion Creek Watershed Management Plan and a creek setback of 3:1 plus 20 feet for all other watercourses.
- 4) All landscape preservation features as required in this policy or other policies, including all stormwater and LID strategies, creek setbacks, existing or mitigated wetlands, etc., identified in new or significant redevelopment shall be placed into an out lot or within public right of way or otherwise approved easement.

REFERENCE INFORMATION

DEFINITIONS

- 1) Creek Setback. See Figure 1 below and related definitions in Policy Group #5. A setback area equal to three (3) times the channel depth plus fifty (50) feet (3:1 plus 50 feet) from the edge of low water on both sides of channel shall be required for any above or below ground structure exclusive of bank stabilization structures, poles or sign structures adjacent to any watercourse defined within the watershed drainage plan. Grading, stockpiling, and other construction activities are not allowed within the setback area and the setback area must be protected with adequate erosion controls or other Best Management Practices, (BMPs). The outer 30 feet adjacent to the creek setback limits may be credited toward meeting the landscaping buffer and pervious coverage requirements.

A property can be exempt from the creek setback requirement upon a showing by a licensed professional engineer or licensed landscape architect that adequate bank stabilization structures or slope protection will be installed in the construction of said structure, having an estimated useful life equal to that of the structure, which will provide adequate erosion control conditions coupled with adequate lateral support so that no portion of said structure adjacent to the stream will be endangered by erosion

PAPILLION CREEK WATERSHED STORMWATER MANAGEMENT POLICIES

or lack of lateral support. In the event that the structure is adjacent to any stream which has been channelized or otherwise improved by any agency of government, then such certificate providing an exception to the creek setback requirement may take the form of a certification as to the adequacy and protection of the improvements installed by such governmental agency. If such exemption is granted, applicable rights-of-way must be provided and a minimum 20 foot corridor adjacent thereto.

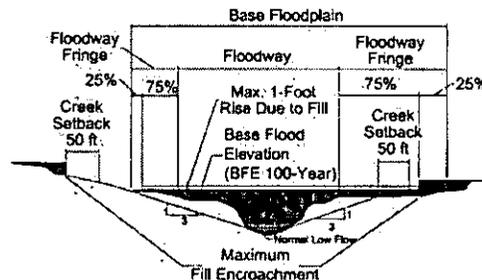


Figure 1 – Floodway Fringe Encroachment and Creek Setback Schematic

DEFINITIONS

- 1) **Base Flood.** The flood having a one percent chance of being equaled or exceeded in magnitude in any given year (commonly called a 100-year flood). *[Adapted from Chapter 31 of Nebraska Statutes]*
- 2) **Floodway.** The channel of a watercourse and the adjacent land areas that are necessary to be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot. *[Adapted from Chapter 31 of Nebraska Statutes].* The Federal Emergency Management Agency (FEMA) provides further clarification that a floodway is the central portion of a riverine floodplain needed to carry the deeper, faster moving water.
- 3) **Floodway Fringe.** That portion of the floodplain of the base flood, which is outside of the floodway. *[Adapted from Chapter 31 of Nebraska Statutes]*
- 4) **Floodplain.** The area adjoining a watercourse, which has been or may be covered by flood waters. *[Adapted from Chapter 31 of Nebraska Statutes]*
- 5) **Watercourse.** Any depression two feet or more below the surrounding land which serves to give direction to a current of water at least nine months of the year and which has a bed and well-defined banks. *[Adapted from Chapter 31 of Nebraska Statutes]*
- 6) **Low Chord Elevation.** The bottom-most face elevation of horizontal support girders or similar superstructure that supports a bridge deck.
- 7) **Updated Flood Hazard Maps.** The remapping of flooding sources within the Papillion Creek Watershed where Digital Flood Insurance Rate Maps (DFIRMs) are based on 2004 or more recent conditions hydrology and full-build out conditions hydrology. West Papillion Creek and its tributaries are currently under remapping and will become regulatory in 2009. Updating flood hazard maps for Big Papillion Creek and Little Papillion Creek are planned to be completed in the future.
- 8) **New Development.** New development shall be defined as that which is undertaken to any undeveloped parcel that existed at the time of implementation of this policy.

PAPILLION CREEK WATERSHED STORMWATER MANAGEMENT POLICIES

POLICY GROUP #4: EROSION AND SEDIMENT CONTROL AND OTHER BMPs

ISSUE: Sound erosion and sediment control design and enforcement practices are needed in order to protect valuable land resources, stream and other drainage corridors, and surface water impoundments and for the parallel purpose of meeting applicable Nebraska Department of Environmental Quality regulatory requirements for construction activities that disturb greater than one acre.

“ROOT” POLICY: Promote uniform erosion and sediment control measures by implementing consistent rules for regulatory compliance pursuant to State and Federal requirements, including the adoption of the Omaha Regional Stormwater Design Manual.

SUB-POLICIES:

- 1) Construction site stormwater management controls shall include both erosion and sediment control measures.
- 2) The design and implementation of post-construction, permanent erosion and sediment controls shall be considered in conjunction with meeting the intent of other Stormwater Management Policies.
- 3) Sediment storage shall be incorporated with all regional detention facilities where technically feasible.

REFERENCE INFORMATION

DEFINITIONS

- 1) Erosion Control. Land and stormwater management practices that minimize soil loss caused by surface water movement.
- 2) Sediment Control. Land and stormwater management practices that minimize the transport and deposition of sediment onto adjacent properties and into receiving streams and surface water impoundments.

PAPILLION CREEK WATERSHED STORMWATER MANAGEMENT POLICIES

POLICY GROUP #5: FLOODPLAIN MANAGEMENT

ISSUE: Continued and anticipated development within the Papillion Creek Watershed mandates that holistic floodplain management be implemented and maintained in order to protect its citizens, property, and natural resources.

“ROOT” POLICY: Participate in the FEMA National Flood Insurance Program, update FEMA floodplain mapping throughout the Papillion Creek Watershed, and enforce floodplain regulations to full build-out, base flood elevations.

SUB-POLICIES:

- 1) Floodplain management coordination among all jurisdictions within the Papillion Creek Watershed and the Papio-Missouri River Natural Resources District (P-MRNRD) is required.
- 2) Flood Insurance studies and mapping throughout the Papillion Creek Watershed shall be updated using current and full-build out conditions hydrology.
- 3) Encroachments for new developments or significant redevelopments within floodway fringes shall not cause any increase greater than one (1.00) foot in the height of the full build-out base flood elevation using best available data.
- 4) Filling of the floodway fringe associated with new development within the Papillion Creek System shall be limited to 25% of the floodway fringe in the floodplain development application project area, unless approved mitigation measures are implemented. The remaining 75% of floodway fringe within the project area shall be designated as a floodway overlay zone. For redevelopment, these provisions may be modified or waived in whole or in part by the local jurisdiction.
- 5) The low chord elevation for bridges crossing all watercourses within FEMA designated floodplains shall be a minimum of one (1) foot above the base flood elevation for full-build out conditions hydrology using best available data.
- 6) The lowest first floor elevation of buildings associated with new development or significant redevelopment that are upstream of and contiguous to regional dams within the Papillion Creek Watershed shall be a minimum of one (1) foot above the 500-year flood pool elevation.

REFERENCE INFORMATION

DEFINITIONS (See Figure 1 below and related definitions in Policy Group #3: Landscape Preservation, Restoration, and Conservation).

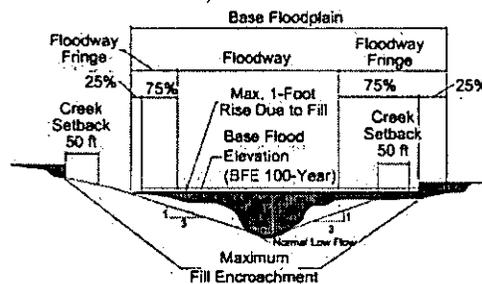


Figure 1 – Floodway Fringe Encroachment and Creek Setback Schematic

PAPILLION CREEK WATERSHED STORMWATER MANAGEMENT POLICIES

- 1) Base Flood. The flood having a one percent chance of being equaled or exceeded in magnitude in any given year (commonly called a 100-year flood). *[Adapted from Chapter 31 of Nebraska Statutes]*
- 2) Floodway. The channel of a watercourse and the adjacent land areas that are necessary to be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot. *[Adapted from Chapter 31 of Nebraska Statutes]*. The Federal Emergency Management Agency (FEMA) provides further clarification that a floodway is the central portion of a riverine floodplain needed to carry the deeper, faster moving water.
- 3) Floodway Fringe. That portion of the floodplain of the base flood, which is outside of the floodway. *[Adapted from Chapter 31 of Nebraska Statutes]*
- 4) Floodplain. The area adjoining a watercourse, which has been or may be covered by flood waters. *[Adapted from Chapter 31 of Nebraska Statutes]*
- 5) Watercourse. Any depression two feet or more below the surrounding land which serves to give direction to a current of water at least nine months of the year and which has a bed and well-defined banks. *[Adapted from Chapter 31 of Nebraska Statutes]*
- 6) Low Chord Elevation. The bottom-most face elevation of horizontal support girders or similar superstructure that supports a bridge deck.
- 7) Updated Flood Hazard Maps. The remapping of flooding sources within the Papillion Creek Watershed where Digital Flood Insurance Rate Maps (DFIRMs) are based on 2004 or more recent conditions hydrology and full-build out conditions hydrology. West Papillion Creek and its tributaries are currently under remapping and will become regulatory in 2009. Updating flood hazard maps for Big Papillion Creek and Little Papillion Creek are planned to be completed in the future.
- 8) New Development. New development shall be defined as that which is undertaken to any undeveloped parcel that existed at the time of implementation of this policy.

BASIC FEMA REQUIREMENTS

On March 1, 2003, FEMA became part of the U.S. Department of Homeland Security (DHS). In order for a community to participate in the FEMA National Flood Insurance Program, it must first define base flood elevations and adopt a floodway for all its major streams and tributaries. Once a community adopts its floodway, the requirements of 44 CFR 60.3(d) must be fulfilled. The key concern is that each project in the floodway must receive an encroachment review; i.e., an analysis to determine if the project will increase flood heights or cause increased flooding downstream. Note that the FEMA regulations call for preventing any increase in flood heights. Projects, such as filling, grading or construction of a new building, must be reviewed to determine whether they will obstruct flood flows and cause an increase in flood heights upstream or adjacent to the project site. Further, projects, such as grading, large excavations, channel improvements, and bridge and culvert replacements should also be reviewed to determine whether they will remove an existing obstruction, resulting in increases in flood flows downstream. *[Adapted from Federal Emergency Management Agency guidance]*

PAPILLION CREEK WATERSHED STORMWATER MANAGEMENT POLICIES

POLICY GROUP #6: STORMWATER MANAGEMENT FINANCING

ISSUE: Regulatory requirements for stormwater management and implementation of Stormwater Management Policies intended to accommodate new development and significant redevelopment will impose large financial demands for capital and operation and maintenance beyond existing funding resources.

“ROOT” POLICY: Dedicated, sustainable funding mechanisms shall be developed and implemented to meet capital and operation and maintenance obligations needed to implement NPDES Stormwater Management Plans, Stormwater Management Policies, and the Papillion Creek Watershed Management Plan.

SUB-POLICIES:

- 1) All new development and significant redevelopment will be required to fund the planning, implementation, and operation and maintenance of water quality LID.
- 2) A Watershed Management Fee system shall be established to equitably distribute the capital cost of implementing the Papillion Creek Watershed Management Plan among new development or significant redevelopment. Such Watershed Management Fee shall only apply to new development or significant redevelopment within the Papillion Creek Watershed and the initial framework shall consist of the following provisions:
 - a. Collection of fees and public funding shall be earmarked specifically for the construction of projects called for in the Papillion Creek Watershed Management Plan, including Maximum LID costs such as on site detention, regional detention basins, and water quality basins.
 - b. Multiple fee classifications shall be established which fairly and equitably distribute the cost of these projects among all undeveloped areas within the Papillion Creek Watershed.
 - c. Watershed Management Fees (private) are intended to account for approximately one-third (1/3) of required capital funds and shall be paid to the applicable local zoning jurisdiction with building permit applications.
 - d. Watershed Management Fee revenues shall be transferred from the applicable local zoning jurisdiction to a special P-MRNRD construction account via inter-local agreements.
 - e. The P-MRNRD (public) costs are intended to account for approximately two-thirds (2/3) of required capital funds, including the cost of obtaining necessary land rights, except as further provided below; and the P-MRNRD shall be responsible for constructing regional detention structures and water quality basins using pooled accumulated funds.
 - f. The P-MRNRD will seek general obligation bonding authority from the Nebraska Legislature to provide necessary construction scheduling flexibility.
 - g. Financing for Papillion Creek Watershed Management Plan projects may require public-private partnership agreements between the P-MRNRD and developers/S&IDs on a case-by-case basis.
 - h. On approximately three (3)-year intervals, the Papillion Creek Watershed Management Plan and Watershed Management Fee framework, rates, and construction priority schedule shall be reviewed with respect to availability of

PAPILLION CREEK WATERSHED STORMWATER MANAGEMENT POLICIES

needed funds and rate of development within the Papillion Creek Watershed by the parties involved (local zoning jurisdictions, P-MRNRD, and the development community). Subsequent changes thereto shall be formally approved by the respective local zoning jurisdictions and the P-MRNRD.

- 3) A Stormwater Utility Fee System shall be established to equitably distribute the costs for ongoing operation and maintenance of all stormwater BMPs and infrastructure among all existing property owners within NPDES Phase I or II municipal jurisdictions.
 - a. NPDES Phase I and II cities and counties should actively seek legislation from the Nebraska Legislature to allow for the establishment of an equitable stormwater utility fee.
 - b. The initial framework for the Stormwater Utility Fee System should consist of the following provisions provided Nebraska statutes allow for such a fee:
 - i. A county or city shall establish by resolution user charges to be assessed against all real property within its zoning jurisdiction and may issue revenue bonds or refunding bonds payable from the proceeds of such charges, all upon terms as the county board or city council determines are reasonable.
 - ii. Such charges shall be designed to be proportionate to the stormwater runoff contributed from such real property and based on sound engineering principles.
 - iii. Such charges should provide credits or adjustments for stormwater quantity and quality BMPs utilized in order to encourage wise conservation and management of stormwater on each property.
 - iv. Such charges shall be collected in a manner that the county or city determines as appropriate and shall not be determined to be special benefit assessments.
 - v. A county or city shall establish a system for exemption from the charges for the property of the state and its governmental subdivisions to the extent that it is being used for a public purpose. The local elected body shall also provide an appeals process for aggrieved parties.
 - vi. A county shall not impose these charges against real property that is being charges user charges by a city.
 - vii. Any funds raised from a Stormwater Utility Fee shall be placed in a separate fund and shall not be used for any purpose other than those specified.

REFERENCE INFORMATION

DEFINITIONS

- 1) Stormwater Management Policies. Stormwater management policies developed by the Technical Workgroup and Policy Workgroup that were commissioned by the Papillion Creek Watershed Partnership (PCWP) subsequent to the "Green, Clean, and Safe" initiatives developed through the "Watershed by Design" public forums conducted in 2004 and 2005 and subsequently revised by the PCWP in 2009. The

PAPILLION CREEK WATERSHED STORMWATER MANAGEMENT POLICIES

following policy groups contain "root" policies and sub-policies for stormwater management that have been developed in addition to the Stormwater Management Financing Policy Group herein:

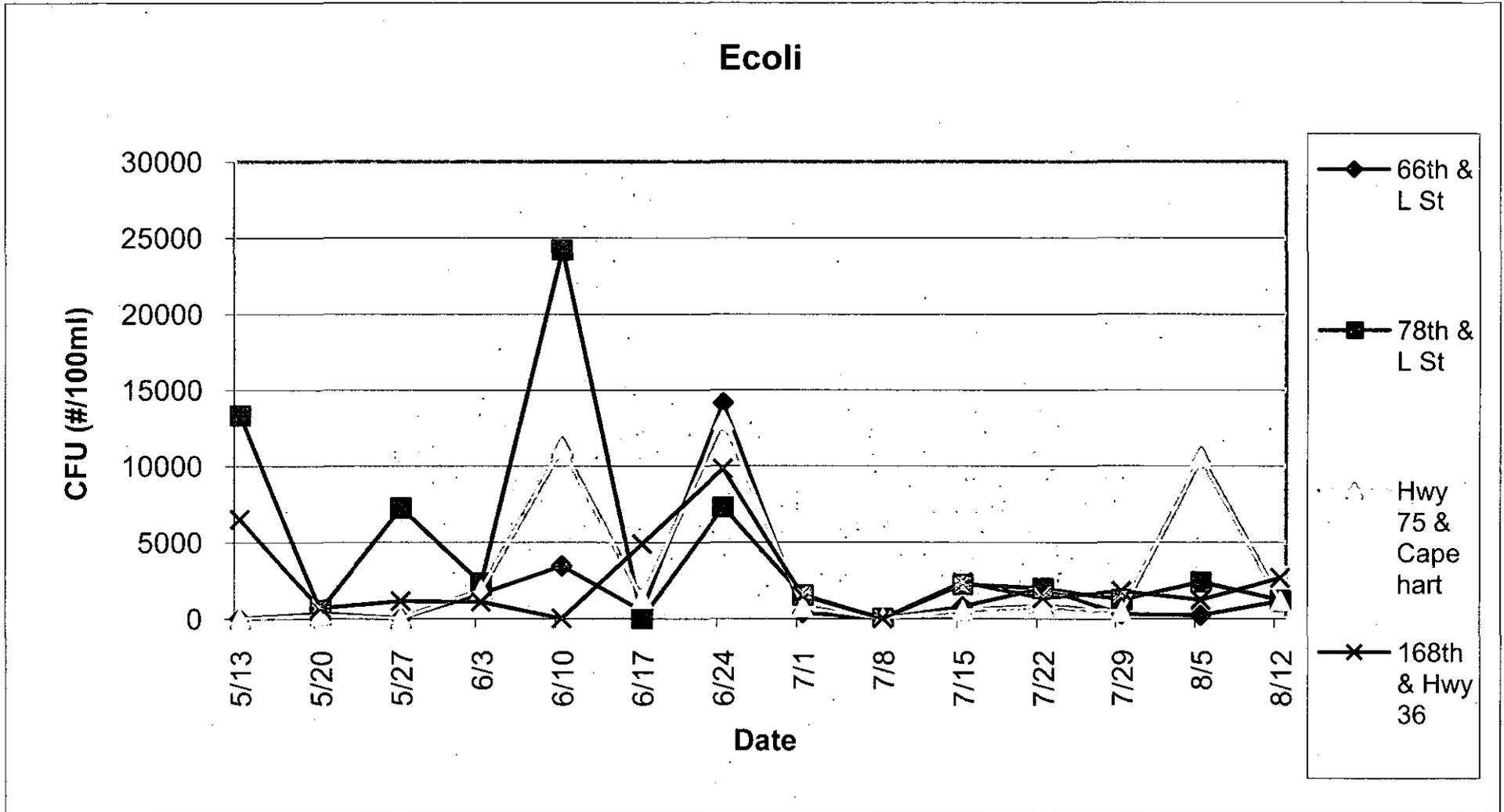
- Policy Group #1 – Water Quality Improvement
 - Policy Group #2 – Peak Flow Reduction
 - Policy Group #3 – Landscape Preservation, Restoration, and Conservation
 - Policy Group #4 – Erosion and Sediment Control and Other BMPs
 - Policy Group #5 – Floodplain Management
- 2) Stormwater Management Plan (SWMP). A SWMP is a required part of the NPDES Phase II Stormwater Permits issued to many of the Omaha metropolitan area Papillion Creek Watershed Partnership (PCWP) members. Development of Stormwater Management Policies is an integral part of the SWMP, and such policies are to be adopted by respective PCWP partners.
 - 3) Comprehensive Development Plans. Existing plans developed by local jurisdictions that serve as the basis for zoning and other land use regulations and ordinances. The Stormwater Management Policies are to be incorporated into the respective Comprehensive Development Plans.
 - 4) Policy Implementation. The implementation of the policies will be through the development of ordinances and regulations, in years 3 through 5 of the NPDES permit cycle; that is, by the year 2009. Ordinances and regulations are intended to be consistent for, and adopted by, the respective PCWP members. Such ordinances and regulations shall need to be consistent with the Comprehensive Development Plans of the respective PCWP members.
 - 5) Low-Impact Development (LID). A land development and management approach whereby stormwater runoff is managed using design techniques that promote infiltration, filtration, storage, evaporation, and temporary detention close to its source. Management of such stormwater runoff sources may include open space, rooftops, streetscapes, parking lots, sidewalks, medians, etc.
 - 6) Water Quality LID. A level of LID using strategies designed to provide for water quality control of the first ½ inch of stormwater runoff generated from each new development or significant redevelopment and to maintain the peak discharge rates during the 2-year storm event to baseline land use conditions, measured at every drainage (stormwater discharge) outlet from the new development or significant redevelopment.
 - 7) Maximum LID. A level of LID using strategies, including water quality LID and on-site detention, designed not to exceed peak discharge rates of more than 0.2 cfs/acre during the 2-year storm event or 0.5 cfs/acre during the 100-year storm event based on the contributing drainage from each site, measured at every drainage (stormwater discharge) outlet from the new development or significant redevelopment.
 - 8) Baseline Land Use Conditions. That which existed for Year 2001 for Big and Little Papillion Creeks and its tributaries (excluding West Papillion Creek) and for Year 2004 for West Papillion Creek and its tributaries. That which existed in 2007 for all areas not within the Papillion Creek Watershed.

PAPILLION CREEK WATERSHED STORMWATER MANAGEMENT POLICIES

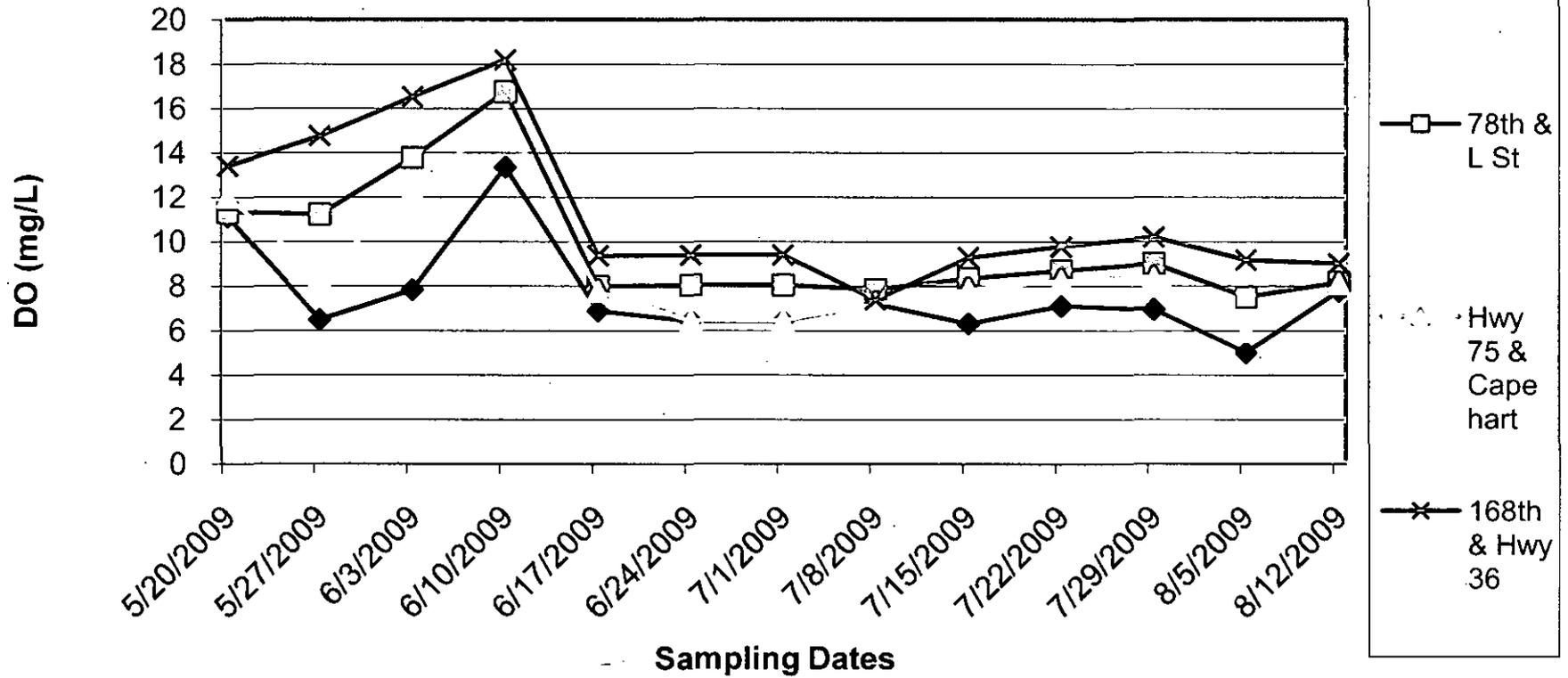
BASIS FOR STORMWATER MANAGEMENT FINANCING ISSUE

- 1) Time is of the essence for policy development and implementation:
 - a) Under the existing Phase II Stormwater Permits issued by the Nebraska Department of Environmental Quality, permittees must develop strategies, which include a combination of structural and/or non-structural best management practices and incorporate them into existing Comprehensive Development Plans by the end of 2009.
 - b) The S&ID platting process is typically several years ahead of full occupation of an S&ID. Therefore, careful pre-emptive planning and program implementation is necessary in order to construct regional stormwater detention and water quality basin improvements in a timely manner to meet the purposes intended and to avoid conflicts from land use encroachments from advancing development.
- 2) Financing to meet capital and O&M obligations for stormwater management projects requires a comprehensive, uniformly applied approach and not a project-by-project approach.

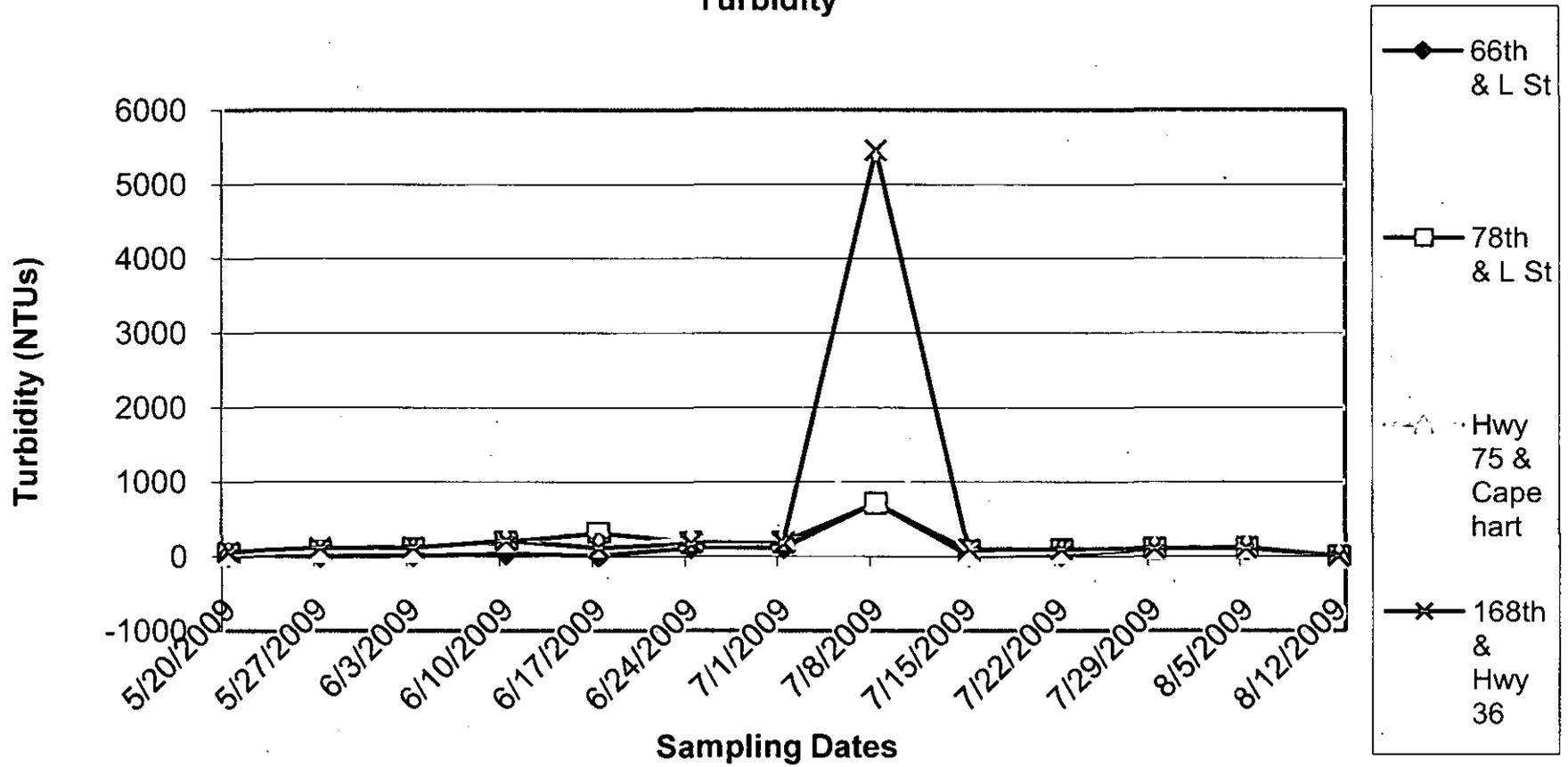
Project Name	Address	Enforce Id	Status	Date Submitted	Action Recommended	City Inspector	Outcome	Comments	Dollars	\$ Benefit
Bellevue										
Papio Structure S-27 Dam Rehab	39 & Fox Ridge Drive Bellevue NE 68123	6	Complete	1/27/2009	Letter of Warning	Chester Black	LOW Issued	2/14/2009	\$ -	
Value Place Motel	Samson Way Bellevue NE 68123	40	Complete	11/24/2009	Notice of Violation	Tami Merriex	RFI Issued	Engineers brought site into compliance and started submitting reports	\$ -	
Lempp Professional Center	42nd & Maass Road Bellevue NE 68123	41	Complete	11/24/2009	Notice of Violation	Tami Merriex	Withdrawn	Engineers brought site into compliance and started submitting reports	\$ -	
Gretna										
R & M Stigge, L.L.C.	NE 68130	12	Complete	4/14/2009	Letter of Warning	Michael Klocke-Sullivan	Withdrawn	After talking to the City of Gretna this action was withdrawn.	\$ -	
Gretna Fire Station	10309 S 168th Street Omaha NE 68136	44	Complete	12/29/2009	Letter of Warning	Tami Merriex	Request for Voluntary Compliance	Engineers brought site into compliance and started submitting reports	\$ -	
La Vista										
Cimarron Woods	99th & Harrison La Vista NE 68128	10	Complete	3/26/2009	Letter of Warning	Theresa Pogge	LOW Issued	Site has begun reporting online. Written response received via email on April 8, 2009	\$ -	
Southport Center	Parkway La Vista NE 68128	34	Complete	10/22/2009	Notice of Violation	Dan May	NOV w/ Fine	I sent the NOV and worksheet to Todd Aerni with the recommendation of a fine.	\$ -	
Omaha										
Bremson Office Condos - Maple Creek	68164	3	Complete	1/9/2009	Letter of Warning	Chester Black	Request for Voluntary Compliance	sure his staff fills in all of the information on future reports.	\$ -	
Quality Pork International Freezer Addition	10404 F Plaza Omaha NE 68127	4	Complete	1/12/2009	Notice of Violation	Dan May	SEP	Applicant paid \$8,335 for the Environmental Omaha @ work... campaign which had a value of	\$ 12,602.00	\$ 38,017.00
Ridgeview Apartments	186th & Wright Omaha NE 68130	7	Complete	2/12/2009	Notice of Violation	Tami Merriex	SEP	educational signage at Orchard Park. The signs were designed by Cisson & Associates, and	\$ 9,000.00	\$ 14,000.00
Elkhorn Office Bldg	Lot 2 Elkhorn NE 68022	8	Complete	3/4/2009	Letter of Warning	Erik Westhoff	Request for Voluntary Compliance	needed a permit or where under an existing permit. This confusion was cleared up, and	\$ -	
Omaha Public Safety Training Facility	120th & Rainwood Rd. Omaha NE 68142	9	Complete	3/4/2009	Letter of Warning	Erik Westhoff	Request for Voluntary Compliance	would be up-loaded today, the site brought into compliance, by April, 1, 2009, and as soon as it	\$ -	
Omaha Gospel Hall	11510 N 69th St Omaha NE 68152	11	Complete	3/26/2009	Letter of Warning	Theresa Pogge	SEP	educational sign, promoting rain gardens. Total spent = \$10,000 a value of \$20,000, once	\$ 10,000.00	\$ 20,000.00
Manchester Park	168th & Erskine St Omaha NE 68116	14	Complete	4/24/2009	Letter of Warning	Carol Sorensen	Request for Voluntary Compliance	compliance. He will continue to monitor lot level compliance.	\$ -	
Blue Cross Center - Aksarben Village Zone, 7	1919 Aksarben Drive Omaha NE 68116	15	Complete	4/25/2009	Letter of Warning	Theresa Pogge	Request for Voluntary Compliance	approval, and did not submit the proper paper work. The issues have been clarified, and should	\$ -	
CWS Stadium Streets & Parking Lot	suite 604 civic Center Omaha NE 68183	17	Complete	5/27/2009	Notice of Violation	Jim Kee	Withdrawn	The site has been more completely closed, and they are committed to submit reports on the	\$ -	
Hidden Creek	135th & Fort St Omaha NE 68154	18	Complete	6/12/2009	Letter of Warning	Dan May	NOV Issued	NOV sent to Paul Brown for missing inspections. No fine collected.	\$ -	
NMH - Visitor Parking Structure	8303 Dodge Street Omaha NE 68114	19	Complete	6/27/2009	Notice of Violation	Lisa Ferrin	No Action Taken	inspections.	\$ -	
Village @ Butler St	156 Butler St Omaha NE 68154	20	Complete	6/27/2009	Notice of Violation	Lisa Ferrin	No Action Taken	Hamer. After his review we may take further action.	\$ -	
26 and Grant Sewer Separation	26 & Grant St Omaha NE 68110	21	Complete	7/22/2009	Letter of Warning	Carol Sorensen	Request for Voluntary Compliance	decided to forward the inspection reports to the Cities site supervisor and the Contractors	\$ -	
26 and Grant Sewer Separation	26 & Grant St Omaha NE 68110	22	Complete	7/22/2009	Notice of Violation	Carol Sorensen	LOW Issued	decided to forward the inspection reports to the Cities site supervisor and the Contractors	\$ -	
Lydia House Open Door Mission	68119	23	Complete	8/4/2009	Notice of Violation	Carol Sorensen	LOW Issued	EGA reports did not match the City's report.	\$ -	
Lydia House Open Door Mission	68119	24	Complete	8/4/2009	Notice of Violation	Carol Sorensen	NOV Issued	being reviewed. After further review, EGA wrote a response outlining how their SOP was	\$ -	
Ultimate Baseball Academy	120th & I Street Omaha NE 68137	26	Complete	8/14/2009	Letter of Warning	Heather Tippet Pierce	NOV Issued	Russell Kreikemeier. Mr. Kreikemeier responded in a timely manner, said that he would	\$ -	
Camden Creek Grading Plan	Omaha NE 68114	27	Complete	8/21/2009	Letter of Warning	Heather Tippet Pierce	LOW Issued	the responsible party. An additional NOV was sent 12-10-2009 with no response.	\$ -	
Elkhorn Valley View	1313 S. 208th Street Omaha NE 68022	28	Complete	8/22/2009	Letter of Warning	Heather Tippet Pierce	Withdrawn	has been resolved.	\$ -	
Site Work for Scale Installation	4309 Dahlman Blvd. Omaha NE 68107	29	Complete	8/24/2009	Letter of Warning	Dan May	LOW Issued	Letter of Warning issued to Mike Galwitzer	\$ -	
Dillon Brothers Bike Shop	Omaha NE 68116	30	Complete	9/10/2009	Notice of Violation	Heather Tippet Pierce	LOW Issued	Letter of Warning issued to Mike Bischof	\$ -	
Ridgeview Apartments	186th & Wright Omaha NE 68130	31	Complete	9/10/2009	Notice of Violation	Heather Tippet Pierce	Withdrawn	achieved.	\$ -	
UNMC College of Nursing Addition	68198-7100	32	Complete	10/2/2009	Letter of Warning	Chris Barajas	No Action Taken	enforcement	\$ -	
Manchester Ridge	NW 175th & Blondo St. Omaha NE 68116	33	Complete	10/15/2009	Notice of Violation	Carol Sorensen	LOW Issued	area. Site was brought into compliance, Letter received.	\$ -	
Omaha Public Safety Training Facility	120th & Rainwood Rd. Omaha NE 68142	36	Complete	11/9/2009	Notice of Violation	Jim Kee	Request for Voluntary Compliance	come into compliance.	\$ -	
Skyline Meadows	21805 Lacy Drive Omaha NE 68022	38	Complete	11/12/2009	Notice of Violation	Jim Kee	No Action Taken	open, but on inspections are expected to be filed. When the Bank takes ownership, inspections	\$ -	
TSA - Omaha Kroc Center	30th & Omaha NE 68107	39	Complete	11/18/2009	Notice of Violation	Erik Westhoff	NOV w/ Fine	letter describing new SOP on 12-11-2009	\$ 6,000.00	
Urban Active Fitness	147th & Maple Omaha NE 68116	42	Complete	12/4/2009	Notice of Violation	Dan May	Withdrawn	Information in the field reports did not support enforcement at this time.	\$ -	
Standing Bear Point Commercial	144 & State St Omaha NE 68164	43	Complete	12/8/2009	Notice of Violation	Erik Westhoff	NOV Issued	NOV issued 8/28/2009, no response- second NOV issued 12/10/2009	\$ -	
Papillion										
Stockman's Hollow	66 St and Giles Rd Papillion NE 68157	5	Complete	1/26/2009	Letter of Warning	Theresa Pogge	Request for Voluntary Compliance	fence and has told Kirsten & Lee to stop using the unauthorized entrance. He stated that if K & L	\$ -	
Sarpy County Courthouse	68046	13	Complete	4/16/2009	Notice of Violation	Dan May	LOW Issued	Todd Aerni was to issue enforcement.	\$ -	
Shops at Hickory Hill Plaza	72nd & Giles Papillion NE 68046	16	Complete	4/29/2009	Notice of Violation	Theresa Pogge	LOW Issued	LOW recommended to the City of Papillion, Todd Aerni was going to issue the letter.	\$ -	
Pink Industrial Park 2 - Grading	120th & Roberts Road Papillion NE 68046	25	Complete	8/13/2009	Notice of Violation	Michael Klocke-Sullivan	NOV Issued	Meet with the city of Papillion, who was going to issue the NOV.	\$ -	
Stockman's Hollow	66 St and Giles Rd Papillion NE 68157	35	Complete	11/4/2009	Letter of Warning	Theresa Pogge	NOV w/ Fine	I sent the NOV and worksheet to Todd Aerni with the recommendation of a fine.	\$ -	
Ralston										
Lakeview Center	72nd Street & Q Street Ralston NE 68127	37	Complete	11/12/2009	Notice of Violation	Tami Merriex	Withdrawn	immediately.	\$ -	
									\$ 37,602.00	\$ 72,017.00



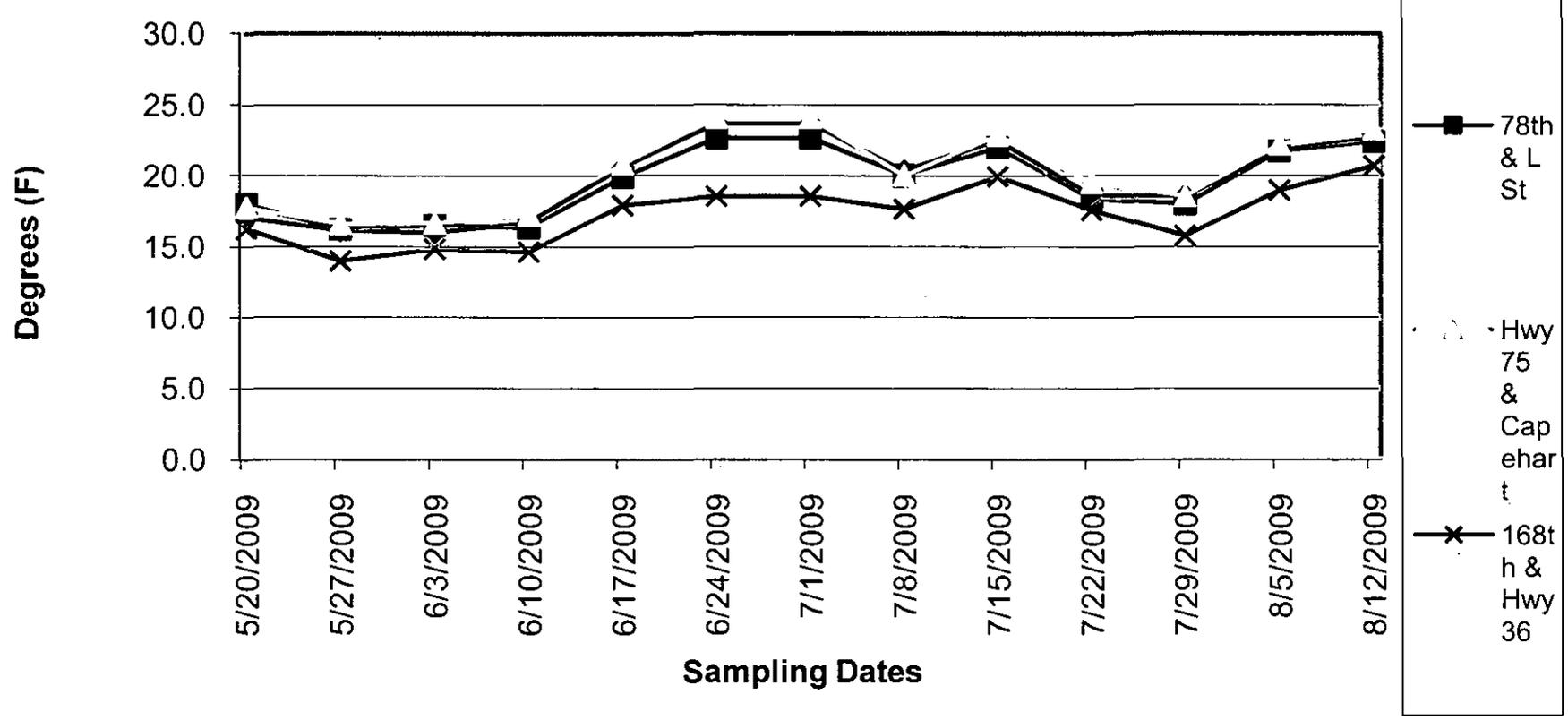
Dissolved Oxygen



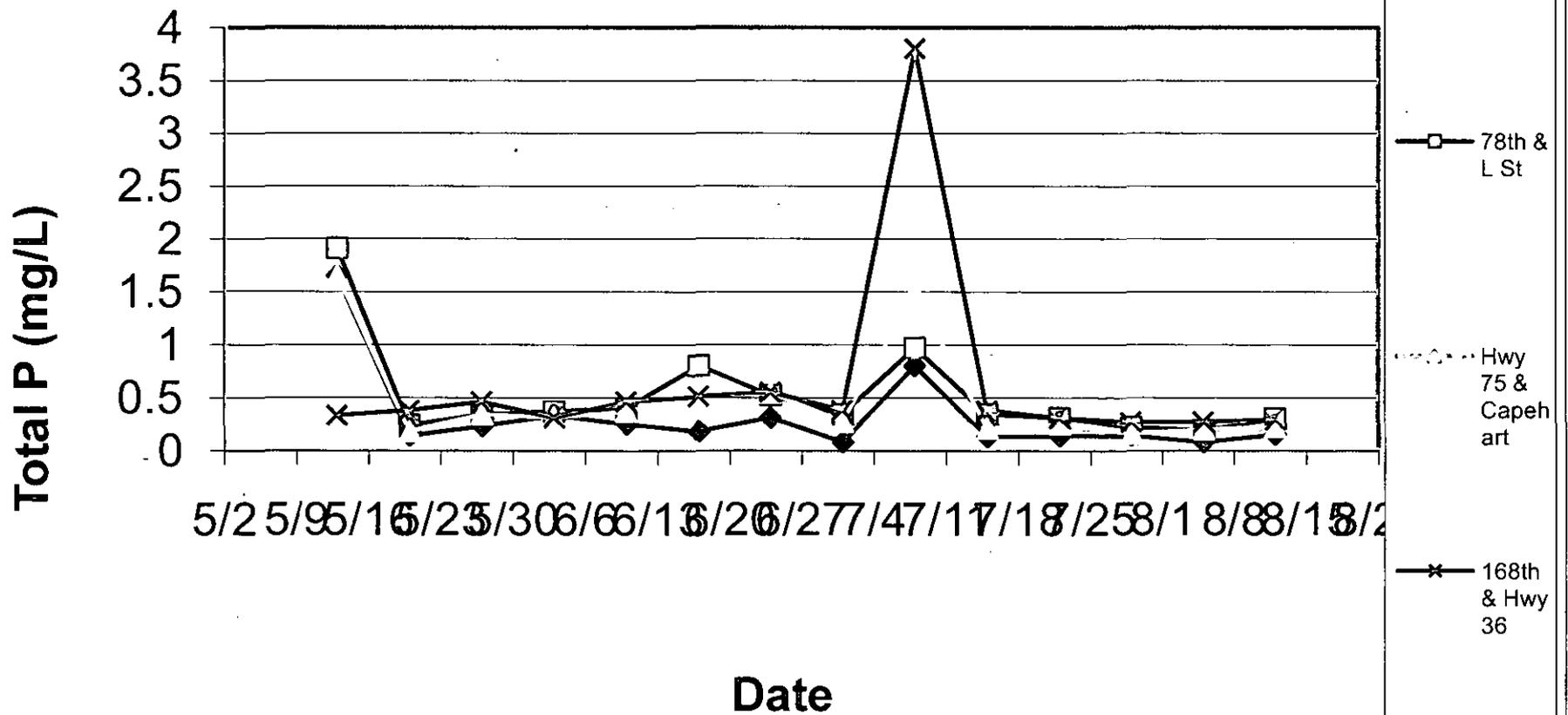
Turbidity



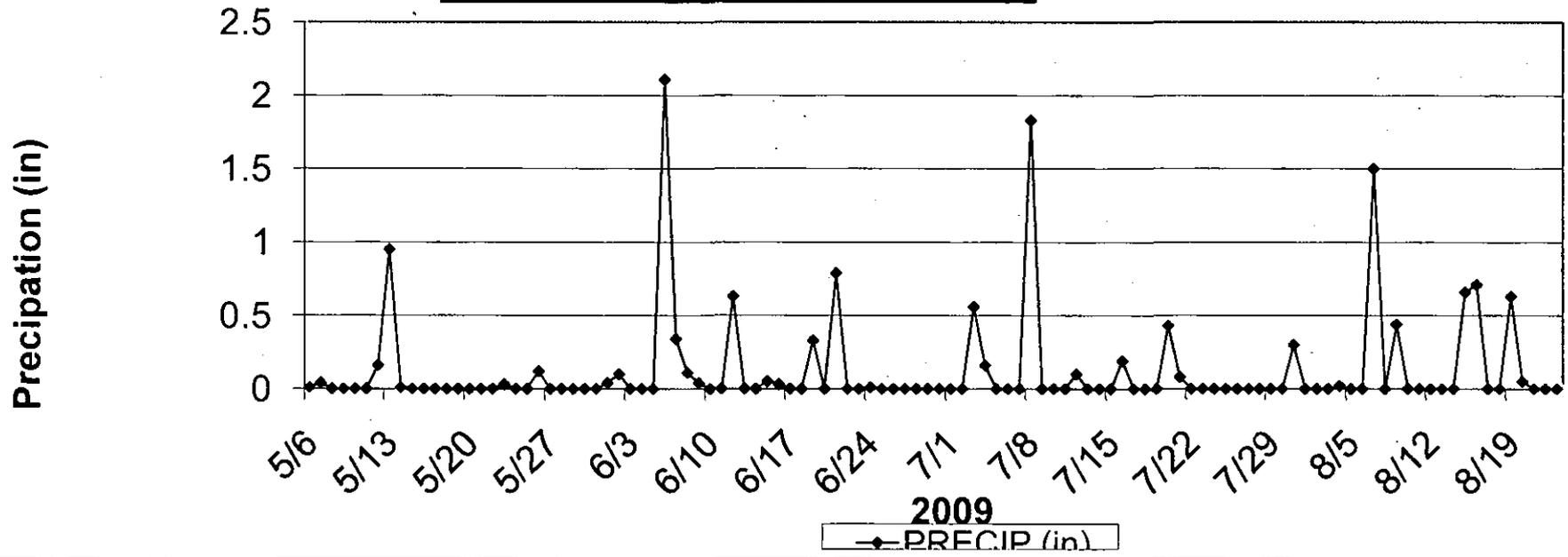
Temperature



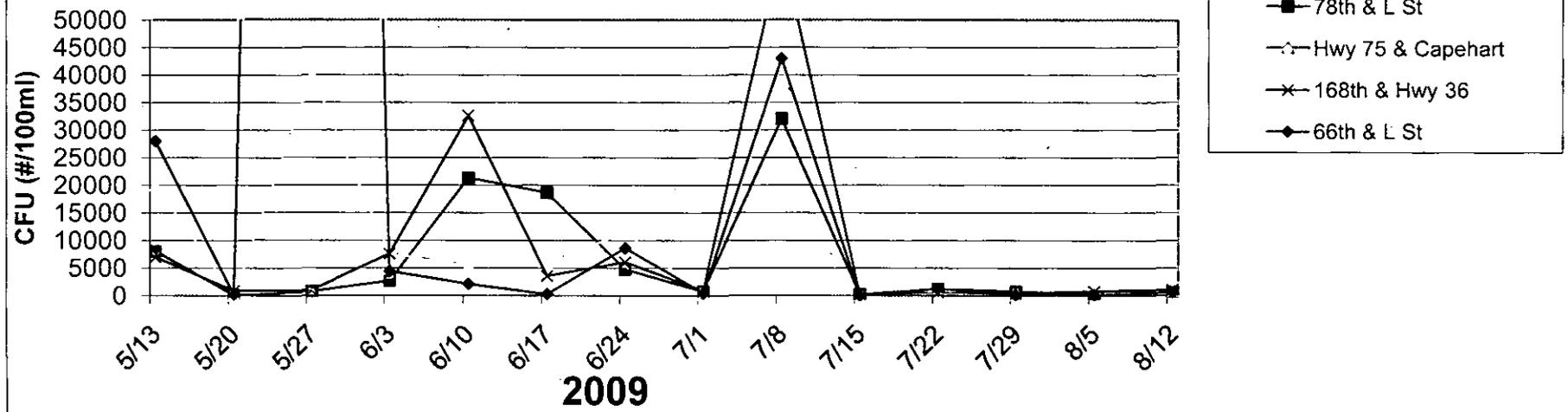
Total Phosphorus



Summer '09 Precipitation (in/day)

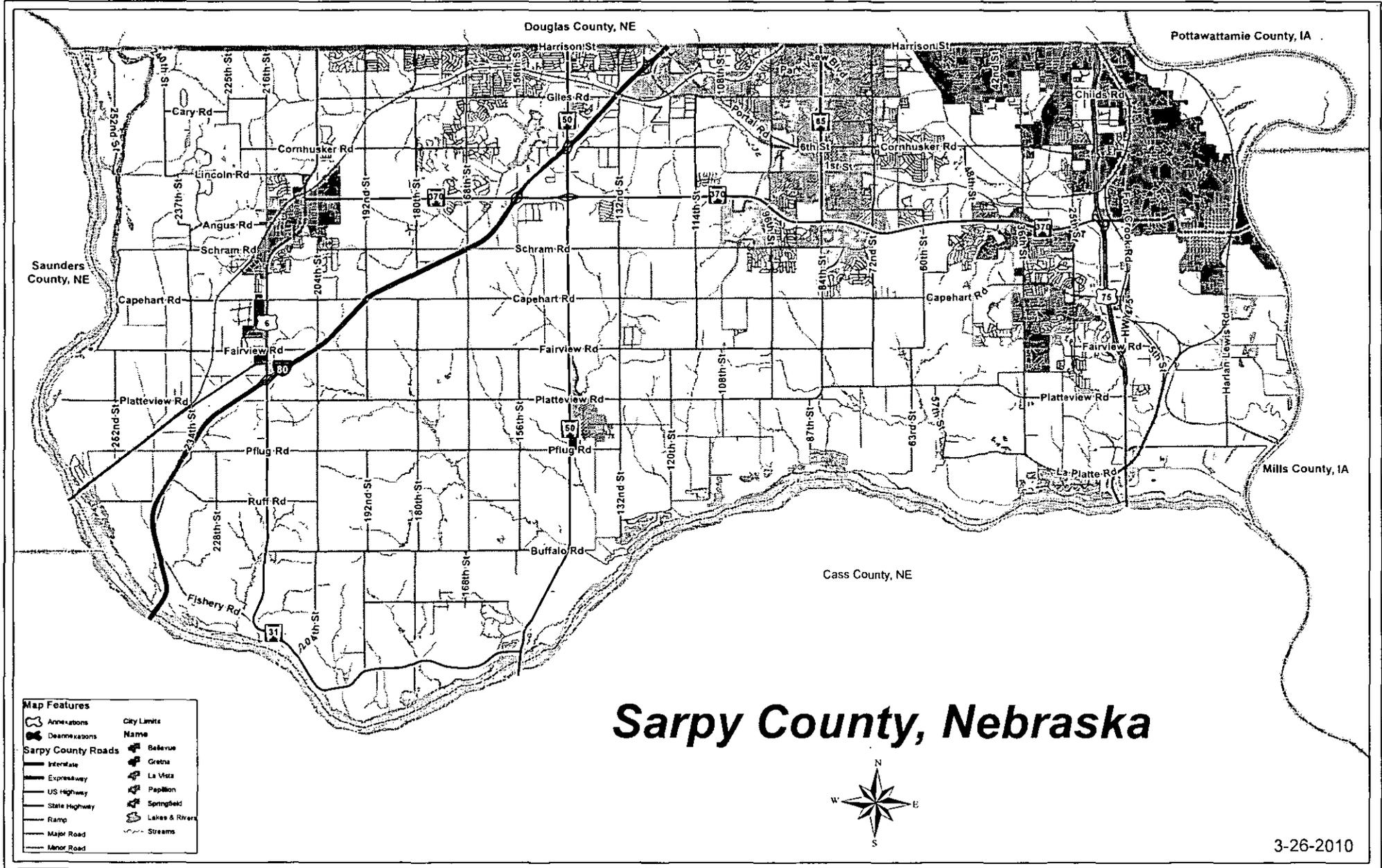


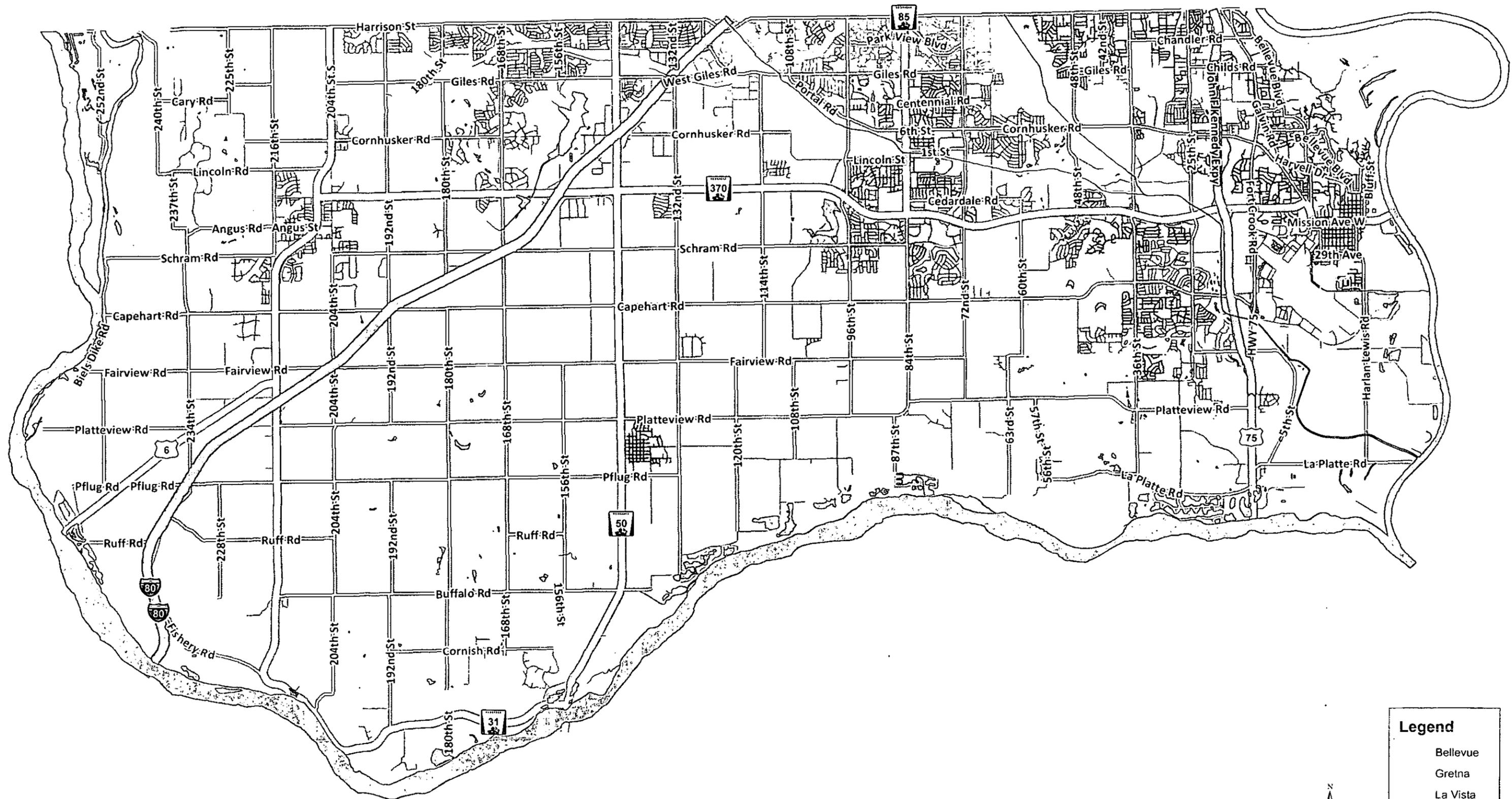
Fecal Coliform



Attachment E

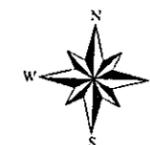
Ordinance/Resolution	Type	General Location	Jusidiction	Effective Date	Instrument Number
928	Annexation	HWY 6 & Fairview Rd	Gretna	1/1/2009	2008-17782
3522	Annexation	Harlan Lewis Rd & Cunningham Rd	Bellevue	6/23/2009	2009-18724
958	Deannexation	HWY 6 & Capehart Rd	Gretna	7/16/2009	2009-19210
Court Decree	Deannexation	HWY 50 & Pflug Rd	Springfiled	8/14/2009	2009-27096
928	Deannexation	HWY 6 & Fairview Rd	Gretna	12/1/2009	2009-38552
1107	Annexation	120th & Giles Rd	LaVista	12/11/2009	
1580	Annexation	84th & Schram Rd	Papillion	2/17/2010	2010-03645





Map prepared on: 3/24/2010 by:

sarpy county
GIS



Legend

- Bellevue
- Gretna
- La Vista
- Papillion
- Springfield