APPENDIX J NPDES MS4 PERMIT SWPPP (SUMMARY)

1. Storm System Maintenance and Inspection Recommendations Memorandum.
2. SWPPP Summary. Note that SWPPP as of March 2006 – Changes may occur prior to final SWMP as a result of the revised Non-degradation assessment permit requirements.

MEMORANDUM

TO: Lori Haak, Water Resources Coordinator
City of Chanhassen

FROM: SEH Water Resources

DATE: August 2, 2006

RE: Storm System Inspections and Maintenance Considerations
SEH No. A-CHANH0409.00 Task 93001 SP

The City's stormwater conveyance system inherently collects and conveys urban runoff and stormwater that may contain certain pollutants to surface water resources. Like other City infrastructure, the system requires a combination of routine maintenance and occasionally major repairs in order to function properly. Conducting inspections and maintenance of the system is also a requirement of the City's NPDES permit program. The intent of this memorandum is to outline recommended inspection and maintenance protocols the City should follow in order to comply with the obligations of the NPDES program as a first priority. In doing so, the City will realize reductions in the pollutants entering water resources, reduce the occurrences of localized flooding from blocked or degraded system components and reduce the overall long-term costs associated with its storm water management infrastructure.

Protocols for maintenance are described in a number of online sources as well as in similar guidance documents from regulatory agencies. These guidance documents are intended to reduce the volume and resulting impacts of pollutants reaching receiving waters through proper conveyance system operation and maintenance. Properly maintaining infrastructure such as catch basins, sump manholes, inlets, skimmer structures, treatment systems (ponds, rain gardens, etc.) and other stormwater system infrastructure on a regular basis will remove pollutants, reduce pollutant concentrations during the first flush, prevent clogging of the conveyance system, restore sediment trapping capacity, and reduce blockages in the system so that it functions properly hydraulically and reduces the occurrences of localized flooding.

The primary BMPs in the City's NPDES SWPPP that relate to inspections and maintenance of the storm sewer system are listed below. Recommendations for each category are provided in the following pages to supplement the City's regulatory requirements.

BMP ID	BMP Title
6a-1	Municipal Operations and Maintenance Program
6a-2	Street Sweeping
6b-2	Annual Inspection of All Structural Pollution Control Devices
6b-3	Annual Inspection of 20% of Outfalls, Sediment Basins and Ponds
6b-4	Annual Inspection of All Exposed Stockpiles, Storage and Material Handling Areas
6b-5	Inspection Follow-up (Repair, Replacement, Maintenance)
6b-6	Record Reporting and Retention: Inspections and Maintenance Program
6b-7	Evaluation of Inspection Frequency

Suggested Considerations and Protocols - by BMP

6a-1	Municipal Operations and Maintenance Program

The City will provide training for Public Works, Parks & Recreation and Development Review Staff on a range of topics related to the NPDES permit program. Several potential topics and specific recommendations are provided below as a guide to developing a more formal training program. One example of a simple training topic that can help improve water quality to train City landscape crews on the need to limit the deposits of grass clipping into the streets, unless they are cleaned/removed after mowing so they don't end up in the storm drains.

In addition, some local twin cities municipalities have initiated efforts to better coordinate municipal training programs such as the Public Works Forum in the east metro area which includes City Engineers, Public Works Directors and Watershed Organization staff addressing topics such as those listed below. Again, the items listed below are potential topics to present at training and are intended as a guide to help City staff at all positions recognize the activities that may have impacts to the City's storm water system.

1. Train crews in proper maintenance activities, including record keeping and material handling and disposal.
2. Train staff involved in detection and removal of illicit connections in the following:
    a. OSHA-required Health and Safety Training plus annual refresher training (as needed).
    b. OSHA Confined Space Entry training for staff entering manholes or other confined spaces.
3. Procedural training for field staff looking for illicit discharges or tracking origination of discharges (field screening, sampling, smoke/dye testing, TV inspection).
4. Clean up of spills and leaks using "dry" methods (with absorbent materials and/or rags), or dig up, remove, and properly dispose of contaminated soil.
5. Look for evidence of illegal discharges or illicit connections during routine maintenance of conveyance system and drainage structures:
    a. Is there evidence of spills such as paints, discoloring, etc?
    b. Are there any odors associated with the drainage system?
    c. Record locations of apparent illegal discharges/illicit connections.
    d. Track flows back to potential dischargers and conduct aboveground inspections. This can be done through visual inspection of upgradient manholes or alternate techniques including zinc chloride smoke testing, fluorometric dye testing, physical inspections, or TV camera inspection.
    e. Eliminate the discharge once the origin of flow is established.

6. Conduct illegal dumping training for inspecting and cleaning up hot spots and other storm drainage areas regularly where illegal dumping and disposal occurs. Train staff that may be in the field on non-storm water program activities to recognize, look for and report potential problems in the context of what may impact water quality or potential plugging of the drainage system.
7. Establish a process to investigate all reports of spills, leaks, and/or illegal dumping promptly and for tracking incident response. The system should be designed to identify the following:
    a. Types and quantities (in some cases) of wastes
    b. Patterns in time of occurrence (time of day/night, month, or year)
    c. Mode of dumping (abandoned containers, "midnight dumping" from moving vehicles, direct dumping of materials, accidents/spills)
    d. Responsible parties
8. Clean-up activities may create a slight disturbance for local aquatic species. Access to items and material on private property may be limited. Trade-offs may exist between channel hydraulics and water quality/riparian habitat. If storm channels or basins are recognized as wetlands, many activities, including maintenance, may be subject to regulation and permitting.
9. Storm drain flushing is most effective in small diameter pipes (36-inch diameter pipe or less, depending on water supply and sediment collection capacity). Other considerations associated with storm drain flushing may include the availability of a water source, finding a downstream area to collect sediments, liquid/sediment disposal, and prohibition against disposal of flushed effluent to sanitary sewer in some areas.
10. Stencil or demarcate storm drains, where applicable, to prevent illegal disposal of pollutants. Storm drain inlets should have messages such as "Dump No Waste Drains to Stream" stenciled next to them to warn against ignorant or intentional dumping of pollutants into the storm drainage system.
11. Post "No Dumping" signs in problem areas with a phone number for reporting dumping and disposal. Signs should also indicate fines and penalties for illegal dumping.

6a-2	Street Sweeping

The City currently sweeps at least once per year and has goals to sweep at least twice per year starting in 2007. The City also intends to develop a schedule and tracking system for sweeping activities. Figure J-2, provided in this Appendix J for the inspection program, can also be used to help prioritize sweeping activities. The approach may be to complete the first and/or second sweeping based on a prioritized basis of which watershed areas have the highest priority waters. Traffic and safety issues are also involved, although the priority system would help identify which areas should see a more focused sweeping effort. As the sweeping program progresses, the City could end up with a map that shows different levels of priority based roughly on a structure that considers factors including:

1. The highest priority watersheds.
2. The extent and frequency of sanding activities.

3. Areas which discharge directly to water bodies versus areas that are routed through storm water ponds.

6b-2	Annual Inspection of All Structural Pollution Control Devices

The City will inspect all structural pollution control devices annually as part of the NPDES permit program requirements. Structures may include sump manholes, grit chambers, skimmers, mechanical separators, small filtering devices, trash racks, etc. The following subsections provide some recommended frequencies and maintenance actions for each type of BMP.

Sump Manholes/Grit Chambers/Separators

1. Inspect facilities at least annually in accordance with BMP 6b-2, to determine need for removal of sediment or other maintenance. Sump manhole locations are identified in Figure J-2.
2. Cleaning should be conducted before a sump exceeds approximately the 40-60% full level. Sump manholes should be cleaned as frequently as needed to meet this standard. The level of the sediment/debris in the sump area should be tracked for each inspection, even if the material is not removed. This process will help identify the need for extending or shortening the time between inspections and to identify the preferred timing of sediment/debris removal.
3. The notebook process (or electronic method in the future) mentioned in 6b-3 should be followed for all small pollution control devices.
4. As new structures are added, the development review staff would be responsible for adding the new structures to the GIS database so that they are inspected later in the current year and/or part of the annual inspections in the following year.

6b-3	Annual Inspection of 20% of Outfalls, Sediment Basins and Ponds

The City will inspect 20% of the ponds and outfalls annually as part of the NPDES permit program requirements. The following subsections provide some recommended approaches and considerations for this inspection program. City staff will identify if the ponds and outfalls are functioning properly and conduct necessary maintenance, repair or replacement. This memorandum includes an attached example inspection checklist (which is similar to what the City currently uses) but that also clearly identifies the key elements required for reporting and follow-up maintenance actions in the NPDES permit program.

The following subsections provide some considerations and suggestions for outfalls and ponds specifically.

Outfalls and Ponds/Sediment Basins

1. Inspect facilities on an annual basis according to the groupings identified in Figure J-1. Five areas are identified in Figure J-1 that have borders based on major roads or distinct sections of the City. The intent of the priority system listed in Figure J-1 is to establish a guide for annual inspection planning based on the priority of the water body or water bodies within the border. The map represents a balance between administrative ease and watershed-based planning.
2. While the areas do not separate the outfalls and ponds into exact 20% sections of the City, the long-term (5-year) goal is to reach each outfall and pond at least once in the five-year period. As time permits, the intent would be to get ahead of the program by inspecting priority areas 1 and 2, for example, in the first year.

3. Outfalls and ponds should be inspected directly (and not by a drive-by process) to observe that the system does not have restrictions, scour at the outlet, or discolored liquid discharging into the pond or discharging to the downstream surface water.
4. Until the City is upgraded at some point in the future to using handheld electronic web-based devices for infrastructure inspections, the use of a 3-ring notebook with the areas in Figure J-1 separated into parts will be sufficient to plan and track the outfall and pond inspections.
5. The notebook should have a print-out of each outfall (or group of outfalls) identified on a letter sized page that identifies the unique ID of each outlet and the major road or roads in the area. In the same manner, each pond could have a printout with its unique ID and showing the pipes or conveyances into and out of the pond.
6. Inspection staff would then use their current inspection form or the example in this appendix in the field (prior to establishing a hand held device process), then enter the data into the GIS or other tracking system database for each outfall in the office after completing the field work. The end result would be that staff could have the ability to click on an outfall or pond from their desktop and see what and when inspections and maintenance had been conducted on each system component.
7. For areas needing a follow-up inspection or maintenance, the City's lead for inspections would review the items on a weekly or monthly basis and be responsible for scheduling follow-up activities. Any major maintenance needs and activities should also include notification to the Public Works and Natural Resources departments.
8. As new ponds or outfalls are added, the development review staff would be responsible for adding the new features to the GIS database so that they are inspected later in the current year and/or part of the annual inspections in the following year.

6b-5	Inspection Follow-up (Repair, Replacement, Maintenance)

City staff will conduct inspections of the system as identified in the previous BMP sections for water quality purposes, but also are required to identify if the system is functioning properly and conduct necessary maintenance, repair or replacement. This memorandum includes an attached example inspection checklist (which is similar to what the City currently uses) but that also clearly identifies the key elements required for reporting and follow-up maintenance actions in the NPDES permit program. The assignment of responsible staff for follow-up activities is the critical item in this BMP section. The tracking and reporting form current used (or the example form) will help gather a reasonable amount of data to be tracked to support the ongoing program evaluation, and adjustment in the inspection program over time.

The following subsections provide some considerations and suggestions for the more routine storm system maintenance that crews will be responsible for and that are not specifically mentioned in BMPs 6b-3 and 6b-5.

Catch Basins/Inlet Structures

1. Inspect facilities routinely during regular street maintenance activities to determine if there are signs of any deterioration threatening structural integrity that are in need of immediate repair, and if stenciling of catch basins and inlets with "drains to stream" or "drains to lake" are still visible or in need of re-stenciling

2. Clean catch basins, storm drain inlets, and other conveyance structures in the late winter/early spring to remove sediments and debris accumulated and again in late fall to remove leaves and debris. Note areas which have regular maintenance needs due to heavy vegetation or debris blocking a structure.
3. Keep accurate logs of the number of catch basins cleaned to better track trends in which structures have most frequent maintenance needs.

Storm Drain Conveyance System (Pipes)

1. Locate reaches of storm drain with deposit problems and develop a flushing schedule that keeps the pipe clear of excessive buildup.
2. Collect and pump flushed effluent to the sanitary sewer for treatment whenever possible.

Open Channels

1. Observe channel sections for occurrences of scour or bank erosion and deposits of sediment or large debris which may reduce the conveyance capacity of the channel.
2. Consider modifications to storm channel characteristics to improve stability, channel hydraulics, increase pollutant removals, and enhance channel/creek aesthetic and habitat value.

Pump Stations

1. Clean all storm drain pump stations at least twice per year to remove silt and trash.
2. Do not allow discharge to reach the storm drain system when cleaning a storm drain pump station or other facility.
3. Conduct routine maintenance at each pump station including testing pump operation at least annually.
4. Inspect, clean, and repair as necessary.

6b-6	Record Reporting and Retention: Inspections and Maint. Program

The use of a paper and/or electronic storm system inspection record process is the first step in tracking and reporting on annual inspections described in previous BMPs. Getting the data tracked in an electronic format will further automate the process of preparing a summary of the activities and results of the program. As a first step the City may be best suited to track the data in an Excel or Access database and consider a more comprehensive work-order management system like City-Works in the future. The City should consider how the current data would be uploaded to a more comprehensive system when making this decision. In this light Access would allow for both more efficient tracking and likely easier transfer of the data.

6b-7	Evaluation of Inspection Frequency

Based on the data collection and a review of trends in material removed from structures or ponds and the frequency of maintenance of system, the City may choose to adjust the inspection

frequency (either increase or decrease). For example, if a selected sump manhole is inspected annually and determined to be 80% full each inspection in the first two years, the City should consider increasing the frequency to twice per year to better manage the accumulation of sediment in the structure. The more frequent inspection may also help to identify what are the best times to maintain structures in various locations (e.g., spring, summer, fall, winter).

In selected areas the City may also consider the effects of more frequent sweeping in areas with ponds and small sediment control devices. Timely or more frequent sweeping may allow the City to clean sump manholes out less frequently. As a big picture view, the overall goal is to reduce the loading of sediment and pollutant to the City's water resources. Inherent in this goal is the need for the City to manage its resources in a cost-effective manner. A more functional database of the inspections and maintenance program will allow the City to make better decisions on the cost-effectiveness of the various storm system maintenance program.

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Attachments:
1. Figure J-1. Inspection Zones: Outfall and Pond Locations
2. Figure J-2. Inspection Zones: Sump Manhole Locations
3. Storm System Inspection record (Example)

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Storm System Inspection Record

Date Inspected _____ Pond/Water Body Name _____

Inspector Name _____ Dept.: STREET NAT. RES. PUB. WKS.
(circle one)

Current Weather: _____ Weather Trends: NORMAL WET DRY
(circle one)

Unique ID _____

Structure Type: <u>100% Inspected Annually (small pollution control devices)</u>

STREETS Sump MH/CB Separator Skimmer Stockpile Other _____

NAT-RES Rain Garden Bioretention Area Infiltration Basin Other _____

DEV REV New Structure Public / Private Describe _____

Structure Type: <u>20% Inspected Annually</u>

Outfall (into lake/river/stream) Sediment Basin Pond

Inspection Results: OK
(circle one)

NEEDS FURTHER REVIEW (circle reasons below and add description)

Trash Guard Obstruction Sediment Delta Possible Illicit Discharge Other

Description: _____

_____

Follow-up Maintenance: MINOR MAJOR Date(s) Completed:_____

Activity Description _____

Material removed (sediment, organics, etc., estimated volume) _____

_____

Submit completed forms to _____
Entered into database by (initials) _____ Date: _____

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National Pollutant Discharge Elimination System Phase II

General Stormwater Permit (MN R 040000) Application for Small Municipal Separate Storm Sewer Systems

CITY OF CHANHASSEN

May 26, 2006

Including: *General Stormwater Permit Application for Small Municipal Separate Storm Sewer Systems*
Storm Water Pollution Prevention Program
Best Management Practice Summary Sheets

Application Instructions for General Stormwater Permit Number MN R 040000 for Small Municipal Separate Storm Sewer Systems (MS4s)

The Municipal Separate Storm Sewer System (MS4) Permit requires that you develop, implement and enforce a Stormwater Pollution Prevention Program (SWPPP) designed to reduce the discharge of pollutants from your small MS4 to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act to the Maximum Extent Practicable (MEP).

What the Application Means

Submission of this application is notice that you, as the owner and/or operator identified on the application, intend to comply with National Pollutant Discharge Elimination System (NPDES) Permit Number MN R 040000 (Permit). This Permit is issued for stormwater discharges associated with operation of a MS4 in the State of Minnesota. The application provides a certification to ensure that the owner/operator has completed the Permit application requirements—and accompanying SWPPP—and will comply with the terms of the MS4 Permit. (In Minnesota, the MPCA Permit application is equivalent to the United States Environmental Protection Agency Notice of Intent.)

Starting the Process

The general stormwater Permit for your MS4 is the start of a five-year process to develop and implement a plan to control, reduce and minimize the discharge of pollutants from your MS4. The Minnesota Pollution Control Agency (MPCA) requires that you implement Best Management Practices (BMP) including educational programs. During this five-year process, you will evaluate and receive public input on the BMPs to improve their effectiveness. The evaluation and input process will lead to more effective programs, which will ultimately result in improved water quality in the receiving waters.

Special Situations

If your MS4 discharges to a Prohibited Water, a Restricted Water, a Trout Water, Lake Trout Lake, a Scientific and Natural Area, or a Calcareous Fen, you must include a map outlining all outfalls to such waters. A mapping tool to locate these waters is available at the MPCA Web site at http://www.pca.state.mn.us/water/stormwater/stormwater-ms4.html. Refer to this map when you complete Section IV of the application.

Format of the Application

The application form is available in two formats: (1) a Microsoft Word document that can be filled out electronically or by hand; and (2) a PDF document. If you choose the Microsoft Word document, the necessary fields will expand automatically as you enter information without changing the format of the document. Additional pages can be added as necessary. If you choose to fill out the application by hand, please type or print clearly. Illegible or incomplete applications will be returned.

I. MS4 Information

(See Part I of the Permit Application)

A. Application Type

- Check the "New applicant" check box if your MS4 has no previous application for MS4 coverage on file at MPCA.
- Check the "Application for re-issuance of coverage" check box if your MS4 applied for coverage in 2003

B. MS4 Owner

- The MS4 owner can be a city, county, community, municipality, government agency, college or university, or another party/entity having ownership or operational responsibility, or control of the MS4.

- Provide the name and address of the MS4 owner or operator. Include the county in which the MS4 is located.
- Include your Federal and State Tax Identification numbers on the application. The MPCA is requesting this information to assist us in reducing duplicate records. Also, should the MPCA collect a future fee from MS4s, this will facilitate the fee process.

C. General Contact

- General contact is the person you want the MPCA to communicate with regarding Permit compliance issues. This person may be the same as the person with overall Stormwater Pollution Prevention Program (SWPPP) implementation responsibility or someone else assigned to this role. Generally, the contact person should be the owner's representative in charge of stormwater Permit compliance for the MS4 (for example, Sandy Smith, Director of Public Works; Joe Johnson, Project Manager; etc.).
- Provide the street address, city, state, ZIP code, and telephone number, including area code, of the person with official status representing the owner of the MS4, or other entity, which has operational control of the MS4. For example, the owner is the city; the representative is the party the MPCA will contact regarding the SWPPP. Preferably, this person has overall coordination of the SWPPP's operations. Include an e-mail address if available.

II. Certification of the Stormwater Pollution Prevention Program (SWPPP)

(See Part II of the Permit Application)

A. Stormwater Pollution Prevention Program (SWPPP)

- You must certify to the specific requirements of the Permit that pertain to Stormwater Pollution Prevention Programs (SWPPPs) by checking the appropriate box next to question.
- By checking the box "Yes," you are certifying that you have developed a SWPPP; and that you will implement and enforce your SWPPP including the educational components, Best Management Practices (BMP) and measurable goals, within the five-year timeframe of the Permit. By not checking the box, you are certifying that you have not completed a SWPPP for your MS4. Under this circumstance, you are submitting an incomplete application and it will be returned.

B. Minimum Control Measure

- The Permit requires that you address all 6 of the defined Minimum Control Measures (MCMs) in your SWPPP. By checking the "yes" box, you are certifying that this has been done.

C. BMP Summary Sheets

- It is required that you attach a BMP Summary Sheet for each of the required BMP, as defined by the Permit. Checking the "Yes" box indicates that you have included all thirty-four (34) BMP Summary Sheets.
- You must use the numbering system established by the MPCA for numbering your BMP on the BMP Summary Sheets. Please see specific instructions for completing the BMP Summary Sheets for additional information.

III. Reporting and Record Keeping

(See Part III of the Permit Application)

A. Evaluating, Recordkeeping, and Reporting

- By checking the box "Yes," you are certifying that you have read and understand Part VI of the MS4 Permit (Evaluating, Recordkeeping, and Reporting), and you intend to comply with the applicable requirements in addition to the Permit as a whole.

- You must include in your SWPPP the process for which you will maintain your records to remain in compliance with the requirements of the Permit.

B. Public Availability of the SWPPP

- It is required that you make your SWPPP available to the public for review. Indicate the exact location of the SWPPP, the hours that it is available, and who can be contacted to receive a copy of the SWPPP for review.
- Include electronic (Web) location of your SWPPP. The MPCA strongly encourages Web access to your SWPPP.

IV. Limitations of Coverage

(See Part IV of the Permit Application)

A. Limitations on Coverage and Appendix C

By checking the box "Yes," you are certifying that you have read Part II of the MS4 Permit (Limitations on Coverage), and Appendix C and that you intend to comply with the applicable requirements of Part II and Appendix C.

B. Outstanding Resource Value Waters (ORVW)

If this MS4 is located on a Prohibited Water, a Restricted Water, a Trout Water, Lake Trout Lake, a Scientific and Natural Area, or a Calcareous Fen, a map was included with the Permit application. Use this map to complete this section of the application. Also, lists of Prohibited Waters, Restricted Waters, and Trout Waters, can be found in the *Guidance Manual for Small Municipal Separate Storm Sewer Systems (MS4s)*. The list of Prohibited Waters and Restricted Waters is found in Attachment 4. The list of Trout Waters is found in Attachment 2 (lakes) and Attachment 3 (streams). The guidance manual and associated attachments can be found on the MPCA's Web site at www.pca.state.mn.us/water/stormwater/stormwater-ms4.html.

Wetlands are also discussed in Attachment 4 to the *Guidance Manual for Small Municipal Separate Storm Sewer Systems (MS4s)*.

Will your MS4 have the following discharges?

1. **Discharges to Waters with Prohibited Discharges.** This Permit does not authorize new or expanded discharges to waters where the water quality standards prohibit new or expanded discharges as described in Minn. R. 7050.0180 subp. 3, 4, and 5. Any new or expanded discharges to these waters must be avoided.
2. **Discharges to Waters with Restricted Discharges.** These waters must be listed on the application. The Permit requires steps to be taken over the life of the Permit such as a plan to address prudent and feasible alternatives to discharge, and the measures taken to ensure protection of the values that made these waters outstanding resources. See Part IX Appendix C Item B numbers 1-5 of the Permit for further information.

   Identify all discharges to ORVWs from your MS4. You must fill in the table on the application with information pertaining to all ORVW discharges; include the name and type of each water body. If you do have any such discharges, you must also provide a map that outlines them. This map must, at a minimum, include the DNR minor sub-watersheds in your jurisdiction with any discharges to Prohibited or Restricted Waters. An interactive map is available on the MPCA website that identifies Special Waters: http://pca-gis04.pca.state.mn.us.

C. Special Waters

1. **Discharges to Trout Waters.** This Permit does not authorize new or expanded discharges to trout waters without additional requirements. At a minimum, you must make the determinations required by the Permit in Part IX, Appendix C, item C, numbers 1 and 2. You must document the rationale for your conclusions.

Best management practices must address how to avoid or minimize raising the temperature, as well as other impacts.

2. **Discharges to Wetlands.** This Permit does not authorize physical alterations, including new or expanded discharges to wetlands, if the alteration will have a significant adverse impact to the designated uses of a wetland. Any physical alteration to wetlands that will cause a potential for a significant adverse impact to a designated use must be mitigated as required in Minn. R. 7050.0186 and/or other applicable rules.

   The mitigation process for wetlands is to avoid, minimize, and mitigate impacts to wetlands. This Permit expects the Permittee to follow this process and obtain applicable Permits.

3. **Discharges Requiring Environmental Review.** This Permit does not replace or satisfy any environmental review requirements, including those under the Minnesota Environmental Policy Act (MEPA) or the National Environmental Policy Act (NEPA). You must complete any environmental review required by law, including any required Environmental Assessment Work Sheets or Environmental Impact Statements, Federal environmental review, or another required review.

   This Permit does not cover discharges that have not conducted the required environmental review. Discharges that have not conducted required reviews are discharges without a Permit. Environmental review includes Environmental Impact Statements, Environmental Assessment Work Sheets, or other environmental documents that are required to be completed before Permits can be issued. For the purpose of this Permit, a process may be an individual or position assigned to meet this requirement.

4. **Discharges Affecting Endangered or Threatened Species.** This Permit does not replace or satisfy any review requirements for endangered or threatened species, from new or expanded discharges whose direct, indirect, interrelated, interconnected, or independent impacts would jeopardize a listed endangered or threatened species or adversely modify a designated critical habitat. You must conduct any required review and coordinate with appropriate agencies for any project with the potential of affecting threatened or endangered species, or their critical habitat. Endangered species coordination must be conducted when required by law. This Permit does not cover any discharge where such coordination is required unless the coordination has been conducted. For the purpose of this Permit, a process may be an individual or position assigned to meet this requirement.

5. **Discharges Affecting Historic Places or Archeological Sites.** This Permit does not replace or satisfy any review requirements for historic places or archeological sites, from new or expanded discharges which adversely affect properties listed or eligible for listing in the National Register of Historic Places or affecting known or discovered archeological sites. You must be in compliance with the National Historic Preservation Act and conduct all required review and coordination related to historic preservation, including significant anthropological sites and any burial sites, with the Minnesota Historic Preservation Officer. Where it is determined that historic or archeological coordination is required, the appropriate processes must be completed before this Permit can be in effect for those discharges. For the purpose of this Permit, a process may be an individual or position assigned to meet this requirement.

6. **Discharges Affecting Source Water Protection Areas.** Indicate if the MS4 has any discharges that may affect drinking water sources due to infiltration or surface water discharges.

V. Owner or Operator Certification

(See Part V of the Permit Application)

After completing this application, the person with overall authority for ensuring implementation of the Stormwater Pollution Prevention Program must sign the form. The signature can be from either a principal executive officer, (for example, mayor, designated public works director, president of the university, city or county engineer, administrator or manager), or a ranking elected official (mayor, manager, etc.). For additional

information on “signatures” and who is required to sign a Permit application form, please see Minn. R. 7001.0060.

Print or type the name of the individual signing the application. Include their title, and date of signature in the appropriate spaces. Include an e-mail address if available. If you have questions about the application or preparation of your SWPPP, please contact the MPCA’s Keith Cherryholmes at (651) 296-6945, Scott Fox at (651) 296-9433, or call the MPCA Customer Assistance Center toll-free at (800) 646-6247.

Minnesota Pollution Control Agency

General Stormwater Permit (MN R 040000) Application for Small Municipal Separate Storm Sewer Systems (MS4s)

RETURN THIS APPLICATION TO:

Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, MN 55155-4194

NO FEE

Application deadline: **June 1, 2006**

PLEASE READ: As you complete this form, read the instructions carefully. Use your keyboard's "Tab" key to move through the fields of this form. Select check-boxes and enter text as indicated. Save, and print.

I. MS4 Information

A. Application Type

☐ New applicant (this MS4 has no previous application for MS4 coverage on file at MPCA)

☒ Application for re-issuance of coverage (this MS4 applied in 2003)

B. MS4 Owner General Contact (the community, municipality, agency or other party having ownership or operation control of the MS4)

City of Chanhassen			
Community, municipality, agency or other party having ownership or operational control of the MS4			
P.O. Box 147			
Mailing Address			
Chanhassen		MN	55317
City		*State*	*Zip Code*
Carver			
County			
41885	9390134		
Federal Tax ID	*State Tax ID*		

C. General Contact (official, staff member, consultant or other) for all general correspondence about Permit compliance issues between the MPCA and your MS4

Haak	Lori	Water Resources Coordinator	
Last Name	*First Name*	*Title*	
P.O. Box 147			
Mailing Address			
Chanhassen		MN	55317
City		*State*	*Zip Code*
952.227.1135		lhaak@ci.chanhassen.mn.us	
Telephone (include area code)		*E-mail Address*	

II. Certification of the Storm Water Pollution Prevention Program (SWPPP)

A. Have you developed a Storm Water Pollution Prevention Program for your MS4? ☒Yes

Municipalities must demonstrate how their Storm Water Pollution Prevention Program will be implemented and enforced over the term of the five-year Permit. SWPPPs must incorporate appropriate educational components, all required BMPs and the measurable goals associated with each. Storm Water Pollution Prevention Programs must address the specific requirements contained in Part V. G. of the Permit. SWPPPs must outline how the six minimum control measures will be addressed, the contact person, department in charge, timeline and measures that will be implemented to meet the schedules required by the Permit. Attach a BMP Summary Sheet to this application for *each* BMP in your SWPPP.

B. Does your SWPPP address all of the six Minimum Control Measures as outlined in the Permit? ☒Yes

The General Permit requires that you incorporate all six of the defined Minimum Control Measures in your Stormwater Pollution Prevention Program. You are required to implement mandatory BMPs which are directly associated to each of the Six Minimum Control Measures.

C. Have you attached the included BMP Summary Sheets, one for each of the Best Management Practices required by the Permit? ☒Yes

There are 34 required BMPs all of which require that the provided BMP Summary Sheet be filled out completely and included with your Storm Water Pollution Prevention Program. If any of these required sheets are missing, your application will not be considered complete and will be returned to you.

III. Reporting and Recordkeeping

A. I have read and understand Part VI *Evaluating, Recordkeeping, and Reporting* of the MS4 General Permit and certify that we intend to comply with the applicable requirements of those sections as well as the Permit as a whole. ☒Yes

B. Where will your SWPPP be available to the public for review?

City of Chanhassen		www.ci.chanhassen.mn.us
Name of Location		*If your SWPPP is available electronically, indicate location*
7700 Market Boulevard		
Street Address		
Chanhassen	MN	**55317**
City	*State*	*ZIP Code*
Lori Haak	952.227.1135	
Contact Name	*Contact Phone Number*	
8:00 a.m. - 4:30 p.m. Monday through Friday, excepting legal holidays		
Hours of Availability		

IV. Limitations of Coverage

A. Part II Limitations on Coverage and Appendix C

I have read and understand Part II *Coverage Under This Permit* and Appendix C *Limitations on Coverage* of the MS4 General Permit and certify that we intend to comply with the applicable requirements of those sections as well as the Permit as a whole. ☒Yes

B. Outstanding Resource Value Waters (ORVWs)

Please refer to the *Guidance Manual for Small Municipal Separate Storm Sewer Systems (MS4s)* to complete this section. An interactive map is available on the MPCA Web site that identifies Special Waters: http://pca-gis04.pca.state.mn.us

1. Prohibited Waters

Does the MS4 discharge into **Prohibited Waters** as defined in Minn. R. 7050.0180, subp. 3, 4, and 5? See Attachment Four of the *Guidance Manual for Small Municipal Separate Storm Sewer Systems (MS4s)* for further information. ☐**Yes** ☒**No**

2. Restricted Discharge

Does the MS4 discharge into waters with a **Restricted Discharge** as defined in Minn. R. 7050.0180, subp. 6, 6a, and 6b? If yes, please list below and comply with Part IX, Appendix C, Item B. See Attachment Four of the *Guidance Manual for Small Municipal Separate Storm Sewer Systems (MS4s)* for further information. ☐**Yes** ☒**No**

3. Prohibited or Restricted Waters

If you answered "yes" to either Question 1 or 2, have you included a map that outlines, at a minimum, the DNR minor sub-watersheds in your jurisdiction with ANY discharges to Prohibited or Restricted Waters? You are required by the Permit to provide this map along with your application. **[IX.B.2.b]** ☐**Yes** ☐**No**

Identify all discharges to Outstanding Resource Value Waters (ORVWs) from your MS4:

Name of Water Body	Type (lake, stream, river)

4. If you answered "yes" to either Question 1 or 2, who is the person responsible for ensuring compliance with this Permit condition?

Name: _____ *Position:* _____ *Phone:* _____

C. Special Waters

1. Trout Waters

Does the MS4 discharge into **Trout Waters** as defined in Minn. R. 6264.0050 subp. 2 & 4? If yes, please list below and comply with Part IX, Appendix C, Item C. See Attachments Two and Three of the *Guidance Manual for Small Municipal Separate Storm Sewer Systems (MS4s)* for further information. ☐Yes ☒No

2. Wetlands

Does the MS4 discharge into **Wetlands** as defined in Minn. R. 7050.0130, subp. F? ☒Yes ☐No

3. Environmental Review

Does the MS4 have a process to assure coordination with appropriate Agencies and to evaluate discharges that require applicable **Environmental Review** as required by State or federal laws? See Part IX of the *Guidance Manual for Small Municipal Separate Storm Sewer Systems (MS4s)* for further information. ☒Yes ☐No

Who is the person responsible for ensuring compliance with this Permit condition?

Name: Kate Aanenson *Position:* Community Development Director *Phone:* 952.227.1139

4. Endangered or Threatened Species

Does the MS4 have a process to assure coordination with appropriate Agencies and to evaluate discharges whose direct, indirect, interrelated, interconnected, or independent impacts may jeopardize a listed **Endangered or Threatened Species** or adversely modify a designated critical habitat? See Part IX of the *Guidance Manual for Small Municipal Separate Storm Sewer Systems (MS4s)* for further information. ☒Yes ☐No

Who is the person responsible for ensuring compliance with this Permit condition?

Name: Kate Aanenson *Position:* Community Development Director *Phone:* 952.227.1139

5. Historic Places and Archeological Sites

Does the MS4 have a process to assure coordination with appropriate Agencies and to evaluate discharges which may adversely affect properties listed or eligible for listing in the National Register of **Historic Places** or affecting known or discovered **archeological sites**? See Part IX of the *Guidance Manual for Small Municipal Separate Storm Sewer Systems (MS4s)* for further information. ☒Yes ☐No

Who is the person responsible for ensuring compliance with this Permit condition?

Name: Kate Aanenson *Position:* Community Development Director *Phone:* 952.227.1139

6. Drinking Water Sources

Does the MS4 have any discharges that may affect Source Water Protection as defined in part **IX.H** of the General Permit? ☐Yes ☒No

If "yes," does the MS4 have BMPs incorporated into the SWPPP to protect drinking water sources that the MS4 discharge may affect? ☐Yes ☐No

V. Owner or Operator Certification

The person with overall, MS4 legal responsibility must sign the application. This person shall be duly authorized to sign the application and may be either a principal executive officer or ranking elected official. (see Minn. R. 7001.0060).

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 (Minn. R. 7001.0070).

I also certify under penalty of law that I have read, understood, and accepted all terms and conditions of the National Pollutant Discharge Elimination System (NPDES) General Storm Water Permit for MS4s that authorizes storm water discharges identified in this application form.

I understand that as a Permittee, I am legally accountable under the Clean Water Act to ensure compliance with the terms and conditions of the NPDES General Storm Water Permit for MS4s.

I also understand that MPCA enforcement actions (pursuant to Minn. Stat. §115.07, 116.072, and Section 309 of the Clean Water Act) may be taken against me or the MS4 if the terms and conditions of the NPDES General Storm Water Permit for MS4s are not met.

C. General Contact (official, staff member, consultant or other) for all general correspondence about Permit compliance issues between the MPCA and your MS4

X

Authorized Signature		*Date*
Furlong	*Thomas*	*Mayor*
Last Name	*First Name*	*Title*
P.O. Box 147		
Mailing Address		
Chanhassen	*MN*	*55317*
City	*State*	*ZIP Code*
952.227.1100	*tfurlong@ci.chanhassen.mn.us*	
Telephone (include area code)	*E-mail Address*	

CITY OF CHANHASSEN

Storm Water Pollution Prevention Program

INTRODUCTION

The City of Chanhassen is a suburb of Minneapolis, Minnesota. Its 24 square mile area supports 20,321 residents, according to the 2000 census. The city's land use was predominately agricultural until about 20 years ago when it experienced an influx of single family residential development. Approximately two-thirds of the land within the city is developed, with a sizeable portion of the undeveloped areas within the Minnesota River bluffs or floodplain. As it grows, residential land uses will continue to dominate Chanhassen's landscape. At ultimate land use conditions, 67% will be residential, 11% will be undeveloped, 10% will be parks and open space, 1% will be commercial and less than 10% will be office/industrial. Consequently, this Storm Water Pollution Prevention Program (SWPPP) focuses primarily on educating and changing behaviors of residents, municipal officials and municipal employees.

RESOURCES

Chanhassen contains 11 lakes, over 400 depressional wetlands and over 350 storm water ponds. Its southern border is the Minnesota River, whose valley contains a very rare natural community: the Seminary Fen. The soils in Chanhassen tend to be high in clay content, making infiltration impractical in many situations, and the water table tends to be high. Four major creeks wind through Chanhassen: Bluff Creek, Riley Creek, Purgatory Creek and Assumption Creek. Chanhassen is home to the Minnesota Landscape Arboretum, a county-owned regional park, a summer camp, a public golf course, a portion of the Raguet Wildlife Management Area, a portion of the Minnesota Valley National Wildlife Refuge, four elementary schools (St. Hubert, Chapel Hill, Bluff Creek and Chanhassen) and two junior high schools (St. Hubert and Minnetonka West).

Sanitary sewer and municipal water are available to approximately two-thirds of the City. There are currently approximately 350 individual sewage treatment systems (ISTS) within Chanhassen's city limits.

SELF-ASSESSMENT DESCRIPTION

Before beginning to select BMPs and measurable goals for the 2003 NPDES Phase II MS4 Permit, City staff undertook a self-assessment of Chanhassen's storm water system. This was an evaluation of conditions, needs and practices in Chanhassen. The objective of this process was to provide a knowledge base upon which to structure the SWPPP in order to meet the permit's Maximum Extent Practicable standard.

The self-assessment was guided by materials included in the League of Minnesota Cities NPDES Phase II MS4 Guide Plan. This self-assessment process had two major components:

- The first workshop session organized as part of the LMC Guide Plan project included a self-assessment component led by Pat Collins of AMEC Earth & Environmental. This included:
  - A discussion of physical and socio-political watershed and organizational conditions and issues that should guide the selection of BMPs and measurable goals;
  - A review of two examples of cities with different characteristics to demonstrate how local conditions should shape the selection of BMPs and measurable goals; and
  - A series of exercises in which our city staff considered the local conditions for our community and how they should guide our selection of BMPs and measurable goals.
- After the workshop session, we worked with the NPDES Phase II Program Assessment Questionnaire that was included in the LMC Guide Plan notebook. This was a twelve-page document with a comprehensive list of questions that we used to guide us through a self-assessment activity, including consideration of a wide range of storm water approaches.

The results of this process include:

- A better understanding of the Phase II program among city staff;
- Written notes; and
- Questionnaires that were completed by various members of City staff.

Together, these items represent our knowledge of our local storm water system and the conditions that shape it. We have used the results of this self-assessment process to guide our selection of BMPs and measurable goals that make up the SWPPP for our Permit Application.

Based on this self-assessment process, our staff has considered the following factors in order to meet the Maximum Extent Practicable standard set forth in the Permit:

- Sources of pollutants;
- Potentially polluting activities being conducted in the watershed;
- Sensitivity of receiving waters;
- Uses of receiving waters;
- Specific local concerns;
- The size of Chanhassen;
- Climate;
- Implementation schedules;
- Current ability to finance storm water programs;
- Hydrology;
- Geology;

- Capacity to perform operation and maintenance;
- Local land uses;
- Rate and type of development;
- Characteristics of our watershed; and
- The organizational characteristics of our city.

In addition to the self-assessment process discussed above, our staff has also considered the following non-storm water discharges to determine whether they should be identified as significant contributors of pollutants to the MS4:

- Water line flushing,
- Landscape irrigation,
- Diverted stream flows,
- Rising ground waters,
- Uncontaminated ground water infiltration,
- Uncontaminated pumped ground water,
- Discharges from potable water sources,
- Foundation drains,
- Air conditioning condensation,
- Irrigation water,
- Springs,
- Water from crawl space pumps,
- Footing drains,
- Lawn watering,
- Individual residential car washing,
- Flows from riparian habitats and wetlands,
- Dechlorinated swimming pool discharges, and
- Street wash water, discharges or flows from fire fighting activities.

During the self-assessment process, the City of Chanhassen did not find any of the additional referenced non-storm water discharges listed above to be significant contributors of pollutants to the storm water system.

MINMUM CONTROL MEASURE SUMMARY

Below is a summary of the best management practices (BMPs) chosen by the City of Chanhassen to attain the permit requirements of the MS4 permit. Each BMP is categorized into a Minimum Control Measures to meet the Maximum Extent Practicable standard set in the permit requirements.

MCM 1: Public Education and Outreach

BMP I.D.	Description
1a-1	Distribute Educational Materials
1a-2	Arbor Day
1a-3	Storm Drain Marking
1b-1	Implement an Education Program
1c-1	Education Program: Public Education and Outreach
1c-2	Education Program: Public Participation
1c-3	Education Program: Illicit Discharge Detection and Elimination
1c-4	Education Program: Construction Site Run-off Control
1c-5	Education Program: Post-Construction Stormwater Management in New Development and Redevelopment
1c-6	Education Program: Pollution Prevention/Good Housekeeping for Municipal Operations
1c-7	City of Chanhassen Website
1c-8	*Chanhassen Connection*
1c-9	Chanhassen Clean Water Hotline
1c-10	Presentations to City Council
1d-1	Coordination of Education Program
1e-1	Annual Public Meeting

MCM 2: Public Involvement and Participation

BMP I.D.	Description
2a-1	Comply with Public Notice Requirements
2b-1	Solicit Public Input and Opinion on the Adequacy of the SWPPP
2c-1	Consider Public Input

MCM 3: Illicit Discharge, Detection and Elimination

BMP I.D.	Description
3a-1	Storm Sewer System Map
3b-1	Regulatory Control Program
3c-1	Illicit Discharge Detection and Elimination Plan
3c-2	Program to Detect and Address Sanitary Sewer Overflow
3c-3	Program to Detect and Address Failing Septic Systems
3c-4	Program to Detect and Address Illegal Dumping
3c-5	Carver County Recycling Center Program
3c-6	Christmas Tree Collection
3d-1	Public and Employee Illicit Discharge Information Program
3e-1	Identification of Non Stormwater Discharges and Flows

MCM 4: Construction Site Runoff Control

BMP I.D.	Description
4a-1	Ordinance or other Regulatory Mechanism
4b-1	Construction Site Implementation of Erosion and Sediment Control BMPs
4c-1	Waste Controls for Construction Site Operators
4d-1	Procedure for Site Plan Reviews
4e-1	Establishment of Procedures for the Receipt and Consideration of Reports of Stormwater Noncompliance
4f-1	Establishment of Procedures for Site Inspection and Enforcement
4f-2	Communication between Chanhassen and CSWCD
4f-3	Site Inspection Criteria

MCM 5: Post-Construction Runoff Control

BMP I.D.	Description
5a-1	Development and Implementation of Structural and/or Nonstructural BMPs
5b-1	Regulatory Mechanism to Address Post Construction Runoff from New Development and Redevelopment
5c-1	Long-term Operation and Maintenance of BMPs

MCM 6: Pollution Prevention and Good Housekeeping

BMP I.D.	Description
6a-1	Municipal Operations and Maintenance Program
6a-2	Street Sweeping
6a-3	Presentations to City Staff
6b-2	Annual Inspection of All Structural Pollution Control Devices
6b-3	Inspection of a Minimum of 20 Percent of the MS4 Outfalls, Sediment Basins and Ponds Each Year on a Rotating Basis
6b-4	Annual Inspection of All Exposed Stockpile, Storage and Material Handling Areas
6b-5	Inspection Follow-up Including the Determination of Whether Repair, Replacement, or Maintenance Measures are Necessary and the Implementation of the Corrective Measures
6b-6	Record Reporting and Retention of All Inspections and Responses to the Inspections
6b-7	Evaluation of Inspection Frequency
6b-8	Fleet Oil and Materials Management
6b-9	Municipal Landscaping and Lawn Care
6b-10	Municipal Vehicle Maintenance
6b-11	Municipal Vehicle Washing
6b-12	Hazardous Materials Management
6b-13	Environmentally Preferable Purchasing
6b-14	Road Salt Application
6b-15	Road Salt Storage and Handling

The BMP Summary Sheets of the BMPs outlined above can be found at the end of this SWPPP.

EVALUATING, RECORDKEEPING AND REPORTING

Part VI of the permit contains several additional requirements relative to evaluation and assessment; recordkeeping; public availability; annual reporting; and reporting submittals for the MS4 permit. Below is a description of the City of Chanhassen's plan for adhering to these requirements.

Evaluation and Assessment: The City will use the preparation of the annual report as an opportunity to evaluate and assess program compliance, the BMPs that have been chosen and implemented, and the City's progress towards achieving the identified measurable goals.

Recordkeeping: The City will keep records related to the NPDES MS4 permit for no less than three (3) years.

Public Availability: The City's SWPPP will be available on the City's website (www.ci.chanhassen.mn.us). Other records related to the City's NPDES MS4 permit will be available at City Hall (7700 Market Boulevard, Chanhassen, Minnesota) during regular business hours. Copies will be made upon request; a reasonable charge will be assessed for copying.

Annual Reporting: An annual report meeting the requirements set forth in Part VI-D will be submitted by June 30 of each year of the permit cycle.

Reporting Submittals: All materials required under this permit will be submitted to the address set forth in Part VI-E of the permit.

OUTSTANDING RESOURCE VALUE WATERS

Part IX (Appendix C) of the permit sets forth limitations on discharges meeting certain criteria. One of these criteria is related to Outstanding Resource Value Waters (ORVWs). Special permit conditions apply to Waters with Prohibited Discharges, Discharges to Waters with Restricted Discharges and Discharges Adversely Impacting Trout Waters.

The City of Chanhassen contains a Water with Restricted Discharges (Seminary Fen) and a Trout Water (Assumption Creek). These resources are in the southern part of Chanhassen, in an area that is relatively undeveloped. The City of Chanhassen's MS4 has not added new or expanded discharges to these listed waters since January 1, 1988. For this reason, Chanhassen rebuts the presumption that it must comply with the provisions of Parts IX-B and C.

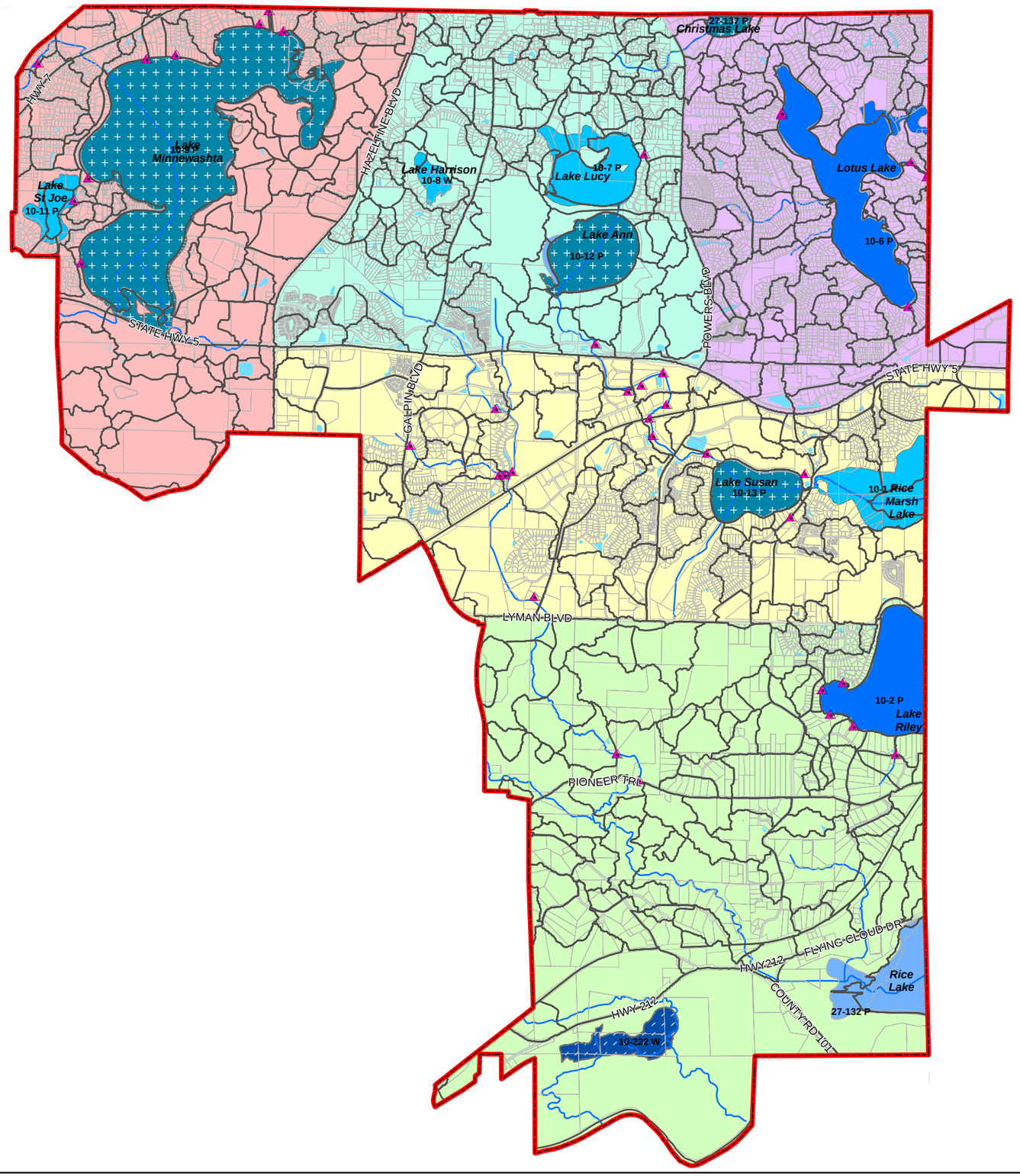
There are a number of outfalls into the area near the Seminary Fen and Assumption Creek; however, they are not under the City of Chanhassen's operational control. A majority of them are owned by either the Hennepin County Railroad Authority (regional rail corridor currently used for recreation) or the Minnesota Department of Transportation (Trunk Highway 212). A portion of the runoff from Bluff Creek Drive does discharge to the west; however, it does not discharge into the Seminary Fen or Assumption Creek.

The City of Chanhassen intends to revise its City Code in 2006-2007 as part of its Third Generation Surface Water Management Planning Process. At that time, the City will include a provision in its code that requires parties proposing new or expanded discharges to Waters with Restricted Discharges or Trout Waters to first determine that there are no prudent and feasible alternatives to the new or expanded discharge. This will ensure that Chanhassen remains compliant with Parts IX-B and C of the permit.

NONDEGRADATION FOR SELECTED MS4s

The City of Chanhassen is a Selected MS4 under Part XI (Appendix E) of the permit. For Chanhassen, the items listed in Part X (Appendix D) of the permit must be submitted twenty (20) months after the effective date of the permit, which is February 1, 2008.

In order to ensure compliance with Parts X and XI of the permit, the City will develop and implement a nondegradation plan, as set forth in Part X-A through I. This will include the preparation of a loading assessment and nondegradation report that reflect public comments received on the draft nondegradation report and modified Storm Water Pollution Prevention Program.



Legend

- OUTFALL
- Municipal Boundaries
- Drainage Area Boundaries
- Parcel Boundaries

Water Features Management Class

- Preserve
- Improve 1
- Improve 2
- Improve 3
- Streams
- Lakes
- Storm Water Ponds

ZONE

- ZONE NE
- ZONE NC
- ZONE NW
- ZONE CTR
- ZONE SO

ZONE	OUTFALLS	PONDS	PRIORITY
NE	6	28	2
NC	2	43	5
NW	9	16	4
CTR	15	48	3
SO	7	11	1
TOTAL	39	146	

Source: Metropolitan Council, Chanhassen, MnDNR, SEH

INSPECTION ZONES PONDS AND OUTFALLS

SURFACE WATER MANAGEMENT PLAN UPDATE
Chanhassen, MN

Printing Date: August 8, 2006
Projection Information:
Name: NAD 1983 UTM Zone 15N
Datum: North American 1983
Short Elliott Hendrickson Inc. SEH®

SEH

Project Number ACHANH0409.00

Figure J-1

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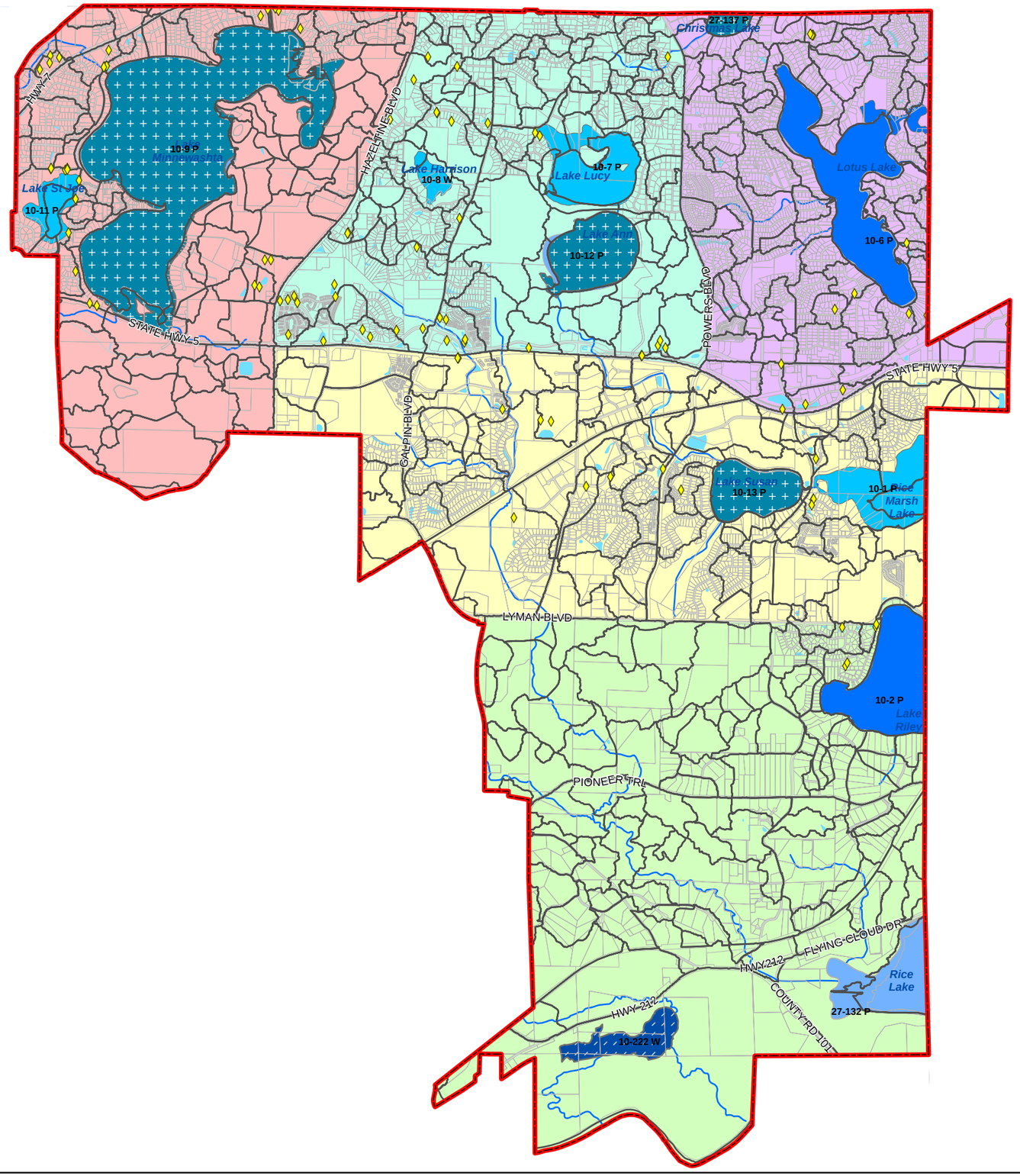

Legend

- SUMP MH/CB
- Municipal Boundaries
- Drainage Area Boundaries
- Parcel Boundaries

Water Features Management Class

- Preserve
- Improve 1
- Improve 2
- Improve 3
- Streams
- Lakes
- Storm Water Ponds

ZONE

- ZONE NE
- ZONE NC
- ZONE NW
- ZONE CTR
- ZONE SO

ZONE	SUMPS	PRIORITY
NE	13	2
NC	42	5
NW	28	4
CTR	17	3
SO	6	1
TOTAL	106	

Source: Metropolitan Council, Chanhassen, MnDNR, SEH

INSPECTION ZONES SUMP MH/CB

SURFACE WATER MANAGEMENT PLAN UPDATE
Chanhassen, MN

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SEH

Project Number ACHANH0409.00

Figure J-2

Map Document: (S:\AE\C\Chanh\040900\GIS\ACHANH040900\SWMPFigures\Fig12_InspectionZones_Sumps.mxd)
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