STATE OF MINNESOTA



Minnesota Pollution Control Agency

Municipal Division

National Pollutant Discharge Elimination System (NPDES) and State Disposal System (SDS) Permit MNG420000 (Minnesota River Basin General Phosphorus Permit Phase I)

General Authorization to Discharge Phosphorus to the Minnesota River Basin and Authorization to Transfer Jordan Trading Units (JTUs)

MODIFICATION DATE: December 1, 2009 ISSUANCE DATE: December 1, 2005

EXPIRATION DATE: November 30, 2010

The state of Minnesota, on behalf of its citizens, through the Minnesota Pollution Control Agency (MPCA) authorizes the Permittees covered by this Permit to discharge phosphorus to surface waters in the Minnesota River Basin (Basin) in accordance with the requirements of this Permit.

The goal of this Permit is to protect the water quality of the Basin in accordance with Minnesota and United States (U.S.) laws, statutes, regulations and rules, including Minnesota Statute chapters 115 and 116, Minnesota Rule chapters 7001, 7050, and the U.S. Clean Water Act.

This Permit is effective on the issuance date identified above. This Permit and the authorization to discharge contained herein expire at midnight on the expiration date identified above. Permittees listed in Appendix B, are not authorized to trade or accumulate Jordan Trading Units (JTUs) after the above date of expiration. To receive authorization to discharge under this Permit and trade or accumulate JTUs beyond the above date of expiration without interruption in permit coverage, Permittees listed in Appendix B must submit a permit application, any required fee, and such information and forms as required by the MPCA for permit coverage under the Minnesota River Basin General Phosphorus Phase II Permit to the MPCA no later than 180 days prior to the date of expiration pursuant to Minn. R. 7001.0040 - 7001.0070 (2005). Expiration of this Permit will not affect an entity's ability to discharge phosphorus under the terms of an applicable individual NPDES/SDS permit or general NPDES/SDS permit.

Signature:

Lisa J. Thorvig Division Director Municipal Division for the Minnesota Pollution Control Agency

If you have questions regarding this Permit, please contact:

Minnesota Pollution Control Agency Municipal Wastewater Section 520 Lafayette Road North St. Paul, Minnesota 55155-4194 Telephone: 651-296-6300 or 800-657-3864 Fax: 651-297-8676 Telephone Device for Deaf (TTY): 651-282-5332

TABLE OF CONTENTS

PAGE

Cover Page: Issuance and Expiration Date1Table of Contents and Report Submittal Summary2Chapter 1: Introduction4Chapter 2: Authority4Chapter 3: Authorization4
Chapter 4: Applicability
Chapter 6: Monitoring and Reporting Requirements for Permittees Listed in Appendix B
Chapter 7: Trading Conditions
APPENDIX A: Permit Coverage Area Map11
APPENDIX B:
APPENDIX C:
APPENDIX D:
Existing Continuously Discharging WWTFs that discharge to the Minnesota River (directly or via tributaries) at any point between the City of Jordan (at river mile 39.4) to the City of Shakopee (at river mile 25.1)
APPENDIX E:
APPENDIX F:

APPENDIX G: Map of Jordan BOD Factors	
APPENDIX H: Definitions	
APPENDIX I: Calculations	

REPORT SUBMITTAL SUMMARY

Chapter 6 - Reporting Requirements for Permittees listed in Appendix B.

- 1. Minnesota River Basin Discharge Monitoring Report (MRBDMR) must be received by MPCA by the 21^{st} of each month.
- 2. Pre-season Implementation Plan (PIP) must be received by MPCA by April 30th of each year (not required in 2006 or 2007 unless trading).
- 3. Annual Compliance Report must be received by MPCA by November 30th of each year (not required in 2006 or 2007 unless trading).

CHAPTER 1. INTRODUCTION

This Permit begins implementation of the Waste Load Allocation portion of the Lower Minnesota River Dissolved Oxygen Total Maximum Daily Load (TMDL). The TMDL addressed the violations of the dissolved oxygen standard in the Minnesota River from river mile 22 to its mouth. The dissolved oxygen impairment is due to high Biochemical Oxygen Demand (BOD) caused by excessive phosphorus levels that generate algal blooms. Phosphorus is discharged to the Minnesota River from wastewater treatment facilities (WWTFs), agricultural runoff, stormwater and non-compliant individual sewage treatment systems. This Permit begins implementation of the phosphorus reductions required by the TMDL for WWTFs. The other sources of phosphorus to the Minnesota River are being addressed outside this Permit. The phosphorus reductions for WWTFs will be implemented over a ten-year period. This Permit addresses the first five years (Phase I) of that ten-year period. The goal of this Permit is an aggregate 35 percent target reduction in phosphorus discharged, from baseline WWTF loading, by the end of this Permit term. The ten-year goal established by the current TMDL for WWTFs is a phosphorus discharge limit of 1 milligram per liter (mg/L). The TMDL could be updated within the next ten years, which may or may not alter the 1 mg/L phosphorus discharge limit goal and the ultimate target phosphorus reduction goal of the Phase II permit.

This Permit also establishes a phosphorus trading program for Permittees in the Minnesota River Basin (Basin). The trading program allows Permittees flexibility to meet the assigned phosphorus limit listed in Appendix B, while making progress toward the phosphorus reduction goal of the TMDL. The Basin, as used in the remaining portion of this Permit, refers to the geographical area identified on the map in Appendix A.

CHAPTER 2. AUTHORITY

This Permit is issued under the authority of Minn. Stat. Chs. 115 and 116 and Minn. R. Chs. 7001 and 7050 and Section 401 of the Clean Water Act, Title 33 Part 1341.

CHAPTER 3. AUTHORIZATION

- 1. This Permit authorizes the discharge of phosphorus to surface waters of the Minnesota River Basin from Permittees in accordance with the provisions of this Permit. All entities, including existing WWTFs in the Basin, seeking to become permittees must apply for and obtain coverage under this Permit.
- 2. This Permit authorizes the discharge of phosphorus from new and expanding WWTFs to the Minnesota River Basin in accordance with the provisions of this Permit. Any entity, which intends to initiate, create, or originate a new or expanded discharge of phosphorus, must first apply for and obtain permit coverage under an individual NPDES/SDS permit or general NPDES/SDS permit for the new or expanding discharge, prior to applying for coverage under this Permit.
- 3. This Permit does not authorize the actual construction or modification of a new or existing WWTF. Entities intending to construct or modify a WWTF must first apply for and obtain permit authorization for that activity under an individual NPDES/SDS permit or general NPDES/SDS permit.
- 4. This Permit does not authorize any discharge of a pollutant other than phosphorus. WWTFs should review the requirements in this Permit in addition to their individual NPDES/SDS permit or general NPDES/SDS permit for a complete assessment of the applicable pollutant requirements.
- 5. This Permit authorizes pollutant trading of phosphorus in order to meet limits contained within this Permit. Chapter 7 of this Permit details the trading applicability and allowances provisions.
- 6. This Permit does not authorize pollutant trading to comply with phosphorus limits contained in an individual or applicable general NPDES/SDS permit.
- 7. This Permit does not authorize any backsliding in violation of state or federal regulations.
- 8. In the event that a Permittee has an individual NPDES/SDS permit or another applicable general NPDES/SDS permit that contains phosphorus limits or monitoring requirements, the Permittee shall comply with all phosphorus limits and requirements contained in this Permit and their individual NPDES/SDS permit or general NPDES/SDS permit.

9. This Permit and the authorization to discharge contained herein expire at midnight on the expiration date identified above. Permittees listed in Appendix B are not authorized to trade or accumulate Jordan Trading Units (JTUs) after the above date of expiration. To receive authorization to discharge under this Permit and trade or accumulate JTUs beyond the expiration date of this Permit without interruption in permit coverage, Permittees listed in Appendix B must submit a permit application, any required fee, and such information and forms as are required by the MPCA for permit coverage under the Minnesota River Basin General Phosphorus Phase II Permit, to the MPCA no later than 180 days prior to the date of expiration pursuant to Minn. R. 7001.0040 - 7001.0070 (2005). Expiration of this Permit will not affect an entity's ability to discharge phosphorus under the terms of an applicable individual or general NPDES/SDS permit.

CHAPTER 4. APPLICABILITY

The requirements of this Permit apply in addition to all applicable requirements of a WWTF's individual NPDES/SDS permit or any applicable general NPDES/SDS permit. The specific requirements of this Permit follow.

- 1. Existing Continuously Discharging WWTFs that discharge to the Minnesota River (directly or via tributaries) downstream of the outlet of Lac Qui Parle Reservoir (river mile 285) and upstream of the City of Jordan (at river mile 39.4). These WWTFs must comply with the following:
 - a. Permittees with a calculated phosphorus discharge <u>greater than</u> 1800 pounds per year listed in Appendix B must:
 - (1) Submit an application for coverage under Appendix B of this Permit and obtain coverage;
 - (2) Meet their phosphorus effluent limit listed in Appendix B according to the compliance provisions of Chapter 5; and
 - (3) Monitor for phosphorus (influent and effluent) per the frequency listed in Appendix B.
 - b. WWTFs with a calculated phosphorus discharge <u>less than or equal to</u> 1800 pounds per year listed in Appendix C must, in accordance with the following terms of their individual NPDES/SDS permit or an applicable general NPDES/SDS permit:
 - (1) Monitor for phosphorus; and
 - (2) Develop a Phosphorus Management Plan (PMP).
- 2. Existing Continuously Discharging WWTFs that discharge to the Minnesota River (directly or via tributaries) at any point between the City of Jordan (at river mile 39.4) and the City of Shakopee (at river mile 25. 1), listed in Appendix D. These WWTFs must comply with the following:
 - a. WWTFs with a calculated phosphorus discharge <u>greater than</u> 1800 pounds per year listed in Appendix D, Part 1, must comply with the conditions contained in their individual NPDES/SDS permit or applicable general NPDES/SDS permit.
 - b. WWTFs with a calculated phosphorus discharge <u>less than or equal to</u> 1800 pounds per year listed in Appendix D, Part 2, must comply with the following conditions contained in their individual NPDES/SDS permit or applicable general NPDES/SDS permit:
 - (1) Monitor for phosphorus; and
 - (2) Develop a PMP.
- 3. Existing Controlled Discharge Stabilization Ponds that discharge to the Minnesota River (directly or via tributaries) downstream of the outlet of Lac Qui Parle Reservoir (river mile 285) and upstream of the City of Shakopee (at river mile 25.1), listed in Appendix E. These WWTFs must comply with the following conditions in their individual NPDES/SDS permit or applicable general NPDES/SDS permit:
 - a. Monitor for phosphorus and
 - b. Develop a PMP.

- 4. Unsewered or undersewered communities that discharge to the Minnesota River (directly or via tributaries) downstream of the outlet of Lac Qui Parle Reservoir (river mile 285) and upstream of the City of Shakopee (at river mile 25.1), listed in Appendix F. These communities must:
 - a. First apply for, and receive an individual NPDES/SDS permit or a general NPDES/SDS permit before upgrading to a secondary treatment system.
 - (1) Demonstrate no net increase in mass of phosphorus discharged to the Basin between May 1st and September 30th, or
 - (2) Offset through trading any increased mass of phosphorus discharged from May 1st through September 30th, associated with new growth; and
 - (3) If trading is necessary, first submit a NPDES/SDS permit application for coverage under Appendix B of this Permit.
- 5. Expanding Continuously Discharging WWTFs (entities who apply for an increase in their hydraulic or organic capacity under their individual permit or undergo design and construction during the term of this permit). These entities must comply with the following:
 - a. <u>Permittees in Appendix B</u> are limited to the phosphorus mass loading listed in Appendix B.
 - b. <u>WWTFs in Appendix C or D</u> must:
 - (1) First apply for, and receive an individual NPDES/SDS permit or general NPDES/SDS permit before upgrading.
 - (2) Demonstrate no net increase in mass of phosphorus discharged to the Basin between May 1st and September 30th, or
 - (3) Offset through trading any increased mass of phosphorus discharged from May 1st through September 30th resulting from the expansion; and
 - (4) If trading is necessary, first submit an NPDES/SDS permit application for coverage under Appendix B of this Permit;
 - c. <u>Permittees listed in Appendix E</u> must design and construct so that there is no discharge to the Basin from June 1st through September 30th.
- 6. New Continuously Discharging WWTFs that discharge to the Minnesota River (directly or via tributaries) downstream of the outlet of Lac Qui Parle Reservoir (river mile 285) and upstream of City of Shakopee (at river mile 25.1). These WWTFs must:
 - a. Apply for, and receive, an individual NPDES/SDS permit or general NPDES/SDS permit;
 - b. Submit an NPDES/SDS permit application for coverage under Appendix B of this Permit; and
 - c. Offset through trading any mass of phosphorus discharged from May 1st through September 30th.
- 7. New Controlled Discharge Stabilization Ponds that discharge to the Minnesota River (directly or via tributaries) downstream of the outlet of Lac Qui Parle Reservoir (river mile 285) and upstream of City of Shakopee (at river mile 25.1). These WWTFs must:
 - a. Be designed and constructed so that there is no discharge from June 1st through September 30th as authorized under an individual NPDES/SDS permit or general NPDES/SDS permit;
 - b. Monitor for phosphorus; and
 - c. Develop a Phosphorus Management Plan.

CHAPTER 5.LIMITS AND COMPLIANCE DEMONSTRATION FOR PERMITTEESLISTED IN APPENDIX B

- 1. Limits: Permittees shall meet the following phosphorus effluent limits:
 - a. Except as provided below, Permittees listed in Appendix B must meet their individual 5-Month Mass Phosphorus Limit.
 - b. All Permittees must also meet any applicable phosphorus limit listed in their individual NPDES/SDS permit or general NPDES/SDS permit.
- 2. Exclusion from 5-Month Mass Phosphorus Limit:
 - a. Permittees who have executed a compliance agreement with the MPCA by April 1, 2008, which requires a 1.0 mg/L phosphorus limit prior to expiration of this Permit, are not required to meet their individual 5-Month Mass Phosphorus Limits listed in Appendix B.
 - b. Permittees with a 1.0 mg/L phosphorus limit listed in their individual NPDES/SDS permit, are not participating in pollutant trading, and have submitted a completed Exclusion from 5-Month Mass Phosphorus Limit Form to the MPCA Commissioner by April 30th of a calendar year are excluded from their 5-Month Mass Phosphorus Limit during that calendar year.
- 3. Adjustments to 5-Month Mass Phosphorus Limit: Permittees who engage in trading must adjust their 5-Month Mass Phosphorus Limit according to the trading provisions of Chapter 7 of this Permit.
- 4. **Compliance Demonstration with Limit:** Permittees are in compliance with their applicable phosphorus limit if they comply with the following:
 - a. For 5-Month Mass Phosphorus Limit listed in Appendix B:
 - (1) For a Permittee not trading The Permittee's Actual 5-Month Phosphorus Discharge is less than or equal to its 5-Month Mass Phosphorus Limit; or
 - (2) For a Permittee trading outside a Trade Association The Permittee's Actual 5-Month Phosphorus Discharge is less than or equal to its Final Adjusted Phosphorus Limit; or
 - (3) For a Permittee trading within a Trade Association:
 - (a) The Trade Association's Actual 5-Month Phosphorus Discharge is less than or equal to the Trade Association's Final Adjusted Phosphorus Limit (regardless of whether the individual members of the Association exceeded their individual Final Adjusted Phosphorus Limits); or
 - (b) The Permittee itself had an Actual 5-Month Phosphorus Discharge which was less than or equal to its Trade Association Member Adjusted Phosphorus Limit.
 - b. For Concentration Limits (as applicable): Permittees subject to a phosphorus concentration limit (in their individual NPDES/SDS permit or through a compliance agreement) are required to demonstrate compliance with that limit through their individual NPDES/SDS permit, an applicable general NPDES/SDS permit, or through an executed compliance agreement, as applicable.

<u>CHAPTER 6.</u> <u>MONITORING AND REPORTING REQUIREMENTS FOR PERMITTEES</u> <u>LISTED IN APPENDIX B</u>

1. Monitoring:

- a. Monitor facility influent and effluent for total phosphorus concentration at the frequency specified in Appendix B; or the frequency specified in their individual NPDES/SDS permit or an applicable general NPDES/SDS permit, whichever is more frequent;
- b. Measure flow continuously;
- c. Sample at the location(s) specified in the Permittee's individual NPDES/SDS permit or general NPDES/SDS permit, as applicable;
- d. Use 24-hour flow proportional composite samples for total phosphorus, unless otherwise approved in writing by the Commissioner;
- e. Use a laboratory certified by the Minnesota Department of Health for phosphorus analysis; and
- f. Use sample preservation and test procedures that conform to 40 CFR Part 136 and Minnesota Rule 7041.3200.

2. Reporting.

- a. **Minnesota River Basin Discharge Monitoring Report** (**MRBDMR**). The Permittee shall submit a monthly MRBDMR within 21 days after the end of each calendar month following permit issuance. The Permittee shall report monitoring results for the completed reporting period in the units specified by this Permit on a MRBDMR form provided by the MPCA. A MRBDMR shall be submitted even if no discharge occurred during the reporting period or if the Permittee has received an exclusion from its 5-Month Mass Phosphorus Limit.
- b. **Pre-season Implementation Plan (PIP).** The PIP is required, unless the Permittee has obtained an exclusion from their 5-Month Mass Phosphorus Limit as allowed by Chapter 5, item 2. By April 30, 2008, and each April 30th thereafter, the Permittee shall submit a PIP to the MPCA. In addition, if a Permittee is trading in 2006, the Permittee shall submit a PIP to the MPCA by April 30th of 2006 and if the Permittee is trading in 2007, the Permittee shall submit a PIP to the MPCA by April 30th of 2007. The PIP must include the following information:
 - (1) A description of how the Permittee intends to meet its 5-Month Mass Phosphorus Limit;
 - (2) An evaluation of the Permittee's monthly phosphorus mass load discharged during, for at least, the two previous years (May through September discharge period);
 - (3) A graph of the Permittee's previous two years mass loadings by month which identifies the Permittee's seasonal (May through September) mean effluent total phosphorus loadings;
 - (4) An estimate of the Permittee's anticipated seasonal (May through September) phosphorus loadings for the year covered by the PIP submittal;
 - (5) Notification of whether the Permittee anticipates participating in pollutant trading during the upcoming May through September period;
 - (6) An analysis of the phosphorus load that a Permittee intends to trade during the upcoming season;
 - (7) Copies of each Legal Contract to Trade that the Permittee enters into for the upcoming May through September period. Any trades entered into prior to April 30th must be included with the PIP; and.
 - (8) Notification of Permittee's membership in any Trade Association and copy of any Trade Association Internal Legal Contract to Trade.
- c. Annual Compliance Report. The Annual Compliance Report is required, unless the Permittee has an exclusion from their 5-Month Mass Phosphorus Limit as allowed by Chapter 5, item 2. By November 30, 2008, and each November 30th thereafter, the Permittee shall submit to the Commissioner an Annual Compliance Report on a form provided by the MPCA. The annual compliance report is to certify how the Permittee achieved compliance with the phosphorus effluent limit listed in Appendix B of the Permit. In addition, if a Permittee is trading in 2006 or 2007, the Permittee shall submit an Annual Compliance Report to the MPCA by November 30th of 2006 and 2007 as applicable. The Annual Compliance Report shall include a copy of each Legal Contract to Trade and each Internal Legal Contract to Trade that the Permittee enters into.

d. General Reporting Requirements.

(1) MRBDMRs and Supplemental Forms shall be submitted to:

MPCA

Attn: Discharge Monitoring Reports

520 Lafayette Road North

St. Paul, Minnesota 55155-4194

(2) Other reports required by this Permit shall be submitted by the date specified to: MPCA

Attn: WQ Reports Submittal Center

520 Lafayette Road North

St. Paul, Minnesota 55155-4194

(3) Required Signatures. All MRBDMRs, forms, reports and other documents submitted to the MPCA shall be certified and signed by the Permittee or the duly authorized representative of the Permittee per Minnesota Rule 7001.0150 (2005).

CHAPTER 7. TRADING CONDITIONS

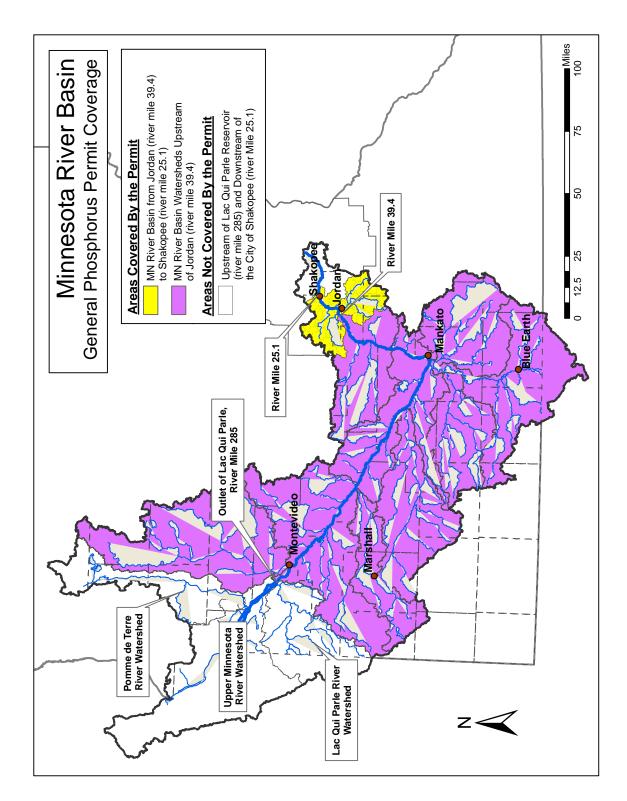
- 1. **Application.** Permittees or entities, who intend to trade and are not yet listed in Appendix B, must first apply for coverage under this Permit using a form provided by the MPCA.
- 2. **General Requirements.** The following requirements apply to all pollutant trading authorized by this Permit:
 - a. Jordan Trading Units (JTUs) are the only commodity that may be traded under this Permit.
 - b. Only Permittees listed in Appendix B may trade JTUs under the authority of this Permit.
 - c. Permittees who are trading are required to use either the Legal Contract to Trade Form or the Internal Legal Contract to Trade Form provided by the MPCA, as applicable. The Internal Legal Contract to Trade Form is used for internal trades within a Trade Association. The Legal Contract to Trade Form is used for all other trades.
 - d. Trades are not effective or valid and Permittees' 5-Month Mass Phosphorus Limits will not be adjusted until complete MPCA trade forms are received by the MPCA. For a Permittee's own protection, all parties signing MPCA trade forms are encouraged to send them to the MPCA immediately.
 - e. The equations in Appendix I must be used for trading calculations.
 - f. When trade forms are completed, received and recorded by the MPCA, a buyer's 5-Month Mass Phosphorus Limit is adjusted upward and a seller's 5-Month Mass Phosphorus Limit is adjusted downward according to the equations listed in Appendix I of this Permit.
 - g. Permittees selling JTUs in 2006 or 2007 must use the trading baseline value listed in Appendix B to determine how many JTUs are available to sell. During this period, JTUs may only be sold for reductions made below the Permittee's trading baseline listed in Appendix B.
 - h. Permittees that sell JTUs to any Permittee in 2008, 2009, or 2010 must use the 5-Month Mass Phosphorus Limit listed in Appendix B to determine how many JTUs are available to sell. Permittees shall use the equations listed in Appendix I when calculating this value.
 - i. A Permittee or Trade Association may enter into more than one MPCA Legal Contract to Trade per year and may trade with more than one Permittee or Trade Association.
 - j. A Permittee may both buy and sell JTUs during a calendar year.
 - k. The MPCA is not a party to any Legal Contract to Trade.
 - 1. Permittees may only enter into Legal Contracts to Trade up to September 30th of the trading year.
 - m. A buyer's Trade Ratio for Permittees listed in part 1 of Appendix B is 1.1 to 1.
 - n. A buyer's Trade Ratio for Permittees listed in part 2 of Appendix B is 1.2 to 1.
 - o. Permittees must use the equations listed in Appendix I of this Permit when filling out a Legal Contract to Trade.
 - p. Existing Permittees shall use the appropriate Jordan BOD Factor listed in Appendix B of this Permit.
 - q. New Permittees shall use the appropriate Jordan BOD Factor listed on the map in Appendix G.
- 3. **Trade Associations.** The following requirements are applicable to Trade Associations and their members:
 - a. Individual members of a Trade Association must each submit an Internal Legal Contract to Trade form to the MPCA by April 30th of each year in which the Association intends to trade.
 - b. A Permittee may be a member of only one Trade Association per calendar year.
 - c. An individual member of a Trade Association may not enter into a Legal Contract to Trade with an entity outside of its Trade Association.
 - d. A Trade Association may enter into a Legal Contract to Trade with individual Permittees or with other Trade Associations.
 - e. The equations in Appendix I must be used in determining compliance with the Trade Association's limits.

- f. Each Permittee, which is a member of a Trade Association, must submit an Annual Compliance Report to the MPCA, as required by Chapter 6. The report shall include all of the following information regarding the Permittee and its Trade Association:
 - (1) Trade Association 5-Month Mass Phosphorus Limit;
 - (2) Trade Association 5-Month Mass Limit Adjustments;
 - (3) Trade Association Final Adjusted Phosphorus Limit;
 - (4) Trade Association Actual 5-Month Discharge;
 - (5) 5-Month Mass Phosphorus Limit of the permittee member submitting the Report;
 - (6) 5-Month Mass Limit Adjustment of the permittee member submitting the Report;.
 - (7) Trade Association Member Adjusted Phosphorus Limit; and
 - (8) Actual 5-Month Phosphorus Discharge of the permittee member submitting the Report.

CHAPTER 8. GENERAL CONDITIONS OF THE PERMIT

- 1. The General Conditions found in the Permittee's individual NPDES/SDS or an applicable general NPDES/SDS permit are hereby incorporated by reference.
- 2. In the event that permit terms or limits conflict between this Permit and a facility's individual NPDES/SDS permit or another general NPDES/SDS permit that applies to the WWTF, the most stringent term or limit will apply and be enforced. All monitoring and recordkeeping required shall be performed whether required in a WWTF's individual NPDES/SDS, other applicable general NPDES/SDS permit, or this Permit. Questions should be addressed with MPCA staff immediately by written request. MPCA will make the final determination of what constitutes "the most stringent term or limit."
- 3. The terms and conditions of this Permit continue until this Permit is terminated, expires, or upon issuance of the Minnesota River Basin Phase II Permit.
- 4. The Permittee shall maintain all records for each sample, measurement and submittal required by this Permit for at least three years, including any calculations, original recordings from automatic monitoring instruments, and laboratory sheets. The Permittee shall extend these record retention periods upon request by the MPCA.
- 5. The MPCA's issuance of this Permit does not release the Permittee from any liability, penalty or duty imposed by Minnesota or federal statutes or rules or local ordinances.
- 6. The Permit incorporates by reference all applicable portions of 40 CFR 122, Minn. R. 7001.0150 and Minn. R. 7001.1090, which are also enforceable parts of this Permit.
- 7. The provisions of this Permit are severable, and if any provision of this Permit, or the application of any provision of this Permit to any circumstance, is held invalid, the application of such provision to other circumstances and the remainder of this Permit shall not be affected thereby.
- 8. The Commissioner may modify or revoke and reissue this Permit pursuant to Minn. R. 7001.0170 (2005).
- 9. This Permit does not convey a property right or an exclusive privilege. Minn. R. 7001.0150, Subp. 3C (2005). The authorization to discharge up to a permitted level is nontransferable. Any entity obtaining an interest in a permitted facility must separately apply for permit coverage and be assigned its own authorization to discharge at an MPCA-determined permitted level.
- 10. A person who falsifies, tampers with, or knowingly renders inaccurate a monitoring device or method required to be maintained under this Permit is subject to penalties provided by federal and state law. See Minnesota Rule 7001.1090, Subp. 1G (2005).
- 11. All appendices to this Permit and the limits contained herein are incorporated into and made enforceable parts of this Permit.
- 12. The issuance of a permit does not prevent the future adoption by the MPCA of pollution control rules, standards or orders more stringent than those now in existence and does not prevent the enforcement of these rules, standards or orders against the Permittee. (Minnesota Rules, pt. 7001.0150, subp. 3. B).

APPENDIX A Permit Coverage Area Map



APPENDIX B Continuous Discharge Permittees with Calculated Phosphorus Loads Greater Than 1800 lb/yr

Appendix B lists Permittee WWTFs with calculated effluent phosphorus loads greater than 1800 lbs per year that are within the geographical area identified in Appendix A as, "MN River Basin Watersheds Upstream of the City of Jordan." Phosphorus limits listed in the table below specify the total phosphorus load permitted for each Permittee during the May 1st through September 30th period of each applicable calendar year. Limits are based on aggregate phosphorus reduction milestones of 15% (2008), 25% (2009) and 35% (2010) from the baseline mass.

Appendix B, Part 1. These WWTFs existed as of the date of approval of the TMDL (September 28, 2004). These
Permittees must use a trade ratio of 1.1 to 1.

No.	Permittee Name	Name River Basin	River Basin	River Basin NPDES Pho	Total Phosphorus	osphorus BOD	Trading Baseline	Effluent Limit			
		Permit Number	Permit Number	Monitoring Frequency (samples per week) ¹	Factor	2006 and 2007 (kg)	2008 (kg)	2009 (kg)	2010 (kg)	2015 ²	
1.	City of Amboy	MNG420001	MN0022624	1	0.62	111	111	111	111	1 milli-	
2.	ADM Co. – Marshall	MNG420002	MN0057037	2	0.18	5504	4512	3850	3189	gram per liter or	
3.	City of Arlington	MNG420003	MN0020834	2	0.67	271	271	271	271	final TMDL	
4.	City of Belle Plaine ³	MNG420004	MN0022772	2	1.00	533	533	533	533	goal	
5.	City of Benson	MNG420005	MN0020036	2	0.11	877	557	557	557		
6.	City of Blue Earth	MNG420006	MN0020532	1	0.27	1076	931	931	931		
7.	City of Clara City	MNG420007	MN0023035	2	0.13	292	281	274	266		
8.	Darling Int. ⁴	MNG420008	MN0002313	2	0.19	90	90	90	90		
9.	Del Monte Corporation	MNG420009	MN0001171	2	0.34	1726	1400	1183	967		
10.	City of Fairmont	MNG420010	MN0030112	1	0.22	2228	2057	2057	2057		
11.	City of Granite Falls	MNG420011	MN0021211	2	0.10	NA	NA	393	340		
12.	City of Henderson	MNG420012	MN0023621	2	1.03	321	321	321	321		
13.	City of Lake Crystal	MNG420013	MN0055981	1	0.72	514	385	385	385		
14.	City of Le Center	MNG420014	MN0023931	2	1.02	417	348	348	348		
15.	City of Le Sueur	MNG420015	MN0022152	2	1.02	2,602	2,602	2,602	2,602		
16.	City of Madelia	MNG420016	MN0024040	2	0.29	3484	1951	1951	1951		
17.	City of Mankato	MNG420017	MN0030171	2	0.72	12111	9603	9603	9603		
18.	City of Marshall	MNG420018	MN0022179	2	0.18	15234	12361	10446	8531		
19.	Milton Waldbaum Co.	MNG420019	MN0060798	2	0.64	1730	969	969	969		
20.	City of Montevideo	MNG420020	MN0020133	2	0.09	4934	4003	3383	2763		
21.	City of New Richland	MNG420021	MN0021032	1	0.36	243	243	243	243		
22.	City of New Ulm	MNG420022	MN0030066	2	0.47	7225	6036	5243	4450		
23.	City of Norwood Young America	MNG420023	MN0024392	2	1.00	3138	2546	2152	1757		
24.	City of Olivia	MNG420024	MN0020907	2	0.17	609	570	544	518		
25.	City of Redwood Falls	MNG420025	MN0020401	2	0.27	1277	1174	1105	1036		

Permit MNG420000

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No.	Permittee Name	Minnesota River Basin	Individual NPDES	Total Phosphorus	Jordan BOD	Trading Baseline		Effluent	Limit	
		Permit Number	Permit Number	Monitoring Frequency (samples per week) ¹	Factor	2006 and 2007 (kg)	2008 (kg)	2009 (kg)	2010 (kg)	2015 ²
26.	City of Renville	MNG420026	MN0020737	2	0.17	1681	1370	1163	956	
27.	City of Sacred Heart	MNG420027	MN0024708	1	0.17	142	127	117	107	
28.	City of Springfield	MNG420028	MN0024953	2	0.24	360	360	360	360	
29.	City of St. Clair	MNG420029	MN0024716	1	0.69	169	148	134	120	
30.	City of St. James	MNG420030	MN0024759	2	0.22	4743	3849	3252	2656	
31.	City of St. Peter	MNG420031	MN0022535	2	0.91	1531	1531	1531	1531	
32.	City of Starbuck	MNG420032	MN0021415	1	0.10	151	151	151	151	
33.	City of Trimont	MNG420033	MN0022071	1	0.15	NA	NA	154	154	
34.	City of Truman	MNG420034	MN0021652	1	0.19	319	319	319	319	
35.	City of Walnut Grove	MNG420035	MN0021776	2	0.20	137	126	117	110	
36.	City of Waseca	MNG420036	MN0020796	2	0.59	2600	2401	2268	2136	
37.	City of Welcome	MNG420037	MN0021296	1	0.15	104	104	104	104	
38.	City of Willmar	MNG420038	MN0025259	2	0.13	12653	10372	8852	7332	
39.	City of Winnebago	MNG420039	MN0025267	2	0.30	687	687	687	687	
40.	MRVPUC	MNG420047	MN0068195	2	1.02	2,923	NA	2,923	2,923	
	L		1							

¹ The monitoring frequency listed is applicable May through September. From October through April, the monitoring frequency is twice monthly. Monitoring is required during the entire permit term.

² Compliance with the currently-approved TMDL allocation. The implementation plan for the 2004-approved TMDL is a 1 mg/l TP concentration limit during summer low flow critical periods. This limit may change based on an updated Minnesota River Basin Waste Load Allocation.

³ The NPDES permit for the City of Belle Plaine provides for a controlled discharge treatment system for a portion of the wastewater and a continuously discharging treated effluent for the remainder of the wastewater discharge. The 5-Month Mass Phosphorus Limit in Appendix B reflects only the continuous discharge wastewater treatment train. The controlled discharge stabilization pond system phosphorus controls are managed under the individual permit requirements for sampling and limits; the individual permit includes a final effluent limit concentration of 1 mg/l total phosphorus for the controlled discharge stabilization pond.

⁴ The individual permit for Darling International authorizes two different treatment processes. The Appendix B listing represents the 5-Month Mass Phosphorus limit for only the continuous discharge portion of the facility. The controlled discharge portion of the facility is managed under the individual permit and referenced in Appendix E.

Appendix B, Part 2. These WWTFs did not exist as of the date of approval of the TMDL. These Permittees must use a trade ratio of 1.2 to 1. Any mass of phosphorus discharged by a facility listed in Appendix B – Part 2 shall be offset through trading so that there is no net increase in phosphorus discharged to the Minnesota River basin as a result of the Permittee's discharge.

No.	Permittee Name	River Basin NPDES Frequency BOD	Jordan BOD	Trading Baseline		Effl	uent Lim	it		
		Permit Number	Permit Number	(samples per week) ¹		2006 and 2007 (lbs)	2008 (lbs)	2009 (lbs)	2010 (lbs)	2015 ²
1.	NorthStar Ethanol ³	MNG420040	MN0067172	2	0.72	0	0	0	0	0.
2.	Granite Falls Energy LLC	MNG420041	MN0066800	2	0.1	0	0	0	0	0
3.	Buffalo Lake Energy LLC	MNG420042	MN0068063	2	0.22	0	0	0	0	0
4.	RBF Acquisition V	MNG420043	MN0068331	2	0.69	0	0	0	0	0
5.	Highwater Ethanol LLC	MNG420044	MN0068586	2	0.2	0	0	0	0	0
6.	Lower Sioux Indian Res.	MNG420045	MN0061433	2	0.27	0	0	0	0	0
7.	Knollwood Mobile Home Park	MNG420046	MN0030651	2	0.72	0	0	0	0	0

¹ The influent and effluent monitoring frequency listed is applicable May through September. From October through April, the monitoring frequency is twice monthly.

² Compliance with the currently-approved TMDL allocation. The implementation plan for the 2004-approved TMDL is a 1 mg/l TP concentration limit during summer low flow critical periods. This limit may change based on an updated Minnesota River Basin Waste Load Allocation.

³NorthStar Ethanol has completed a 20-year trade agreement with the City of Lake Crystal.

APPENDIX C Continuous Discharge WWTFs with Calculated Phosphorus Loads Less Than or Equal to 1800 lb/yr

Appendix C includes continuously discharging WWTFs with calculated effluent phosphorus loads of less than or equal to 1800 lbs per year that are within the geographical area identified in Appendix A as, "MN River Basin Watersheds Upstream of Jordan." These WWTFs existed as of the date of approval of the TMDL.

This list includes, but is not limited to, the following continuously discharging WWTFs. As data becomes available
and verified, additional WWTFs may be added to this list.

No.	Permittee Name	Individual NPDES Permit Number	Location
1.	Comfrey WWTP	MN0021687	Comfrey
2.	Dairy Farmers of America	MN0003671	Winthrop
3.	Delft Sanitary District WWTP	MN0066541	Windom
4.	Delhi WWTP	MN0067008	Delhi
5.	Franklin WWTP	MN0021083	Franklin
6.	Hancock WWTP	MN0023582	Hancock
7.	Hillcrest Health Care Center	MN0041696	Mankato
8.	Kerkhoven WWTP	MN0020583	Kerkhoven
9.	Lafayette WWTP	MN0023876	Lafayette
10.	La Salle WWTP	MN0067458	La Salle
11.	Lewisville WWTP	MN0065722	Lewisville
12.	Madison Lake WWTP	MN0040789	Madison Lake
13	Maynard WWTP	MN0056588	Maynard
14.	Morgan WWTP	MN0020443	Morgan
15	Morton WWTP	MN0051292	Morton
16.	Prinsburg WWTP	MN0063932	Prinsburg
17.	St George Community WW System	MN0064785	New Ulm
18.	Vernon Center WWTP	MN0030490	Vernon Center
19.	Wabasso WWTP	MN0025151	Wabasso
20.	Waldorf WWTP	MN0021849	Waldorf
21.	Washington Park Association	MN0062219	Madison Lake
22.	Watson WWTP	MN0022144	Watson

APPENDIX D Continuous Discharge WWTFs (Jordan to Shakopee)

Appendix D includes, but is not limited to, the following WWTFs within the geographical area identified in Appendix A as, "MN River Basin from the City of Jordan to the City of Shakopee." As data becomes available and verified, additional WWTFs may be added to these lists.

Appendix D, Part 1. WWTFs with calculated effluent phosphorus loads greater than 1800 lbs per year

No.	Permittee Name	Individual NPDES Permit Number	Location
1.	Bongards' Creameries Inc	MN0002135	Norwood
2.	Carver WWTP	MN0053457	Carver
3.	MA Gedney	MN0022446	Chaska
4.	New Prague WWTP	MN0020150	New Prague
5.	Rahr Malting Company	MN0031917	Shakopee
6.	Montgomery WWTP	MN0024210	Montgomery

Appendix D, Part 2. WWTFs with calculated effluent phosphorus loads less than or equal to 1800 lbs per year

No.	Permittee Name	Individual NPDES Permit Number	Location
1.	Cologne WWTP	MN0023108	Cologne
2.	Hamburg WWTP	MN0025585	Hamburg

APPENDIX E Controlled Discharge Stabilization Ponds WWTFs

Appendix E includes Controlled Discharge Stabilization Ponds that are within the geographical area identified in Appendix A as, "MN River Basin Watersheds Upstream of the City of Jordan." These WWTFs were in existence as of the date of approval of the TMDL.

Appendix E, Part 1. This list includes, but is not limited to, Controlled Discharge Stabilization Ponds with an individual NPDES/SDS Permits. As data becomes available and verified, additional WWTFs may be added to this list.

No.	Permittee Name	Individual NPDES Permit Number	Location
1.	Balaton WWTP	MN0020559	Balaton
2.	Bird Island WWTP	MN0022829	Bird Island
3.	Blomkest Svea WWTP	MN0069388	Blomkest
4.	Butterfield WWTP	MN0022977	Butterfield
5.	Balaton WWTP	MN0020559	Balaton
6.	Evan WWTP	MN0066460	Evan
7.	Hamburg WWTP	MN0025585	Hamburg
8.	Darling Int. ¹	MN0002313	Blue Earth
9.	Gaylord WWTP	MN0051209	Gaylord
10.	Good Thunder WWTP	MN0045713	Good Thunder
11.	Hanska WWTP	MN0052663	Hanska
12.	Lowry WWTP	MN0024007	Lowry
13.	Odin – Ormsby WWTP	MN0069442	Odin
14.	Mapleton WWTP	MN0021172	Mapleton
15.	Murdock WWTP	MNG580086	Murdock
16.	Northrop WWTP	MN0024384	Northrop
17.	Raymond WWTP	MN0045446	Raymond
18.	Southern MN Beet Sugar - Processing Plt	MN0040665	Renville
19.	St Leo WWTP	MN0024775	St. Leo
20.	Tracy WWTP	MN0021725	Tracy
21.	Wells Easton Minnesota Lake WWTP	MN0025224	Wells
22.	Winthrop WWTP	MN0051098	Winthrop
23.	Urbank WWTP	MN0068446	Urbank

¹ The individual permit for Darling International authorizes two different treatment processes. Therefore the facility is listed in Appendix B and in Appendix E. The controlled discharge portion of the facility is managed under the individual permit.

Appendix E, Part 2. This list includes, but is not limited to, Controlled Discharge Stabilization Ponds with General NPDES/SDS Permit MNG580000 coverage. As data becomes available and verified, additional WWTFs may be added to this list.

No.	Permittee Name	Individual NPDES Permit Number	Location
1.	Alden WWTP	MNG580118	Alden
2.	Belview WWTP	MNG580003	Belview
3.	Bricelyn WWTP	MNG580129	Bricelyn
4.	Clarkfield WWTP	MNG580093	Clarkfield
5.	Clements WWTP	MNG580094	Clements
6.	Cleveland WWTP	MNG580009	Cleveland
7.	Clontarf WWTP	MNG580108	Clontarf
8.	Cottonwood WWTP	MNG580010	Cottonwood

Permit MNG420000

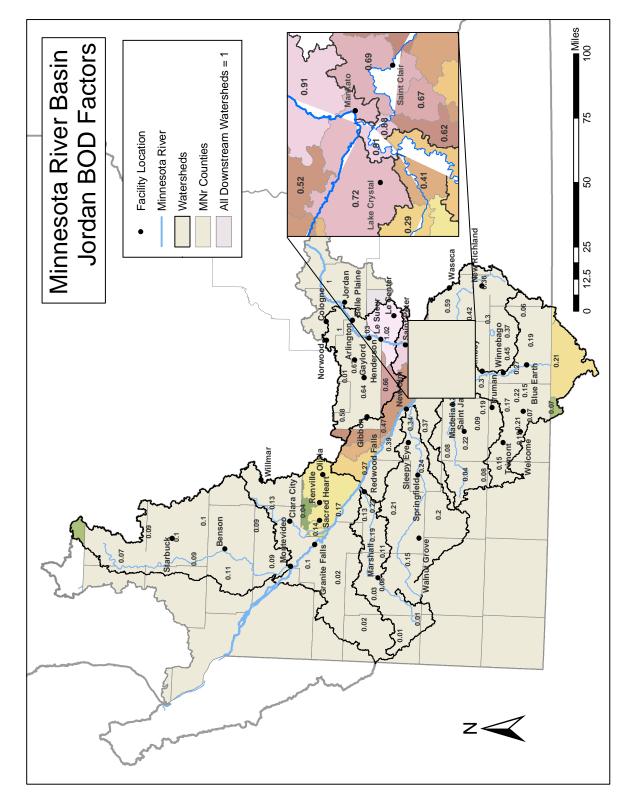
0		10/0500057	Permit MNG420000
9.	Danube WWTP	MNG580057	Danube
10.	Danvers WWTP	MNG580019	Danvers
11.	Delavan WWTF	MNG580109	Delavan
12.	Echo WWTP	MNG580059	Echo
13.	Elmore WWTP	MNG580110	Elmore
14.	Fairfax WWTP	MNG580060	Fairfax
15.	Freeborn WWTP	MNG580018	Freeborn
16.	Frost WWTP	MNG580120	Frost
17.	Garvin WWTP	MNG580101	Garvin
18.	Ghent WWTP	MNG580121	Ghent
19.	Gibbon WWTP	MNG580020	Gibbon
20.	Granada WWTP	MNG580023	Granada
21.	Hanley Falls WWTP	MNG580122	Hanley Falls
22.	Hartland WWTP	MNG580102	Hartland
23.	Hoffman WWTP	MNG580134	Hoffman
24.	Ivanhoe WWTP	MNG580103	Ivanhoe
25.	Janesville WWTP	MNG580025	Janesville
26.	Jeffers WWTP	MNG580111	Jeffers
27.	Kiester WWTP	MNG580097	Kiester
28.	Lamberton WWTP	MNG580100	Lamberton
29.	Lucan WWTP	MNG580112	Lucan
30.	Lynd WWTP	MNG580030	Lynd
31.	Milroy WWTP	MNG580124	Milroy
32.	Minneota WWTP	MNG580033	Minneota
33.	Mountain Lake WWTP	MNG580035	Mountain Lake
34.	Neuhof Hutterian Brethren	MNG580113	Mountain Lake
35.	Nicollet WWTP	MNG580037	Nicollet
36.	Pemberton WWTP	MNG580075	Pemberton
37.	Pennock WWTP	MNG580104	Pennock
38.	Porter WWTP	MNG580128	Porter
39.	Revere WWTP	MNG580114	Revere
40.	Russell WWTP	MNG580062	Russell
41.	Ruthton WWTP	MNG580105	Ruthton
42.	Sanborn WWTP	MNG580115	Sanborn
43.	Searles WWTP	MNG580080	Searles
44.	Sleepy Eye WWTP	MNG580041	Sleepy Eye
45.	Storden WWTP	MNG580106	Storden
46.	Sunburg WWTP	MNG580125	Sunburg
47.	Taunton WWTP	MNG580090	Taunton
48.	Tyler WWTP	MNG580116	Tyler
49.	Vesta WWTP	MNG580043	Vesta
50.	Wanda WWTP	MNG580126	Wanda
51.	Westbrook WWTP	MNG580127	Westbrook
52.	Wood Lake WWTP	MN0025305	Wood Lake

APPENDIX F Unsewered and Untreated Communities

Appendix F includes, but is not limited to, unsewered and under treated communities within the geographical area identified in Appendix A as, "MN River Basin Watersheds Upstream of the City of Jordan." These communities existed as of the date of approval of the TMDL and do not currently have an individual NPDES/SDS permit. As data becomes available and verified, additional WWTFs may be added to this list.

No.	Community Name	Location (County)
1.	Blomkest	Kandiyohi
2.	Cobden	Brown
3.	Florence	Lyon
4.	Forada	Douglas
5.	Heidelberg	Le Sueur
6.	La Salle	Watonwan
7.	Long Beach	Pope
8.	Odin	Watonwan
9.	Ormsby	Watonwan
10.	Seaforth	Redwood
11.	Urbank	Otter Tail
12.	Walters	Faribault

APPENDIX G Map of Jordan BOD Factors



APPENDIX H DEFINITIONS

- 1. **"5-Month Mass Phosphorus Limit"** means the maximum mass of phosphorus (measured in pounds) that a Permittee may discharge from its facility during the May 1st through September 30th period each year that the phosphorus limit is in effect under this Permit. This is a total facility discharge limit and is listed in Appendix B of this Permit.
- 2. **"5-Month Mass Limit Adjustment"** means the amount (measured in pounds of phosphorus) that a Permittee's 5-Month Mass Phosphorus Limit is adjusted by buying or selling JTUs. The buyer's 5-Month Mass Phosphorus Limit is adjusted upward by JTUs purchased, except for the JTUs retired as required by the Trade Ratio. The seller's 5-Month Mass Phosphorus Limit is adjusted downward by all JTUs sold to the buyer including those required by the Trade Ratio. Appendix I of this Permit contains the equation used to determine this value.
- 3. **"24-hour Flow Composite Sample"** is a composite sample taken over the operating hours of one day, including all clean up.
- 4. "Act" means the federal Clean Water Act, as amended, 33 U.S. Code 1251 et seq.
- 5. **"Actual 5-Month Phosphorus Discharge"** means the actual mass of phosphorus discharged by an individual facility (measured in pounds) during the May 1st through September 30th period of a calendar year. Appendix I of this Permit contains the equations used to determine this value.
- 6. **"Baseline Mass"** means the 5-Month Mass Discharge of Phosphorus that represents the average phosphorus discharged, for a specific individual facility, from May 1st through September 30th during 1999 and 2000, or other representative period, if 1999-2000 data was not available.
- 7. **"Buyer"** means a Permittee that has entered into a legal contract to purchase JTUs from another Permittee or Trade Association. The buyer's 5-Month Mass Phosphorus Limit is adjusted upward by trading, according to the equations listed in Appendix I of this Permit, at the time the trade is recorded, and thus, made "effective" by MPCA.
- 8. **"Commissioner"** means the Commissioner of the Minnesota Pollution Control Agency.
- 9. "Entities" means an owner(s) of a facility that discharges phosphorus and is not yet covered by this Permit.
- 10. "Expanding Facility" means a Permittee or an entity that is increasing its design flow capacity after the date of issuance of this Permit.
- 11. **"Facility"** or **"Facilities"** means equipment, buildings, structures, process or production equipment, or machinery that form a permanent part of a discharge to surface waters of the Basin.
- 12. **"Final Adjusted Phosphorus Limit"** means the sum of the Permittees 5-Month Mass Phosphorus Limit and all 5-Month Mass Limit Adjustments. Appendix I of this Permit contains the equations used to determine this value.
- 13. **"General Permit"** means a permit issued under Minn. R. 7001.0210 to a category of Permittees whose operations, emissions, activities, discharges, or facilities are the same or substantially similar.
- 14. **"Individual Permit"** means an NPDES/SDS permit that has been issued to an individual Permittee. Individual Permit does not mean the Minnesota River Basin Phosphorus Permit.
- 15. **"Individual Trades"** means legal contracts exchanging JTUs between: two Permittees, one Permittee and a Trade Association, or between two Trade Associations.
- 16. **"Jordan Biochemical Oxygen Demand Factor" or "JBOD Factor"** means the factor used in trading to convert pounds of phosphorus discharged by a facility into JTUs. JBOD Factors are calculated to compensate for changes in loading impacts to the river related to spatial differences in the basin which affects algal production and/or temporary sequestration of pollutants.
- 17. **"Jordan Trading Units" or "JTUs"** means the "currency" used for trading between sellers and buyers. A JTU takes into consideration the buyers or sellers JBOD Factor in order that a JTU discharged by one facility has the same impact at Jordan, Minnesota, as a JTU discharged by another facility.
- 18. **"Legal Contract"** means a written agreement between two or more parties creating obligations that are enforceable by law. In order to trade JTUs, Permittees must use the forms provided by the MPCA.
- 19. "Limit Adjustment" means the upward or downward adjustment of a Permittee's 5-Month Mass Phosphorus Discharge Limit (lbs) based on the trades it makes. For Trade Associations, this adjustment is made in terms of JTUs. Appendix I of the Permit contains the formulas for calculating the limit adjustment.
- 20. "MPCA" refers to the Minnesota Pollution Control Agency.
- "National Pollutant Discharge Elimination System" or "NPDES" means the program for issuing, modifying, revoking, reissuing, terminating, monitoring, and enforcing permits under the Clean Water Act (Sections 301, 318, 402, and 405) and United States Code of Federal Regulations Title 33, Sections 1317, 1328, 1342, and 1345.
- 22. **"Permittee"** means facility owners covered by this Permit, which have applied for and been granted coverage under this Permit by the MPCA.
- 23. "Phosphorus" always refers to Total Phosphorus.

- 24. **"Seller"** means a Permittee that has entered into a legal contract to sell JTUs to another Permittee or Trade Association. The seller's 5-Month Mass Phosphorus Limit is adjusted downward by trading, according to the equations listed in Appendix I of this Permit, at the time the trade is recorded and thus made "effective" by MPCA.
- 25. **"Total Phosphorus"** means the sum of all organic and inorganic forms of dissolved and particulate phosphorus in a sample.
- 26. **"Trade Association"** or **"Association"** means a group of Permittees who have registered their trade association with the MPCA by using the Trade Association Internal Legal Contract to Trade Form provided by the MPCA.
- 27. **"Trade Association Actual 5-Month Phosphorus Discharge"** means the sum of the JTUs actually discharged by members of a Trade Association. Appendix I of this Permit contains the equation used to determine this value.
- 28. "Trade Association 5-Month Mass Limit Adjustment" means the number of JTUs that a Trade Association's Limit is adjusted by buying or selling JTUs with Permittees outside the Association or with other Associations. The Association's 5-Month Mass Limit is not adjusted by JTUs retired as required by the Trade Ratio. Appendix I of this Permit contains the equation used to determine this value.
- 29. **"Trade Association Final Adjusted Phosphorus Limit"** means the sum of the Trade Association 5-Month Mass Phosphorus Limit and all Trade Association 5-Month Mass Limit Adjustments. Appendix I of this Permit contains the equation used to determine this value.
- 30. **"Trade Association 5-Month Mass Phosphorus Limit"** means the sum of all of the Association's members 5-Month Mass Phosphorus Limits (converted into JTUs) minus the number of JTUs retired as required by the Trade Ratio (as listed in the Pre-season Implementation Plan). Appendix I of this Permit contains the equation used to determine this value.
- 31. **"Trade Association Member Adjusted Phosphorus Limit**" means, for an individual member of a Trade Association, the sum of its 5-Month Mass Phosphorus Limit and 5-Month Mass Limit Adjustment, applicable for that calendar year, made in the Pre-season Implementation Plan. The 5-Month Mass Limit Adjustments made after the due date of the PIP (i.e. April 30th) do not adjust the individual Trade Association member's 5-Month Mass Phosphorus Limit.
- 32. **"Trade Ratio"** means the factor applied to the buyer during the calculation for exchange of JTUs. JTUs purchased by the buyer for the Trade Ratio do not adjust the buyer's 5-Month Mass Phosphorus Limit. Appendix I of this Permit indicates how this factor is applied.
- 33. "Trading" means buying or selling JTUs according to the provisions of this Permit.

APPENDIX I PERMIT EQUATIONS

1. Phosphorus Limits

For Individual Permittees:

- *Final Adjusted Phosphorus Limit (buyer)* = [5-Month Mass Phosphorus Limit (lbs) + 5-Month Mass Limit Adjustment (lbs)]
 - o 5-Month Mass Phosphorus Limit (lbs) (see Appendix B)
 - 5-Month Mass Limit Adjustment (lbs) = [(Total JTUs Purchased from seller JTUs required for Trade Ratio)/Jordan BOD Factor of buyer]
- Final Adjusted Phosphorus Limit (seller) = [5-Month Mass Phosphorus Limit (lbs) 5-Month Mass Limit Adjustment (lbs)]
 - 5-Month Mass Phosphorus Limit (lbs) (see Appendix B)
 - 5-Month Mass Limit Adjustment (lbs) = [Total JTUs sold/Jordan BOD Factor of seller]

For Trade Associations:

- <u>Trade Association Final Adjusted Phosphorus Limit</u> = [Trade Association 5-Month Mass Phosphorus Limit (JTUs) + Trade Association 5-Month Mass Limit Adjustment (JTUs)]
- <u>Trade Association 5-Month Mass Phosphorus Limit(JTUs)</u> To determine this value, calculate the following for each Association member and add up the values of all of the members: [(Association Member 5-Month Mass Phosphorus Limit (lbs) x Association member Jordan BOD Factor) any JTUs required by the Trade Ratio for the buyers].
- <u>*Trade Association 5-Month Mass Limit Adjustment (JTUs)*</u> = [(Number of JTUs bought by Association from outside entities JTUs required by Trade Ratio) (Number of JTUs sold by Association)]
- <u>Trade Association Member Adjusted Phosphorus Limit</u> = [Member 5-Month Mass Phosphorus Limit (lbs)
 - +/- Member 5-Month Mass Limit Adjustment (lbs) (made by April 30th of applicable year)]
 - Member 5-Month Mass Phosphorus Limit (lbs) (see Appendix B)
 - Buying Member 5-Month Mass Limit Adjustment (lbs) = [(Total JTUs Purchased from Trade Association JTUs required for Trade Ratio)/Jordan BOD Factor of buying member]
 - Selling Member 5-Month Mass Limit Adjustment (lbs) = [(Total JTUs sold to Trade Association/Jordan BOD Factor of selling member]

2. Actual Phosphorus Discharge

For Individual Permittees:

• <u>Actual 5-Month Phosphorus Discharge (lbs)</u> = (The sum of values obtained for the months of May through September) = [average monthly phosphorus concentration of effluent (mg/L) x total facility flow during month (million gallons) x 8.34]

For Trade Associations:

• <u>*Trade Association Actual 5-Month Phosphorus Discharge* =</u> For each Trade Association member, calculate the following: [Association member Actual 5-Month Phosphorus Discharge x Association member JBOD Factor]. Add the values of all of the Association's members.

3. JTUs

- <u>JTUs Available to Sell =</u> [Pounds of phosphorus Permittee is under its 5-Month Mass Phosphorus Limit (or Baseline Value, during 2006 and 2007) x Jordan BOD Factor of seller]
- *JTUs Required by Trade Ratio for* New Permittee's = (20% of the number of JTUs purchased to adjust Permittee's 5-Month Mass Phosphorus Limit)
- <u>JTUs Required by Trade Ratio for Existing</u> Permittee's = (10% of the number of JTUs purchased to adjust Permittee's 5-Month Mass Phosphorus Limit)