

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF MINNESOTA

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UNITED STATES OF AMERICA and	)
the STATE OF MINNESOTA,	)
	)
Plaintiffs,	)
	)
v.	)
	)
SOUTHERN MINNESOTA BEET	)
SUGAR COOPERATIVE,	)
	)
Defendant.	)

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Civil Action No. 16-1205 (WMW/SER)

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## I. INTRODUCTION

A. Plaintiff United States of America, on behalf of the United States Environmental Protection Agency ("EPA"), and the State of Minnesota ("State") have filed a complaint in this action concurrently with this Consent Decree, alleging that Defendant Southern Minnesota Beet Sugar Cooperative ("Defendant"), violated Section 301 of the Clean Water Act ("Act"), 33 U.S.C. § 1311.

B. The Complaint alleges that Defendant violated the Act at its sugar beet processing plant located near Renville, Minnesota ("Facility"). The Complaint also alleges that Defendant violated its National Pollutant Discharge Elimination System ("NPDES") permit, issued by the Minnesota Pollution Control Agency ("MPCA"), for the Facility.

C. Defendant does not admit any liability to the United States or the State arising out of the transactions or occurrences alleged in the Complaint.

D. The Parties recognize, and the Court by entering this Consent Decree finds, that this Consent Decree has been negotiated by the Parties in good faith and will avoid litigation among the Parties and that this Consent Decree is fair, reasonable, and in the public interest.

NOW, THEREFORE, before the taking of any testimony, without the adjudication or admission of any issue of fact or law except as provided in Section II (Jurisdiction and Venue), and with the consent of the Parties, IT IS HEREBY ADJUDGED, ORDERED, AND DECREED as follows:

## II. JURISDICTION AND VENUE

1. This Court has jurisdiction over the subject matter of this action, pursuant to 28 U.S.C. §§ 1331, 1345, and 1355, and Section 309(b) of the Act, 33 U.S.C. § 1319(b), and over the Parties. Venue lies in this District pursuant to 28 U.S.C. §§ 1391 and 1395(a) and Section 309(b) of the Act, 33 U.S.C. § 1319(b), because Defendant conducts business in and is located in this judicial district and the violations alleged in the Complaint are alleged to have occurred in this judicial district. For purposes of this Consent Decree, or any action to enforce this Consent Decree, Defendant consents to the Court's jurisdiction over this Consent Decree and any such action and over Defendant and consents to venue in this judicial district.

2. For purposes of this Consent Decree, Defendant agrees that the Complaint states claims upon which relief may be granted pursuant to Section 309(b) of the Act, 33 U.S.C. § 1319(b).

3. This Court has supplemental jurisdiction over the State law claims asserted by the State pursuant to 28 U.S.C. § 1367.

## III. APPLICABILITY

4. The obligations of this Consent Decree apply to and are binding upon the United States and the State, and upon Defendant and any successors, assigns, or other entities or persons otherwise bound by law.

5. No transfer of ownership or operation of Defendant's Facility, whether in compliance with the procedures of this Paragraph or otherwise, shall relieve Defendant of its obligation to ensure that the terms of the Consent Decree are implemented. At least 30 Days prior to such transfer, Defendant shall provide a copy of this Consent Decree to the proposed transferee and shall simultaneously provide written notice of the prospective transfer, together with a copy of the proposed written agreement, to EPA Region 5, the United States Attorney for the District of Minnesota, the United States Department of Justice, and the State in accordance with Section XVI (Notices). Any attempt to transfer ownership or operation of the Facility without complying with this Paragraph constitutes a violation of this Consent Decree.

6. Defendant shall provide a copy of this Consent Decree to all officers, employees, and agents whose duties might reasonably include compliance with any provision of this Consent Decree, as well as to any contractor retained to perform work required under this Consent Decree. Defendant shall condition any such contract upon performance of the work in conformity with the terms of this Consent Decree.

7. In any action to enforce this Consent Decree, Defendant shall not raise as a defense the failure by any of its officers, directors, employees, agents, or contractors to take any actions necessary to comply with the provisions of this Consent Decree.

#### IV. DEFINITIONS

8. Terms used in this Consent Decree that are defined in the Act or in regulations promulgated pursuant to the Act shall have the meanings assigned to them in the Act or such regulations, unless otherwise provided in this Decree. Whenever the terms set forth below are used in this Consent Decree, the following definitions shall apply:

- a. "Act" shall mean the Clean Water Act, 33 U.S.C. § 1251, *et seq.*, as amended;
- b. "Agencies" shall mean, collectively, EPA and MPCA;
- c. "Appendix" or "Appendices" shall mean a document(s) listed in Section XXV (Appendices) of this Consent Decree;
- d. "Complaint" shall mean the complaint filed by the United States and the State in this action;
- e. "Consent Decree" or "Decree" shall mean this Decree and all Appendices;
- f. "Day" shall mean a calendar day unless expressly stated to be a business day. In computing any period of time under this Consent Decree, where the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the close of business of the next business day;
- g. "Defendant" shall mean Southern Minnesota Beet Sugar Cooperative;
- h. "EPA" shall mean the United States Environmental Protection Agency and any of its successor departments or agencies;

- i. "Effective Date" shall have the definition provided in Section XVII (Effective Date);
- j. "Facility" shall mean Defendant's sugar beet processing facility located just east of Renville, Minnesota and subject to NPDES permit No. MN0040665, issued by the MPCA for the Facility on December 29, 2004, and as may be reissued;
- k. "Grower" or "Growers" shall mean the member farmer(s) who contract with Defendant to provide sugar beets to Defendant for processing at the Facility;
- l. "MPCA" shall mean the Minnesota Pollution Control Agency and any of its successor departments or agencies;
- m. "O&M Plan" shall mean Defendant's Operation and Maintenance Plan, which describes procedures to properly operate and maintain the systems used to achieve Permit compliance at the Facility, in accordance with Chapter 12, Section 11 of the Permit;
- n. "Paragraph" shall mean a portion of this Consent Decree identified by an arabic numeral;
- o. "Parties" shall mean the United States, the State, and Defendant;
- p. "Permit" shall mean NPDES permit No. MN0040665, issued by MPCA for the Facility on December 29, 2004 and as may be reissued. Defendant continues to operate pursuant to the Permit pending MPCA disposition of Defendant's timely submitted permit renewal application and issuance of any successor permits;
- q. "Pond Model" shall mean Defendant's pond volume projection water balance model;
- r. "Section" shall mean a portion of this Consent Decree identified by a roman numeral;
- s. "State" shall mean the State of Minnesota;
- t. "UASB" shall mean the upflow anaerobic sludge blanket treatment system located at Defendant's Wastewater Treatment Facility;
- u. "United States" shall mean the United States of America, acting on behalf of EPA;
- v. "Wastewater Storage Ponds" shall mean the storage ponds at the Facility commonly referred to as Ponds 1-7;
- w. "Wastewater Treatment Facility" or "WWTF" shall mean all assets used at the Facility to store, treat or discharge wastewater.

#### V. CIVIL PENALTY

9. Within 15 Days after Defendant receives notice that this Consent Decree has been lodged, Defendant shall deposit the amount of \$500,000.00 into an escrow account bearing

interest on commercially reasonable terms, in a federally-chartered bank (the "Escrow Account"). Such monies shall remain in escrow until entry of the Decree. If the Decree is not entered by the District Court, and the time for any appeal of that decision has run, or if the District court's denial of entry is upheld on appeal, the monies placed in escrow, together with accrued interest thereon, shall be returned to Defendant. If the Decree is entered by the District Court, Defendant shall, within 15 Days thereof, cause the monies (including all accrued interest) in the Escrow Account to be released and disbursed to the United States in payment of the civil penalty under this Decree.

10. Defendant shall pay the civil penalty due at <https://www.pay.gov> to the U.S. Department of Justice account, in accordance with instructions provided to Defendant by the Financial Litigation Unit ("FLU") of the United States Attorney's Office for the District of Minnesota after the Effective Date. The payment instructions provided by the FLU shall include a Consolidated Debt Collection System ("CDCS") number, which Defendant shall use to identify all payments required to be made in accordance with this Consent Decree. The FLU will provide the payment instructions to:

Ian O'Connell,  
Vice President of Administration, SMBSC  
P.O. Box 500,  
Renville, MN 56284  
(320) 329-4173  
[ian.oconnell@smbosc.com](mailto:ian.oconnell@smbosc.com)

on behalf of Defendant. Defendant may change the individual to receive payment instructions on its behalf by providing written notice of such change to the United States and EPA in accordance with Section XVI (Notices).

At the time of payment, Defendant shall send notice that payment has been made: (i) to EPA via email at [cinwd\\_acctsreceivable@epa.gov](mailto:cinwd_acctsreceivable@epa.gov) or via regular mail at EPA Cincinnati Finance Office, 26 W. Martin Luther King Drive, Cincinnati, Ohio 45268; (ii) to the United States via email or regular mail in accordance with Section XVI (Notices); and (iii) to EPA in accordance with Section XVI (Notices). Such notice shall state that the payment is for the civil penalty owed pursuant to the Consent Decree in *United States of America and the State of Minnesota v. Southern Minnesota Beet Sugar Cooperative* and shall reference the CDCS Number and DOJ case number 90-5-1-1-10696.

11. Within 30 days after receipt of an invoice from MPCA, Defendant shall pay the sum of \$500,000.00 to the State as a civil penalty. Payment of the civil penalty is to be by check or money order payable to the Minnesota Pollution Control Agency. The check must be mailed to: Fiscal Services – 6th Floor, Minnesota Pollution Control Agency, 520 Lafayette Road North, St. Paul, Minnesota 55155-4194. To make an Electronic Payment, Defendant must contact MPCA Fiscal Services at 651-757-2834.

12. Defendant shall not deduct any penalties paid under this Consent Decree pursuant to this Section or Section X (Stipulated Penalties) in calculating its federal or State or local income tax.

## VI. RESTITUTION

13. Within 30 days after the Effective Date, Defendant shall pay the sum of \$49,155.83 to the Minnesota Department of Natural Resources as restitution for the August 2013 fish kill. Payment shall be made by check payable to the Minnesota Department of Natural Resources and sent to:

Minnesota Department of Natural Resources  
500 Lafayette Road  
St. Paul, MN 55155  
Attn: Luke Skinner, Director, Division of Ecological Services  
Ref: 221398

## VII. WASTEWATER TREATMENT PLANT CORRECTIVE ACTIONS

14. **No Release from Obligations.** Nothing in this Consent Decree shall be construed to release Defendant from the duty to comply with all applicable requirements of the CWA, regulations promulgated thereunder, State statutes and regulations, the Permit, and other legal requirements applicable to the Facility. Except as otherwise provided in this Consent Decree, Defendant shall, beginning on the Effective Date, comply with all applicable requirements of the CWA, regulations promulgated thereunder, State statutes and regulations, the Permit, and other legal requirements at the Facility.

### 15. Permits

a. MPCA may include actions required under this Consent Decree as conditions in a re-issued Permit. Nothing in this Consent Decree shall be construed to limit MPCA, as the authorized authority for issuance of NPDES permits in the State, from proposing to add additional conditions to the Permit or any reissued permit, if MPCA determines such additional conditions are necessary.

b. Where any compliance obligation under this Section requires Defendant to obtain a federal, state, or local permit or approval, Defendant shall submit timely and complete applications and take all other actions necessary to obtain all such permits or approvals. Defendant may seek relief under the provisions of Section XI (Force Majeure) for any delay in the performance of any such obligation resulting from a failure to obtain, or a delay in obtaining, any permit or approval required to fulfill such obligation, if Defendant has submitted timely and complete applications and has taken all other actions necessary to obtain all such permits or approvals.

16. **Certification of Contingency Actions.** Within 30 days of the Effective Date, Defendant shall submit a written certification ("Contingency Certification") to the Agencies demonstrating that it can implement actions ("Contingencies") to ensure compliance with the Permit in the event of an inability to fully process sugar beets, or treat or discharge wastewater through operation of the Facility and WWTF. For each successive year thereafter during the term of this Consent Decree, Defendant shall provide a Contingency Certification by October 1. In the Contingency Certification, Defendant must demonstrate that the Contingencies are adequate to manage, throughout the processing season, at least 3.6 million tons of sugar beets.

- a. Contingencies may include, but are not limited to:
  - i. Grower contracts that enable Defendant to:
    - aa. limit beet planting by each Grower;
    - bb. terminate or limit beet harvesting by each Grower; and
    - cc. require each Grower to accept beets or beet wastes, in amounts to be determined by Defendant, back for land application on land controlled by the Grower. The amounts of beet or beet waste land applied by each Grower and the acreage used by each Grower for land application must be consistent with limitations on land application established by Defendant's Solid Waste Permit # SW-562 at each proposed land application site;
  - ii. Contracts or other enforceable arrangements for discharge of wastewater at one or more publicly owned treatment works ("POTWs") consistent with the federal, state, and local permits for the POTWs, and applicable state and federal law;
  - iii. Contracts or other enforceable arrangements with animal feed producers under which Defendant is allowed to ship beets to those producers for use as animal feed;
  - iv. Contracts or other enforceable arrangements with other beet producers under which Defendant is allowed to ship beets that it is unable to process up to the amount that the other beet producers are able to accept for processing within the limits of their permits and applicable state laws; and
  - v. Contracts or other enforceable arrangements with other landowners for land application of beets and beet wastes.

b. In the Certification, Defendant shall identify for each mechanism identified in Paragraph 16(a) above:

- i. the amount of beets or beet wastes that can be managed;
- ii. any temporal limitations, either express or practicable;
- iii. if relevant, the gallons of wastewater to be discharged; and
- iv. if relevant, the amount and location of land application acreage available.

c. Defendant shall maintain all contracts or other documentation relied on for the Certification at the Facility and shall make the contracts or other documentation available to the Agencies upon request.



17. Modeling

a. Following the Effective Date, Defendant shall run the Pond Model on or about August 15 of each year and thereafter on a monthly basis through the end of the processing season, *i.e.*, September 15, October 15, November 15, and December 15, etc. In addition, Defendant shall run the Pond Model if any assumption in the preceding Pond Model run is no longer valid or if any of the following events occur:

- i. the current total volume of wastewater being stored in Wastewater Storage Ponds used to manage high-strength wastewater is at any time 85% or greater of the permitted storage capacity in those Wastewater Storage Ponds; or
- ii. the current total volume of wastewater being stored in Wastewater Storage Ponds used to manage low-strength wastewater is at any time 95% or greater of the permitted storage capacity in those Wastewater Storage Ponds; or
- iii. an equipment malfunction or another similar event with the potential to impact compliance occurs.

b. In running the Pond Model, Defendant shall use:

- i. if the beet harvest is not completed, an estimate of the size of the beet harvest generated no later than one week prior to the model run;
- ii. if the beet harvest is completed, the remaining amount of beets to be processed; and
- iii. the latest data on performance of the WWTF and volumes of wastewater in the Wastewater Storage Ponds.

18. Contingency Implementation

a. Defendant shall immediately take action to implement Contingencies if a Pond Model run indicates likely (more than a 50% chance of) non-compliance with freeboard limits in any Wastewater Storage Ponds.

b. Defendant shall continue to implement Contingencies until such time that the Pond Model indicates Defendant will likely (more than 50% chance that it will) attain compliance with freeboard limits for all Wastewater Storage Ponds.

19. Additional Actions. In the event that Defendant is required to implement Contingencies, Defendant shall:

- a. run the Pond Model on a weekly basis; and

b. within 24 hours of beginning to implement Contingencies, provide written notification to the Agencies that Defendant is implementing Contingencies. Such notification shall include:

- i. a description of each Contingency that Defendant intends to implement;
- ii. a schedule for the implementation of each Contingency; and
- iii. identification of the amount of beets projected to be managed by each Contingency.

20. Ongoing Monitoring of UASB

a. Within 30 days of the Effective Date, to the extent such equipment does not already exist, Defendant shall install and operate monitoring equipment for the UASB that, at a minimum, shall measure on a daily basis:

- i. Influent Flow Volume in millions of gallons per day;
- ii. Influent and Effluent pH;
- iii. Influent and Effluent temperature;
- iv. Total Biogas Volume; and
- v. Biogas composition (% methane and carbon dioxide).

b. Defendant has begun to collect and shall continue collecting and sending samples to a certified laboratory, for a period of two processing seasons, to measure on a twice monthly basis:

- i. Effluent Volatile Fatty Acid;
- ii. Effluent Alkalinity;
- iii. Influent and Effluent and Reactor Volatile Solids and Total Suspended Solids; and
- iv. Influent and Effluent soluble Chemical Oxygen Demand.

Defendant shall ensure that its certified laboratory uses methods and procedures listed in 40 CFR Part 136 for measurements of Alkalinity, solids, and soluble Chemical Oxygen Demand. For Volatile Fatty Acids, Defendant shall send samples to a laboratory for analysis using a Gas Chromatographic Method.

c. Defendant shall maintain the results of the monitoring required by this Section in an electronic format, such as an Excel Spreadsheet.

d. Defendant shall maintain the results of the monitoring required by this Paragraph at the Facility and shall make such records available to the Agencies upon request.

21. WWTF Reliability/Biomass Security

a. Within 30 days of the Effective Date, Defendant shall submit to the Agencies for review and approval, in accordance with Section VIII (Approval of Deliverables), a proposal for investigating and implementing improved methods for maintaining and/or growing reliable source(s) of replacement biomass ("Biomass Security Study") at the Facility that Defendant can use to achieve necessary levels of treatment in the UASB, and reseed the UASB if necessary during the production season. To be approved, the Biomass Security Study must identify the list of methods and technologies that will be investigated and include a schedule of bench and pilot testing that will be completed within four years of approval. In addition, the Biomass Security Study must quantitatively evaluate the extent to which biomass washout and biomass growth rates affect the performance of the UASB.

b. Defendant agrees that the MPCA may include the requirement and schedule for the Biomass Security Study in the next reissuance of the Permit, along with requirements that:

- i. At the conclusion of the Biomass Security Study, Defendant shall submit a report ("Biomass Security Report") to MPCA for review and approval that describes the results of the Biomass Security Study and identifies any measures and/or technologies that the Biomass Security Study has shown are feasible and prudent means of maintaining acclimated biomass at the Facility at levels sufficient to restart the UASB if necessary during the production season. For purposes of this Paragraph, "acclimated biomass" means biomass, whether from the Facility or an external source, that has biological diversity, viability, and activity commensurate with the level of function of the UASB employed in the Pond Model; and
- ii. Within 60 days of MPCA's approval of the Biomass Security Report, Defendant shall:
  - aa. submit a proposed schedule for implementing feasible and prudent methods and/or technologies as identified in the approved Biomass Security Report that will result in implementation as soon as reasonably possible; or
  - bb. if the approved Biomass Security Report does not identify any feasible and prudent methods and/or technologies for maintaining acclimated biomass at the Facility, submit either a conceptual plan and schedule for improving the reliability of the wastewater treatment system using technologies that are not dependent on the function of the UASB or a report that summarizes data that Defendant asserts demonstrates that the current system is reliable. The MPCA reserves the right to deny future permits if the

MPCA concludes that the wastewater treatment facility is not sufficiently reliable.

22. Permanent Pond Level Gauges

a. Upon the Effective Date, Defendant shall implement the approved Pond Level Gauge Workplan, attached hereto as Appendix 1, in accordance with the schedule contained therein.

b. Within seven days of completion of all actions required by the approved Pond Level Gauge Workplan, Defendant shall provide written certification of such completion to the Agencies.

c. Within 30 days of completion of all actions required by the approved Pond Level Gauge Workplan, Defendant shall revise its O&M Plan to include the permanent pond level gauges and shall submit the revised O&M Plan to the Agencies for review and approval, in accordance with Section VIII (Approval of Deliverables).

23. Reporting Procedures for Pond Level Measurements for Wastewater Storage Ponds

a. Defendant shall report all measurements to MPCA by electronic Discharge Monitoring Report ("eDMR") and MPCA sample values spreadsheet. When reporting on eDMR, Defendant shall continue to enter pond elevation levels as Mean Sea Level.

b. Defendant shall report the lowest pond freeboard (calculation) in the reporting period to the nearest 1/10 of a foot in the comments box on the eDMR.

c. After the Permit has been reissued, Defendant shall comply with all pond level reporting requirements in the reissued NPDES permit, and the reporting requirements in the reissued Permit shall govern future reporting.

24. Pond Level Measurement, Recording and Reporting for Wastewater Storage Ponds

a. Beginning on the Effective Date, Defendant shall measure and record the wastewater level in each Wastewater Storage Pond no less frequently than once every seven Days, employing surveys until staff gauges are installed under the Pond Level Gauge Workplan, and then staff gauge readings thereafter. If at any time the staff gauges are being repaired or replaced, then surveys can be employed pending repair or replacement of the gauges.

b. If a pond level measurement indicates that the level of wastewater in one or more Wastewater Storage Pond(s) exceeds freeboard limits in the Permit, Defendant shall, beginning on the day after such measurement, measure the wastewater level in all Wastewater Storage Ponds on at least a daily basis until such time that the wastewater level in each Wastewater Storage Pond no longer exceeds the freeboard limits in the Permit.

c. Defendant shall maintain records of all Wastewater Storage Pond level measurements and shall make those records available to the Agencies upon request.

25. Valve Placement and Wastewater Monitoringa. Piping Audit

- i. Defendant shall conduct a piping audit of the Facility in accordance with industry standards and best management practices and the requirements of this Paragraph. The goal of the audit is to develop complete and accurate map(s), pursuant to the scope of an approved workplan, of piping that conducts or could conduct wastewater and non-contact cooling water within the Facility, and to identify any potential locations for unauthorized discharges of process wastewaters or non-contact cooling waters to waters of the State and/or navigable waters, including cross-connections between wastewater and non-contact cooling water and other piping or valve arrangements that could lead to unauthorized discharges. The audit shall include an evaluation of measures taken by Defendant prior to the Effective Date to prevent unintended discharges and shall include recommendations for alarms, fail-safes, and operation and maintenance procedures to prevent unintended discharges from occurring as a result of human error.
- ii. Within 30 days of the Effective Date, Defendant shall notify the Agencies of the name of one or more unaffiliated third-party consultants, who are professional engineers (“PEs”) who either will design the investigation and evaluate the results or subcontract the work to one or more qualified companies, subject to review and approval by the PE(s).
- iii. Within 90 days of the Effective Date, Defendant shall submit a detailed Piping Audit Workplan that meets the requirements of this Paragraph to the Agencies for MPCA and EPA review and approval. The scope of the Piping Audit Workplan shall include the following areas of the Facility: non-contact cooling water piping (CD37), including all new and old piping that Defendant plans to abandon; CD45 outfall; Tanner’s Pond; Ponds 1-4 inlet and transfer piping; Ponds 5 and 6 inlet and transfer piping; Pond 7 inlet piping; spray irrigation piping; and WWTF inlet and process piping. The Piping Audit Workplan shall use video verification unless the Agencies agree that video verification of a particular pipe system is not feasible due to physical constraints or other reasons identified in the Piping Audit Workplan that makes video verification impractical. Where it is determined that video verification is impractical, the Piping Audit Workplan shall use industry-standard best practices for locating underground utilities including, as appropriate, visual inspections, potholing, remote sensing, interviews with knowledgeable personnel, and review of

as-built drawings and other records. The Piping Audit Workplan shall include the proposed investigative techniques and implementation schedule for the following above-ground and below-ground piping at the factory site portion of the Facility:

- aa. piping, meters, valves, pumps, and any other appurtenances starting from each outlet and working upstream to the post-aeration pumps;
  - bb. impoundments, Wastewater Storage Ponds, and associated pumping stations with interconnects between each impoundment, pond, and associated pumps;
  - cc. pumps and piping for the disposal of wastewater through land application;
  - dd. non-contact cooling water system from the backflow preventer on the well line through the factory and to the final outfall;
  - ee. other pipes or conveyance structures used to transport wastewater streams; and
  - ff. locations where cross-connections between the process wastewater and non-contact cooling water may potentially occur.
- iv. The Parties recognize that the approved Piping Audit Workplan may need to be updated as work under the plan is completed and Defendant's investigation progresses. Accordingly, Defendant may submit a Revised Piping Audit Workplan to MPCA for review and approval if any changes to the plan as approved become necessary. Any Revised Piping Audit Workplan shall be submitted by Defendant no more than once a year, by October 31, and shall be finalized and approved by MPCA by April 1 of the following year.
- v. Within 90 Days of the Effective Date, Defendant shall submit to the Agencies for MPCA and EPA review and approval a plan and schedule for removing from service and replacing all unaudited pipes, i.e. interconnecting pond piping for Ponds 1-6, ("Piping Replacement Plan"). The approved Piping Replacement Plan shall be included in Defendant's next Permit. To be approved, the Piping Replacement Plan must:
- aa. result in the removal from service of underground pipes and associated equipment by the end of calendar year 2021, unless extended for good cause shown;

- bb. clearly identify all pipes that are being replaced in the plan and the anticipated schedule for such replacement;
  - cc. provide that all control structures associated with the piping be replaced or evaluated as part of the move such that the new control structure is not connected to any old piping left in place; and
  - dd. provide that old piping left in place is grouted or otherwise disabled so that it cannot carry wastewater.
- vi. Defendant shall submit a Piping Audit Report to the Agencies on an annual basis that documents all progress made under the Piping Audit Workplan during the preceding year. Defendant shall submit the Piping Audit Report by October 31 until all work under the Piping Audit Workplan is completed or until the requirements of this Paragraph 25(a)(vi) are included in Defendant's next Permit. Each annual Piping Audit Report shall include:
- aa. a diagram of all piping and connections inspected and located, including a description of the inspection technique;
  - bb. a copy of all piping video with a vocal narrative identifying the piping and connections, location, piping and connection condition, cross connections, and other observations;
  - cc. documentation of any valves that Defendant has installed to prevent the discharge of wastewater and noncontact cooling water through Outfalls SD001 and SD009 except in accordance with the Permit; and
  - dd. a proposal (including implementation and completion schedule(s)) for any additional modifications of its piping as necessary to eliminate any piping that poses a hazard for unauthorized discharge, bypass, or overflow. Upon approval by MPCA, Defendant shall implement the proposal according to the approved schedule(s). This does not prohibit Defendant from taking immediate interim measures to prevent unauthorized discharges during MPCA review.
- vii. Defendant shall submit a Piping Replacement Report to the Agencies on an annual basis that documents all progress made under the Piping Replacement Plan during the preceding year. Defendant shall submit the Piping Replacement Report by October 31 until all work under the Piping Replacement Plan is completed or until the requirements of this Paragraph 25(a)(vii) are included

in Defendant's next Permit. Each annual Piping Replacement Report shall include:

- aa. a diagram of all piping and connections abandoned in place along with documentation of how abandonment was accomplished;
  - bb. documentation of new piping, valves, and pumps that Defendant has installed to replace abandoned piping; and
  - cc. a proposal (including implementation and completion schedule(s)) for any additional modifications of Facility piping subject to the Piping Audit. Upon approval by MPCA, Defendant shall implement the proposal according to the approved schedule(s). This does not prohibit Defendant from taking immediate interim measures to prevent unauthorized discharges during MPCA review.
- viii. As part of each annual Piping Audit Report and Piping Replacement Report, Defendant shall submit accurate "Record Drawings" of equipment audited in the Piping Audit Report and replaced in the Piping Replacement Plan. Record Drawings prepared for the Piping Audit Reports shall be drawings completed by a professional engineer or professional land surveyor. Record Drawings prepared for the Piping Replacement Reports may be completed by the Facility engineer. These Record Drawings shall be prepared and updated after completion of any changes to the portions of the wastewater system covered by the Piping Audit or Piping Replacement Plans, through the completion of both plans. The requirements of this Paragraph 25(a)(viii) shall be included in Defendant's next Permit.

b. Valve and Monitor Placement and Effluent Monitoring

- i. The Permit designates Outfall SD009 as an outfall that discharges to CD 45. Defendant shall not make piping connections downstream of the location where flow is measured for the combined effluent discharge from SD009. In the event the discharge to CD 45 through SD009 is not in compliance with the Specific Conductance and/or the Flow limitations in the Permit, the discharge shall be automatically halted and rerouted to the Wastewater Storage Ponds.
- ii. The Permit designates Outfall SD001 as an outfall that discharges to CD 37. Defendant shall not make piping connections downstream of the location where Specific Conductance and Flow are measured for the discharge to CD 37 through SD001. In the event the discharge to CD 37 through SD001 is not in compliance



with the Specific Conductance requirement of the Permit, the discharge shall be automatically halted and rerouted to the Wastewater Storage Ponds.

- iii. Defendant shall submit an application for an amendment to its Permit reflecting the requirements of Paragraph 25(b)(i) and (ii), above.
- iv. All separate and combined discharges from SD009 shall be monitored per the requirements in the Permit.
- v. The Facility shall maintain all calculations and original records from automatic monitoring instruments as required by Chapter 12 Section 5 of the Permit.

c. Recordkeeping. In addition to complying with other recordkeeping requirements of the Permit, Defendant shall maintain the following records at the Facility and shall make them available to the Agencies upon request:

- i. The approved Piping Audit Workplan(s), Piping Replacement Plan, annual Piping Audit Reports, and annual Piping Replacement Reports; and
- ii. All Record Drawings submitted pursuant to Paragraph 25(a)(viii), above.

The requirements in this Paragraph 25(c) shall be included in Defendant's next Permit.

26. Effluent Violations at Spray-irrigation Sites.

a. Defendant shall immediately cease spray irrigation on Parcels 8 and 9. Defendant shall not spray irrigate on Parcels 8 and 9 until it has excavated, removed, and backfilled all tile inlets on Parcels 8 and 9 and excavated and backfilled the last 50 feet of the drain tiles leading to outfalls SD003 and SD004. Within 30 Days of completion of this work, Defendant shall submit a certification of completion and supporting documentation to the Agencies for review and approval in accordance with Section VIII (Approval of Deliverables).

b. Following submittal of the certification of completion required by Paragraph 26(a), Defendant shall manage application of wastewater to Parcels 8 and 9 in accordance with its Land Application Management Plan for other non-tile-lined parcels.

c. Defendant shall submit an application for an amendment to its Permit application reflecting the changes required by this Paragraph and the removal of outfalls SD003 and SD004 from the Permit.

27. O&M Plan Updates and Revisions

- a. Within 60 days of the Effective Date, Defendant shall submit to the

Agencies for review and approval, in accordance with Section VIII (Approval of Deliverables), an O&M Plan that addresses, to the extent that they are not already on an approved maintenance schedule, the following "Critical Assets:" equipment associated with pond dikes; the UASB; the equalization tank; rapid mix tank; splitter box; aerobic basins; clarifiers; filters; trough; contact basin; post-aeration basin; sludge belt presses; spray irrigation lines where elevated above drainage ditches; and above-ground piping that conducts wastewater outside the factory. To be approved, the O&M Plan must include all information described in Paragraph 27(d) for each Critical Asset and must provide guidance to the Facility staff as to how the Facility must be inspected and maintained. For Facility assets that already have an approved inspection and maintenance protocol, Defendant shall attach the previously-approved protocol(s) for such assets to the revised O&M Plan submittal.

b. Defendant agrees that MPCA may include the O&M plan approved under this Consent Decree as an enforceable element of the re-issued Permit for the Facility.

c. Defendant shall revise the O&M Plan whenever there are substantive changes to the WWTF that involve assets that require maintenance.

d. The O&M Plan submitted pursuant to Paragraph 27(a) shall include, in table form, the following information:

- i. an inventory of Critical Assets;
- ii. a description of the current condition of each Critical Asset; (*e.g.*, excellent, good, fair, poor) and the estimated remaining useful life of the Critical Asset;
- iii. for each Critical Asset, a description of the likely methods by which the Asset may fail and the effect of such failure on the wastewater treatment system;
- iii. life cycle costing;
- iv. how the Critical Asset is intended to perform within the WWTF (*e.g.*, pump capacity);
- v. the schedule as to when that Critical Asset will be inspected and maintained, including any triggering events for inspection and maintenance (*e.g.*, storm event greater than 2 inches, end of each slicing campaign, monthly date, etc.); and
- vi. records that the inspector will create documenting that inspections and maintenance have been conducted as required by the O&M Plan.

### VIII. APPROVAL OF DELIVERABLES

28. Except as otherwise provided in this Consent Decree, after review of any plan, report, or other item that is required to be submitted pursuant to this Consent Decree, MPCA, after reasonable opportunity for comment by EPA, shall in writing: (a) identify any additional

information needed to act upon the submission; (b) approve the submission; (c) approve the submission upon specified conditions; (d) approve part of the submission and disapprove the remainder; or (e) disapprove the submission.

29. If the submission is approved pursuant to Paragraph 28(b), Defendant shall take all actions required by the plan, report, or other document, in accordance with the schedules and requirements of the plan, report, or other document, as approved. If the submission is conditionally approved or approved only in part pursuant to Paragraph 28(c) or (d), Defendant shall, upon written direction from MPCA, take all actions required by the approved plan, report, or other item that MPCA determines are technically severable from any disapproved portions, subject to Defendant's right to dispute only the specified conditions or the disapproved portions, under Section XII (Dispute Resolution).

30. If the submission is disapproved in whole or in part pursuant to Paragraph 28(d) or (e), Defendant shall, within 45 days or such other time set forth in this Consent Decree or as the Parties agree to in writing, correct all deficiencies and resubmit the plan, report, or other item, or disapproved portion thereof, for approval, in accordance with the preceding Paragraphs. If the resubmission is approved in whole or in part, Defendant shall proceed in accordance with the preceding Paragraph.

31. Any stipulated penalties applicable to the original submission, as provided in Section X (Stipulated Penalties), shall accrue during the 45 day period or other specified period, but shall not be payable unless the resubmission is untimely or is disapproved in whole or in part; provided that, if the original submission was so deficient as to constitute a material breach of Defendant's obligations under this Decree, the stipulated penalties applicable to the original submission shall be due and payable notwithstanding any subsequent resubmission.

32. If a resubmitted plan, report, or other item, or portion thereof, is disapproved in whole or in part, MPCA may again require Defendant to correct any deficiencies, in accordance with the preceding Paragraphs, subject to Defendant's right to invoke Dispute Resolution and the right of EPA and the State to seek stipulated penalties as provided in the preceding Paragraphs.

#### IX. REPORTING REQUIREMENTS

33. Defendant shall submit the following reports:

a. By July 31<sup>st</sup> and January 31<sup>st</sup> of each year after the lodging of this Consent Decree, until termination of this Decree pursuant to Section XX (Termination), Defendant shall submit a written semi-annual report for the preceding six months. Each semi-annual report shall include:

- i. all records of UASB monitoring required by Paragraph 20;
- ii. all records of Pond Level Measurements required by Paragraph 24;
- iii. all records of flow and conductance measurements for SD001 and SD009 required by Paragraph 25(b) and the Permit;
- iv. all Discharge Monitoring Reports submitted pursuant to the

Permit; and

- v. with respect to each Contingency implemented pursuant to Paragraph 18:
  - aa. identification of the time period Defendant implemented such Contingency;
  - bb. identification of the amount of beets managed by each Contingency; and
  - cc. a description of any problems experienced in the implementation of such Contingency.

b. The semi-annual report shall also include a description of any non-compliance with the requirements of this Consent Decree and an explanation of the violation's likely cause and of the remedial steps taken, or to be taken, to prevent or minimize such violation. If Defendant violates, or has reason to believe that it may violate, any requirement of this Consent Decree, Defendant shall notify the United States and the State of such violation and its likely duration, in writing, within 10 business Days of the Day Defendant first becomes aware of the violation, with an explanation of the violation's likely cause and of the remedial steps taken, or to be taken, to prevent or minimize such violation. If the cause of a violation cannot be fully explained at the time the report is due, Defendant shall so state in the report. Defendant shall investigate the cause of the violation and shall then submit an amendment to the report, including a full explanation of the cause of the violation, within 30 Days of the Day Defendant becomes aware of the cause of the violation. Nothing in this Paragraph or the following Paragraph relieves Defendant of its obligation to provide the notice required by Section XI (Force Majeure).

34. Whenever any violation of this Consent Decree or of any applicable permits or any other event affecting Defendant's performance under this Decree, or the performance of its Facility, may pose an immediate threat to the public health or welfare or the environment, Defendant shall notify EPA and the State orally or by electronic or facsimile transmission as soon as possible, but no later than 24 hours after Defendant first knew of the violation or event. This procedure is in addition to the requirements set forth in the preceding Paragraph.

35. All reports shall be submitted to the persons designated in Section XVI (Notices).

36. Each report or deliverable submitted by Defendant under this Consent Decree shall be signed by an official of the submitting party and include the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant

penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

37. This certification requirement does not apply to emergency or similar notifications where compliance would be impractical.

38. The reporting requirements of this Consent Decree do not relieve Defendant of any reporting obligations required by the Act or implementing regulations, or by any other federal, state, or local law, regulation, permit, or other requirement.

39. Any information provided pursuant to this Consent Decree may be used by the United States or the State in any proceeding to enforce the provisions of this Consent Decree and as otherwise permitted by law.

X. STIPULATED PENALTIES

40. Defendant shall be liable for stipulated penalties to the United States and the State for violations of this Consent Decree as specified below, unless excused under Section XI (Force Majeure). A violation includes failing to perform any obligation required by the terms of this Decree, including any work plan or schedule approved under this Decree, according to all applicable requirements of this Decree and within the specified time schedules established by or approved under this Decree.

41. Late Payment of Civil Penalty. If Defendant fails to pay the civil penalty required to be paid under Section V (Civil Penalty) when due, Defendant shall pay a stipulated penalty of \$2,500 per Day for each Day that the payment is late.

42. Compliance Milestones

a. The following stipulated penalties shall accrue per violation per Day for each violation of the requirements identified in Paragraph 42(b).

<u>Penalty Per Violation Per day</u>	<u>Period of Noncompliance</u>
\$500.00	1st through 14th day
\$2,000.00	15th through 30th day
\$5,000.00	31st day and beyond

b. Milestones subject to Stipulated Penalties

- i. Failure to submit the annual Contingency Certification required by Paragraph 16;
- ii. Failure to run the Pond Model as required by Paragraph 17;
- iii. Failure to implement Contingencies as required by Paragraph 18;
- iv. Failure to perform any of the additional actions required by Paragraph 19;
- v. Failure to comply with the UASB monitoring requirements of Paragraph 20;

- vi. Failure to submit the Biomass Security Study required by Paragraph 21(a);
- vii. Failure to certify completion of all actions required by the Pond Level Gauge Workplan as required by Paragraph 22(b);
- viii. Failure to comply with the requirements of Paragraph 23;
- ix. Failure to comply with the requirements of Paragraph 24;
- x. Failure to submit the Piping Audit Workplan, the Piping Replacement Plan, and the annual Piping Audit and Piping Replacement Reports as required by Paragraph 25(a);
- xi. Failure to comply with the requirements of Paragraph 25(b);
- xii. Failure to comply with the requirements of Paragraph 26; and
- xiii. Failure to revise or submit the O&M Plan as required by Paragraph 27.

43. Permit Violations

a. The following stipulated penalties shall accrue per violation per Day for each violation of the requirements identified in Paragraph 43(b).

<u>Penalty Per Violation Per day</u>	<u>Period of Noncompliance</u>
\$500.00	1st through 5th day
\$2,000.00	6th through 11th day
\$5,000.00	12th day and beyond

b. Permit Violations subject to Stipulated Penalties

- i. Failure to comply with the freeboard requirements of the Permit; and
- ii. Failure to comply with volumetric and seasonal discharge limits.

44. Reporting Requirements. Except as provided in Paragraphs 42 and 43, the following stipulated penalties shall accrue per violation per Day for each violation of any reporting requirements of this Consent Decree:

<u>Penalty Per Violation Per day</u>	<u>Period of Noncompliance</u>
\$250.00 .....	1st through 14th day
\$1,000.00 .....	15th through 30th day
\$2,500.00 .....	31st day and beyond

45. Recordkeeping Requirements. The stipulated penalty for each violation of the recordkeeping requirements of Paragraphs 16(c), 20(d), 24(c), and 25(c) of this Consent Decree shall be \$2,500 per violation.

46. Stipulated penalties under this Section shall begin to accrue on the Day after performance is due or on the Day a violation occurs, whichever is applicable, and shall continue

to accrue until performance is satisfactorily completed, or until the violation ceases. Stipulated penalties shall accrue simultaneously for separate violations of this Consent Decree.

47. Defendant shall pay stipulated penalties to the United States and the State within 20 Days of a written demand by either Plaintiff. Of the total stipulated penalty amount due, Defendant shall pay 50% to the United States and 50% to the State. The Plaintiff making a demand for payment of a stipulated penalty shall simultaneously send a copy of the demand to the other Plaintiff.

48. Either Plaintiff may in the unreviewable exercise of its discretion, reduce or waive stipulated penalties otherwise due it under this Consent Decree.

49. Stipulated penalties shall continue to accrue as provided in Paragraph 46, during any Dispute Resolution, but need not be paid until the following:

a. If the dispute is resolved by agreement or by a decision of EPA that is not appealed to the Court, Defendant shall pay accrued penalties determined to be owing, together with interest, to the United States and the State within 30 Days of the effective date of the agreement or the receipt of EPA's decision or order.

b. If the dispute is appealed to the Court and the United States and/or the State prevails in whole or in part, Defendant shall pay all accrued penalties determined by the Court to be owing, together with interest, within 60 Days of receiving the Court's decision or order, except as provided in Paragraph 50.

c. If any Party appeals the District Court's decision, Defendant shall pay all accrued penalties determined to be owing, together with interest, within 15 Days of receiving the final appellate court decision.

50. Defendant shall pay stipulated penalties owing to the United States in the manner set forth and with the confirmation notices required by Paragraph 10, except that the transmittal letter shall state that the payment is for stipulated penalties and shall state for which violation(s) the penalties are being paid. Defendant shall pay stipulated penalties owing to the State in the manner described in Paragraph 11.

51. If Defendant fails to pay stipulated penalties according to the terms of this Consent Decree, Defendant shall be liable for interest on such penalties, as provided for in 28 U.S.C. § 1961, accruing as of the date payment became due. Nothing in this Paragraph shall be construed to limit the United States or the State from seeking any remedy otherwise provided by law for Defendant's failure to pay any stipulated penalties.

52. The payment of penalties and interest, if any, shall not alter in any way Defendant's obligation to complete the performance of the requirements of this Consent Decree.

53. Non-Exclusivity of Remedy. Stipulated penalties are not the United States' or the State's exclusive remedy for violations of this Consent Decree. Subject to the provisions of Section XIV (Effect of Settlement/Reservation of Rights), the United States and the State expressly reserve the right to seek any other relief deemed appropriate for Defendant's violation of this Decree or applicable law, including, but not limited to an action against Defendant for

statutory penalties, additional injunctive relief, mitigation or offset measures, and/or contempt. However, the amount of any statutory penalty assessed for a violation of this Consent Decree shall be reduced by an amount equal to the amount of any stipulated penalty assessed and paid pursuant to this Consent Decree.

#### XI. FORCE MAJEURE

54. "Force majeure," for purposes of this Consent Decree, is defined as any event arising from causes beyond the control of Defendant, of any entity controlled by Defendant, or of Defendant's contractors, that delays or prevents the performance of any obligation under this Consent Decree despite Defendant's best efforts to fulfill the obligation. The requirement that Defendant exercise "best efforts to fulfill the obligation" includes using best efforts to anticipate any potential force majeure event and best efforts to address the effects of any such event (a) as it is occurring and (b) following the potential force majeure, such that the delay and any adverse effects of the delay are minimized. "Force Majeure" does not include Defendant's financial inability to perform any obligation under this Consent Decree.

55. If any event occurs or has occurred that may delay the performance of any obligation under this Consent Decree, whether or not caused by a force majeure event, Defendant shall provide notice orally or by electronic or facsimile transmission to the Agencies within 72 hours of when Defendant first knew that the event might cause a delay. Within seven days thereafter, Defendant shall provide in writing to EPA and the State an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; Defendant's rationale for attributing such delay to a force majeure event if it intends to assert such a claim; and a statement as to whether, in the opinion of Defendant, such event may cause or contribute to an endangerment to public health, welfare, or the environment. Defendant shall include with any notice all available documentation supporting the claim that the delay was attributable to a force majeure. Failure to comply with the above requirements shall preclude Defendant from asserting any claim of force majeure for that event for the period of time of such failure to comply, and for any additional delay caused by such failure. Defendant shall be deemed to know of any circumstance of which Defendant, any entity controlled by Defendant, or Defendant's contractors knew or should have known.

56. If EPA, after a reasonable opportunity for review and comment by the State, agrees that the delay or anticipated delay is attributable to a force majeure event, the time for performance of the obligations under this Consent Decree that are affected by the force majeure event will be extended by Plaintiffs for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the force majeure event shall not, of itself, extend the time for performance of any other obligation. EPA will notify Defendant in writing of the length of the extension, if any, for performance of the obligations affected by the force majeure event.

57. If EPA, after a reasonable opportunity for review and comment by the State, does not agree that the delay or anticipated delay has been or will be caused by a force majeure event, EPA will notify Defendant in writing of its decision.



58. If Defendant elects to invoke the dispute resolution procedures set forth in Section XII (Dispute Resolution), it shall do so no later than 15 days after receipt of EPA's notice. In any such proceeding, Defendant shall have the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by a force majeure event, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that Defendant complied with the requirements of Paragraphs 54 and 55. If Defendant carries this burden, the delay at issue shall be deemed not to be a violation by Defendant of the affected obligation of this Consent Decree identified to EPA and the Court.

## XII. DISPUTE RESOLUTION

59. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve disputes arising under or with respect to this Consent Decree. Defendant's failure to seek resolution of a dispute under this Section shall preclude Defendant from raising any such issue as a defense to an action by the United States or the State to enforce any obligation of Defendant arising under this Decree.

60. Informal Dispute Resolution. Any dispute subject to Dispute Resolution under this Consent Decree shall first be the subject of informal negotiations. The dispute shall be considered to have arisen when Defendant sends the United States and the State a written Notice of Dispute. Such Notice of Dispute shall state clearly the matter in dispute. The period of informal negotiations shall not exceed 20 Days from the date the dispute arises, unless that period is modified by written agreement. If the Parties cannot resolve a dispute by informal negotiations, then the position advanced by the United States (after consultation with the State) shall be considered binding unless, within 20 Days after the conclusion of the informal negotiation period, Defendant invokes formal dispute resolution procedures as set forth below.

61. Formal Dispute Resolution. Defendant shall invoke formal dispute resolution procedures, within the time period provided in the preceding Paragraph, by serving on the United States and the State a written Statement of Position regarding the matter in dispute. The Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting Defendant's position and any supporting documentation relied upon by Defendant.

62. The United States (after consultation with the State) shall serve its Statement of Position within 45 Days of receipt of Defendant's Statement of Position. The United States' Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting that position and any supporting documentation relied upon by the United States. The United States' Statement of Position shall be binding on Defendant, unless Defendant files a motion for judicial review of the dispute in accordance with the following Paragraph.

63. Defendant may seek judicial review of the dispute by filing with the Court and serving on the United States and the State, in accordance with Section XVI (Notices), a motion requesting judicial resolution of the dispute. The motion must be filed within 10 Days of receipt

of the United States' Statement of Position pursuant to the preceding Paragraph. The motion shall contain a written statement of Defendant's position on the matter in dispute, including any supporting factual data, analysis, opinion, or documentation, and shall set forth the relief requested and any schedule within which the dispute must be resolved for orderly implementation of the Consent Decree.

64. The United States (after consultation with the State) shall respond to Defendant's motion within the time period allowed by the Local Rules of this Court. Defendant may file a reply memorandum, to the extent permitted by the Local Rules.

65. Standard of Review

a. Disputes Concerning Matters Accorded Record Review. Except as otherwise provided in this Consent Decree, in any dispute brought under Paragraph 61 pertaining to the adequacy or appropriateness of plans, procedures to implement plans, schedules or any other items requiring approval by EPA and/or the State under this Consent Decree; the adequacy of the performance of work undertaken pursuant to this Consent Decree; and all other disputes that are accorded review on the administrative record under applicable principles of administrative law, Defendant shall have the burden of demonstrating, based on the administrative record, that the position of the United States and/or the State is arbitrary and capricious or otherwise not in accordance with law.

b. Other Disputes. Except as otherwise provided in this Consent Decree, in any other dispute brought under Paragraph 61, Defendant shall bear the burden of demonstrating that its position complies with this Consent Decree and better furthers the objectives of the Consent Decree.

66. The invocation of dispute resolution procedures under this Section shall not, by itself, extend, postpone, or affect in any way any obligation of Defendant under this Consent Decree, unless and until final resolution of the dispute so provides. Stipulated penalties with respect to the disputed matter shall continue to accrue from the first Day of noncompliance, but payment shall be stayed pending resolution of the dispute as provided in Paragraph 49. If Defendant does not prevail on the disputed issue, stipulated penalties shall be assessed and paid as provided in Section X (Stipulated Penalties).

XIII. INFORMATION COLLECTION AND RETENTION

67. The United States, the State, and their representatives, including attorneys, contractors, and consultants, shall have the right of entry into any facility covered by this Consent Decree, at all reasonable times, upon presentation of credentials, to:

- a. monitor the progress of activities required under this Consent Decree;
- b. verify any data or information submitted to the United States or the State in accordance with the terms of this Consent Decree;
- c. obtain samples and, upon request, splits of any samples taken by Defendant or its representatives, contractors, or consultants;

- d. obtain documentary evidence, including photographs and similar data; and
- e. assess Defendant's compliance with this Consent Decree.

68. Upon request, Defendant shall provide EPA and the State, or their authorized representatives, splits of any samples taken by Defendant. Upon request, EPA and the State shall provide Defendant splits of any samples taken by EPA or the State.

69. Until five years after the termination of this Consent Decree, Defendant shall retain, and shall instruct its contractors and agents to preserve, all non-identical copies of all documents, records, or other information (including documents, records, or other information in electronic form) in its or its contractors' or agents' possession or control, or that come into its or its contractors' or agents' possession or control, and that relate in any manner to Defendant's performance of its obligations under this Consent Decree. This information-retention requirement shall apply regardless of any contrary corporate or institutional policies or procedures. At any time during this information-retention period, upon request by the United States or the State, Defendant shall provide copies of any documents, records, or other information required to be maintained under this Paragraph.

70. At the conclusion of the information-retention period provided in the preceding Paragraph, Defendant shall notify the United States and the State at least 90 Days prior to the destruction of any documents, records, or other information subject to the requirements of the preceding Paragraph and, upon request by the United States or the State, Defendant shall deliver any such documents, records, or other information to EPA or the State.

71. In response to any request for information under this Section, Defendant may assert that certain documents, records, or other information is privileged under the attorney-client privilege or any other privilege recognized by federal law. If Defendant asserts such a privilege, it shall provide the following: (a) the title of the document, record, or information; (b) the date of the document, record, or information; (c) the name and title of each author of the document, record, or information; (d) the name and title of each addressee and recipient; (e) a description of the subject of the document, record, or information; and (f) the privilege asserted by Defendant. However, no documents, records, or other information required to be created or generated pursuant to the requirements of this Consent Decree shall be withheld on grounds of privilege.

72. Defendant may also assert that information required to be provided under this Section is protected as Confidential Business Information ("CBI") under 40 C.F.R. Part 2 or trade secret information under Minn. Stat. Sec. 13.37. As to any information that Defendant seeks to protect as CBI or trade secret information, Defendant shall follow the procedures set forth in 40 C.F.R. Part 2 or Minn. R. 7000.1300, respectively.

73. This Consent Decree in no way limits or affects any right of entry and inspection, or any right to obtain information, held by the United States or the State pursuant to applicable federal or state laws, regulations, or permits, nor does it limit or affect any duty or obligation of Defendant to maintain documents, records, or other information imposed by applicable federal or state laws, regulations, or permits.

#### XIV. EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS

74. This Consent Decree resolves the civil claims of the United States and the State for the violations alleged in the Complaint filed in this action through the date of lodging.

75. The United States and the State reserve all legal and equitable remedies available to enforce the provisions of this Consent Decree. This Consent Decree shall not be construed to limit the rights of the United States or the State to obtain penalties or injunctive relief under the Act or implementing regulations, or under other federal or State laws, regulations, or permit conditions, except as expressly specified in Paragraph 74. The United States and the State further reserve all legal and equitable remedies to address any imminent and substantial endangerment to the public health or welfare or the environment arising at, or posed by, the Facility, whether related to the violations addressed in this Consent Decree or otherwise.

76. In any subsequent administrative or judicial proceeding initiated by the United States or the State for injunctive relief, civil penalties, or other appropriate relief relating to the Facility, Defendant shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the United States or the State in the subsequent proceeding were or should have been brought in the instant case, except with respect to claims that have been specifically resolved pursuant to Paragraph 74.

77. This Consent Decree is not a permit, or a modification of any permit, under any federal, State, or local laws or regulations. Defendant is responsible for achieving and maintaining complete compliance with all applicable federal, State, and local laws, regulations, and permits; and Defendant's compliance with this Consent Decree shall be no defense to any action commenced pursuant to any such laws, regulations, or permits, except as set forth herein. The United States and the State do not, by their consent to the entry of this Consent Decree, warrant or aver in any manner that Defendant's compliance with any aspect of this Consent Decree will result in compliance with provisions of the Act, or with any other provisions of federal, State, or local laws, regulations, or permits.

78. This Consent Decree does not limit or affect the rights of Defendant or of the United States or the State against any third parties not party to this Consent Decree nor does it limit the rights of third parties not party to this Consent Decree against Defendant, except as otherwise provided by law.

79. This Consent Decree shall not be construed to create rights in, or grant any cause of action to, any third party not party to this Consent Decree.

#### XV. COSTS

80. The Parties shall bear their own costs of this action, including attorneys' fees, except that the United States and the State shall be entitled to collect the costs (including attorneys' fees) incurred in any action necessary to collect any portion of the civil penalty or any stipulated penalties due but not paid by Defendant.

XVI. NOTICES

81. Unless otherwise specified in this Decree, whenever notifications, submissions, or communications are required by this Consent Decree, they shall be made in writing and addressed as follows:

As to the United States by email: [eescdcopy.enrd@usdoj.gov](mailto:eescdcopy.enrd@usdoj.gov)  
Re: DJ # 90-5-1-1-10696

As to the United States by mail: EES Case Management Unit  
Environment and Natural Resources Division  
U.S. Department of Justice  
P.O. Box 7611  
Washington, D.C. 20044-7611  
Re: DJ # 90-5-1-1-10696

As to EPA: Chief  
Water Enforcement and Compliance Assurance  
Branch  
Water Division  
U.S. Environmental Protection Agency  
Region 5  
77 West Jackson Blvd.  
Chicago, IL 60604

As to the State: Scot R Sokola  
Compliance Coordinator  
Compliance and Enforcement Section  
Minnesota Pollution Control Agency  
520 Lafayette Road North  
St. Paul, MN 55155-4194

As to Defendant: John Dean  
Vice President of Operations  
P.O. Box 500  
Renville, MN 56284

Louis Knieper  
Manager of Environmental Affairs  
P.O. Box 500  
Renville, MN 56284  
[knieperl@smbosc.com](mailto:knieperl@smbosc.com)

82. Any Party may, by written notice to the other Parties, change its designated notice recipient or notice address provided above.

83. Notices submitted pursuant to this Section shall be deemed submitted upon mailing, unless otherwise provided in this Consent Decree or by mutual agreement of the Parties in writing.

#### XVII. EFFECTIVE DATE

84. The Effective Date of this Consent Decree shall be the date upon which this Consent Decree is entered by the Court or a motion to enter the Consent Decree is granted, whichever occurs first, as recorded on the Court's docket.

#### XVIII. RETENTION OF JURISDICTION

85. The Court shall retain jurisdiction over this case until termination of this Consent Decree, for the purpose of resolving disputes arising under this Decree or entering orders modifying this Decree, pursuant to Sections XII (Dispute Resolution) and XIX (Modification), or effectuating or enforcing compliance with the terms of this Decree.

#### XIX. MODIFICATION

86. The terms of this Consent Decree, including any attached Appendices, may be modified only by a subsequent written agreement signed by all the Parties. Where the modification constitutes a material change to this Decree, it shall be effective only upon approval by the Court.

87. Any disputes concerning modification of this Decree shall be resolved pursuant to Section XII (Dispute Resolution), provided, however, that, instead of the burden of proof provided by Paragraph 65, the Party seeking the modification bears the burden of demonstrating that it is entitled to the requested modification in accordance with Federal Rule of Civil Procedure 60(b).

#### XX. TERMINATION

88. After Defendant has done the following: (a) completed the requirements of Section VII (Wastewater Treatment Plant Corrective Actions) except for Paragraphs 21(b), 25(a)(vi)-(viii), and 25(c); (b) maintained satisfactory compliance with this Consent Decree and Defendant's Permit for at least two years upon completion of (a); (c) received a new and effective Permit incorporating the requirements of Paragraphs 21(b), 25(a)(vi)-(viii), and 25(c); (d) complied with all other requirements of this Consent Decree; and (e) paid the restitution, civil penalty, and any accrued stipulated penalties as required by this Consent Decree, Defendant may serve upon the United States and the State a Request for Termination, stating that Defendant has satisfied those requirements, together with all necessary supporting documentation.

89. Following receipt by the United States and the State of Defendant's Request for Termination, the Parties shall confer informally concerning the Request and any disagreement that the Parties may have as to whether Defendant has satisfactorily complied with the requirements for termination of this Consent Decree. If the United States, after consultation with the State, agrees that the Decree may be terminated, the Parties shall submit, for the Court's approval, a joint motion seeking termination of the Decree.

90. If the United States, after consultation with the State, does not agree that the Decree may be terminated, Defendant may invoke Dispute Resolution under Section XII (Dispute Resolution). However, Defendant shall not seek Dispute Resolution of any dispute regarding termination until after service of its Request for Termination.

#### XXI. PUBLIC PARTICIPATION

91. This Consent Decree shall be lodged with the Court for a period of not less than 30 Days for public notice and comment in accordance with 28 C.F.R. § 50.7. The United States and the State reserve the right to withdraw or withhold their consent if the comments regarding the Consent Decree disclose facts or considerations indicating that the Consent Decree is inappropriate, improper, or inadequate. Defendant consents to entry of this Consent Decree without further notice and agrees not to withdraw from or oppose entry of this Consent Decree by the Court or to challenge any provision of the Consent Decree, unless the United States or the State have notified Defendant in writing that it no longer supports entry of the Consent Decree.

#### XXII. SIGNATORIES/SERVICE

92. Each undersigned representative of Defendant, the State, and the Department of Justice certifies that he or she is fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind the Party he or she represents to this document.

93. This Consent Decree may be signed in counterparts, and its validity shall not be challenged on that basis. Defendant agrees to accept service of process by mail with respect to all matters arising under or relating to this Consent Decree and to waive the formal service requirements set forth in Rules 4 and 5 of the Federal Rules of Civil Procedure and any applicable Local Rules of this Court including, but not limited to, service of a summons.

#### XXIII. INTEGRATION

94. This Consent Decree constitutes the final, complete, and exclusive agreement and understanding among the Parties with respect to the settlement embodied in the Decree and supersedes all prior agreements and understandings, whether oral or written, concerning the settlement embodied herein. Other than deliverables that are subsequently submitted and approved pursuant to this Decree, the Parties acknowledge that there are no representations, agreements, or understandings relating to the settlement other than those expressly contained in this Consent Decree.

#### XXIV. FINAL JUDGMENT

95. Upon approval and entry of this Consent Decree by the Court, this Consent Decree shall constitute a final judgment of the Court as to the United States, the State, and Defendant.

XXV. APPENDICES

96. The following Appendices are attached to and part of this Consent Decree:

“Appendix 1” is the Pond Level Gauge Workplan.

Dated and entered this \_\_\_ day of \_\_\_\_\_, 2016.

---


UNITED STATES DISTRICT JUDGE




FOR THE UNITED STATES OF AMERICA:

05-04-2016

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FOR THE STATE OF MINNESOTA

Date: 2/29/16

  
JOHN LINC STINE *for*  
Commissioner  
Minnesota Pollution Control Agency

Approved as to form and legality:

Attorney General of Minnesota

Date: 2/29/16

  
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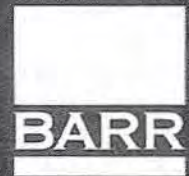
FOR SOUTHERN MINNESOTA BEET SUGAR  
COOPERATIVE:

7-20-16  
Date



John Dean  
Vice President of Operations

# APPENDIX 1



## **Pond Level Gauge Workplan**

***Applicable to SMBSC Wastewater Storage Ponds Identified  
in NPDES/SDS Permit MN0040665 and May 2015 Draft  
Consent Decree***

Prepared for  
Southern Minnesota Beet Sugar Cooperative

June 2015

# Pond Level Gauge Workplan

June 2015

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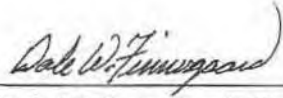
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List of Attachments

Attachment A	Proposed Pond Gauge Locations
Attachment B	Plans and Specifications
Attachment C	Manufacturer’s Data Sheet
Attachment D	Manufacturer’s Installation Instructions

### Certifications

I hereby certify that this report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota



Dale W. Finnesgaard, PE  
License number: 24732

June 30, 2015

Date

## 1.0 Introduction and Executive Summary

This report provides information on pond level monitoring at Southern Minnesota Beet Sugar Cooperative (SMBSC) as required by the May 2015 Draft Consent Decree.

### 1.1 Draft Consent Decree Requirements

Part 21 in Section VI WASTEWATER TREATMENT PLANT CORRECTIVE ACTIONS of the May 2015 DRAFT Consent Decree (Draft Consent Decree) requires submittal of a *Pond Level Gauge Workplan*. Following are the minimum requirements of the *Pond Level Gauge Workplan* as listed in the Draft Consent Decree:

1. Construction drawings and specifications detailing equipment for measuring the water level from the lowest possible water elevation to the highest possible water elevation within each Wastewater Storage Pond. The construction drawings and specifications shall conform with the USGS Publication "Stage Measurement at Gauging Stations, Techniques and Methods 3-A7" available at <http://pubs.usgs.gov/tm/tm3-a7/>.
2. Post-construction surveys verifying the minimum top of berm for each of the Wastewater Storage Ponds in the respective datum;
3. Procedures for setting the initial level of the gauges and a schedule for periodic checks to verify the gauges are set to the appropriate gauge datum. These procedures shall conform with the USGS Publication "Levels at Gauging Stations, Chapter 19 of Section A, Surface-Water Techniques, Techniques and Methods 3-A19" available at <http://pubs.usgs.gov/tm/tm3A19/>; and
4. The equations used for relating the water elevation to storage volume (commonly referred to as stage-storage curves) for all Wastewater Storage Ponds.

The Draft Consent Decree also includes construction, certification, recording, and reporting schedule requirements which are incorporated into the project schedule presented in Section 5.0 of the report.

### 1.2 SMBSC Plan

SMBSC proposes to install staff gauges in conformance with the recommendations from the United States Geologic Survey (USGS) for outside, non-recording, staff gauges. Minor deviations from the USGS recommendations are made to allow use of commonly available products in an installation suitable for the local conditions.

### 1.3 Overview of Schedule

Section 4 provides construction schedule details. The project is expected to require a minimum of three years following plan approval. Note that part of the construction will require dewatering the ponds which may not be possible for some ponds before May 15 or after August 15. In addition, the schedule for emptying Ponds 5 and 6 is dependent on the quantity of water generated in a campaign, the requirement to use available spray irrigation, and the availability of irrigation sites as affected by weather conditions. Food safety requirements restrict the transfer of water from Ponds 5 & 6 to Ponds 1 through 4 due to the specific chemicals used to control hydrogen sulfide control emissions from those ponds.

## 2.0 Basic SMBSC Pond Information

### 2.1 Pond Construction Information<sup>1</sup>

The ponds were constructed at different times throughout the history of SMBSC. Each pond has slightly different designs that are described in this section and summarized in Table 2-1 below.

**Table 2-1 Pond construction information**

Pond name	Year constructed	Liner design	Interior dike erosion protection
Ponds 1 through 4	Mid-1970s	1 foot of compacted clay	Riprap (see Note)
Ponds 5 and 6	1996, 1997	2 feet of compacted clay	Riprap
Pond 7E	2012, 2013	2 feet of compacted clay on the base, clay-core embankment w/ 2 feet thick clay veneer	Riprap

Note: Interior dike erosion protection maintenance project was completed in 2012 that converted to riprap erosion protection.

#### 2.1.1 Ponds 1 through 4

Ponds 1-4 were constructed in the mid-1970s as a part of the original sugar beet processing facility, with each pond being rectangular in layout with internal flow control dikes and having a size of 29 acres.

The design drawings for ponds 1 through 4 were prepared by H.K. Ferguson Co. dated June 1973. The pond design elevations for top of berm and pond bottom are as follows:

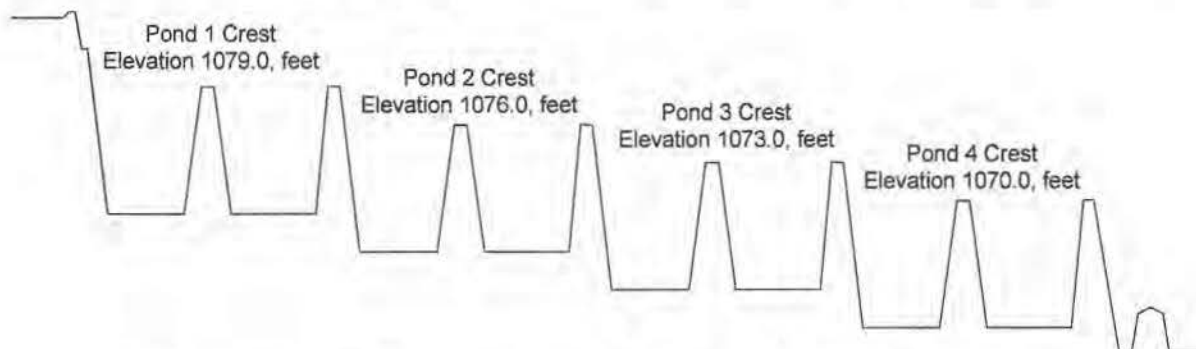
**Table 2-2 Ponds 1 through 4 design crest and pond bottom elevations**

Pond	Crest Elevation (feet MSL)	Pond Bottom Elevation (feet MSL)
1	1,079.0	1,068.0
2	1,076.0	1,065.0
3	1,073.0	1,062.0
4	1,070.0	1,059.0

These four ponds are laid out in rectangular pattern with common western and eastern perimeter berms, northern and southern perimeter berms and three common internal east-west berms between ponds. Centerlines to centerline of the top of berm are 2,405 feet from east to west and 500 feet from north to

<sup>1</sup> adapted from Barr Engineering, Inc., 2014 Wastewater Pond Dike Safety Review and Inspection: Part 1 Report (File Review and Preparation for Inspection), April 2014

south. The typical section for the pond berms shows a minimum 8-foot wide berm top width and side slope is 3H: 1V. The nominal depth of each pond is eleven feet. The pond bottom design is flat.



**Figure 2-1 Section – wastewater Ponds 1 through 4 (view looking west)**

The berm top elevation and the pond bottom elevations decrease by 3 feet between each pond proceeding from south to north. The pond bottom south of the interior berm is eleven feet below the interior berm and the pond bottom north of the interior berm is 14 feet below the top of berm.

### 2.1.2 Ponds 5 and 6

SMBSC constructed Ponds 5 and 6 starting in 1996 and finishing in 1997 to provide additional wastewater storage capacity. Each of these two ponds is approximately 25 acres in size and roughly rectangular in shape. Ponds 5 and 6 were constructed with a crest elevation of 1,081.0 feet and a pond bottom elevation of 1,069.5 feet to 1,068.5 feet (i.e., the pond bottoms are sloped toward the outlet in the northeast corner of Pond 5 and the northwest corner of Pond 6). The interior dikes are sloped at 3H:1V with 3 feet of freeboard (Figure 2-2). The ponds are separate and adjacent ponds that are normally operated as a single pond (same water level with joint inlet and outlet pipes connected to central control and pumping manhole located in the north dike between the ponds).

In spring 2010, SMBSC instituted a temporary extension of the Pond 5 and 6 dikes using imported fill and plastic sheeting to allow the temporary use of permit-required. In the fall of 2010, SMBSC predicted that it might need to consider using permit-required freeboard during the spring of 2011. While this prediction did not come true due to favorable weather conditions late fall 2010 and other efforts by SMBSC to minimize water in the ponds, SMBSC did propose and began construction of a “contingency” raise of the liner and dikes on Ponds 5 and 6. Late in the fall of 2010, SMBSC requested that the MPCA approve the liner and dike raise as a permanent feature of the WWTS. This construction has been completed, documented, and tested for leakage—all of which was approved in the 2013 schedule of compliance.

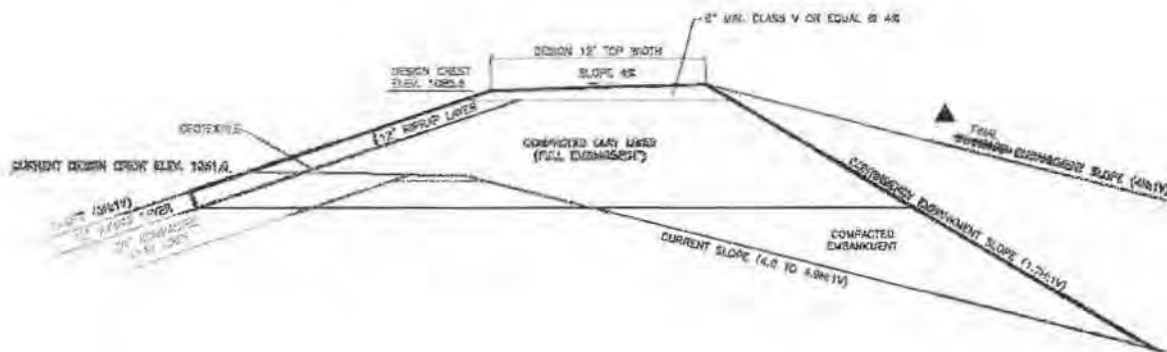


Figure 2-2 Pond 5 and 6 – dike and liner vertical raise: typical cross section

### 2.1.3 Pond 7E

SMBSC constructed Pond 7E in 2012, with some minor finish grading and vegetation in 2013. Construction documentation information and pond water balance test information was submitted to the MPCA in 2012. Supplemental construction documentation information was provided in 2013. MPCA authorized the use of Pond 7E in a Schedule of Compliance issued in 2013.

Pond 7E was constructed with a crest elevation of 1,072.0 feet MSL and a flat pond bottom elevation of 1,057.0 feet MSL. The interior dikes are sloped at 3H:1V (Figure 2-3).

SMBSC proposed Pond 7E as a portion of its proposed WWTS enhancements designed to achieve consistent and reliable future permit compliance under harvest scenario that has not yet occurred (30 ton per acre harvest), including compliance with the permit-required freeboard. Pond 7E is designed in accordance with MPCA's requirements for a wastewater pond, but is used to temporarily hold treated effluent that cannot be discharged immediately. SMBSC can discharge treated effluent seasonally, September through March (discharge through April is proposed), and Pond 7E will hold water treated in the non-discharge period. CD-45 can also become blocked with snow or ice during the winter, either fully blocked or partially blocked, during these times treated effluent will be routed to Pond 7E. When conditions allow, water from Pond 7E will be discharged to the stream following tertiary treatment. This pond allows SMBSC to manage treated effluent during non-discharge periods in a manner that does not require full treatment through the WWTP—thus increasing overall throughput and efficiency of the WWTP.

This concept was developed in late 2010 and early 2011, a modified permit application was submitted in 1Q 2012, construction occurred in 2Q and 3Q 2012, leak testing occurred in 3Q 2012, and final grading and construction documentation occurred in 2013.

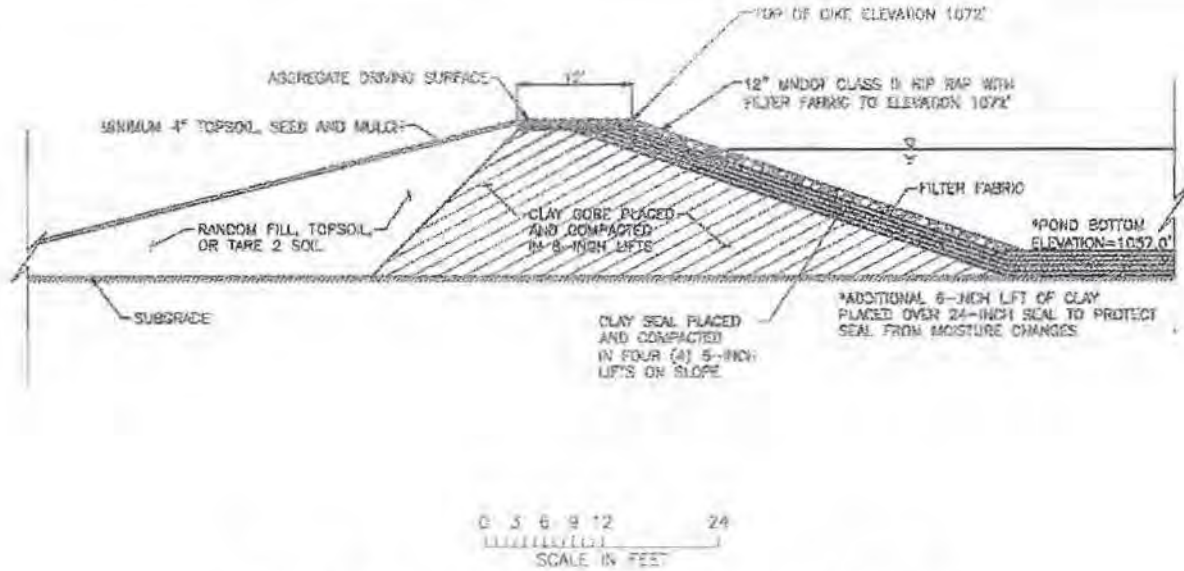


Figure 2-3 Pond 7E construction: typical dike section

## 2.2 Stage-Volume Relationship

Table 2-3 presents pond volumes for each wastewater pond at elevations ranging from pond bottom to dike crest.

**Table 2-3 Pond Storage Volume at NAVD Elevation (gal)**

Water Elevation	Pond 1	Pond 2	Pond 3	Pond 4	Pond 5	Pond 6	Pond 7E
1085.5					95,560,000	97,110,000	
1085					92,290,000	93,910,000	
1084					85,820,000	87,580,000	
1083					79,510,000	81,280,000	
1082					<b>73,360,000</b>	<b>74,990,000</b>	
1081					67,290,000	68,790,000	
1080					61,290,000	62,660,000	
1079	83,560,000				55,380,000	56,620,000	
1078	74,820,000				49,540,000	50,650,000	
1077	66,270,000				43,770,000	44,760,000	
1076	<b>57,900,000</b>	80,630,000			38,090,000	38,950,000	
1075	49,730,000	72,180,000			32,480,000	33,220,000	
1074	41,790,000	63,960,000			26,950,000	27,580,000	
1073	34,180,000	<b>55,960,000</b>	78,790,000		21,510,000	22,020,000	
1072	26,900,000	48,180,000	70,470,000		16,160,000	16,560,000	57,000,000
1071	19,840,000	40,630,000	62,380,000		10,880,000	11,170,000	52,000,000
1070	13,010,000	33,300,000	<b>54,520,000</b>	78,900,000	5,710,000	5,850,000	47,740,000
1069	6,390,000	26,200,000	46,900,000	70,620,000	630,000	640,000	43,540,000
1068	0	19,320,000	39,520,000	62,560,000			<b>39,420,000</b>
1067		12,660,000	32,360,000	<b>54,720,000</b>			35,360,000
1066		6,220,000	25,430,000	47,100,000			31,380,000
1065		0	18,730,000	39,700,000			27,460,000
1064			12,260,000	32,520,000			23,610,000
1063			6,020,000	25,570,000			19,820,000
1062			0	18,850,000			16,100,000
1061				12,340,000			12,430,000
1060				6,060,000			8,830,000
1059				0			5,280,000
1058							1,800,000
1057							0

## Notes:

1. Red values indicate volume below minimum or above maximum elevation.
2. All volumes rounded to nearest 10,000 gal.
3. Calculations completed from pond bottom to design elevation of dike crest.
4. Calculations for Pond Numbers 1-4 are based on survey of June and August 2005 by Barr Engineering and existing construction records and documents.
5. Calculations for Pond Numbers 5 and 6 based upon post re-construction survey data by Bonema Surveying.
6. Pond 7E computations based upon the record drawing and final survey provided by Bonema Surveying.



### **2.3 Permit-Required Freeboard**

SMBSC is required by permit<sup>2</sup> to maintain Ponds 1-4 with a minimum freeboard of 2 feet and Ponds 5-6 with a minimum freeboard of 3 feet. A permit modification has been requested for Pond 7E, but has not been received. This pond is operated with a minimum freeboard of 3 feet<sup>3</sup>.

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<sup>2</sup> NPDES/SDS Permit MN0040665, Chapter 12, Section 11.11, issued December 29, 2004, last modified February 8, 2007.

<sup>3</sup> Barr Engineering. Design Basis Report, Wastewater Treatment Plant Improvements, Southern Minnesota Beet Sugar Cooperative, Renville, Minnesota. March 2012.

## 3.0 Pond Level Gauge Design

### 3.1 Review of USGS guidance

The United States Geological Survey (USGS) provides guidance for equipment and methodology for the observation, sensing, and recording of stage in streams and reservoirs<sup>4</sup>. The SMBSC design incorporates recommendations from USGS for outside, non-recording, staff gauges. Gauges should be:

1. constructed of porcelain-enameled iron,
2. attached to a permanent foundation,
3. built flush with the embankment,
4. calibrated to multiple points along the gauge, and
5. graduated in 0.02 foot vertical increments.

### 3.2 SMBSC's design goals for pond level gauges

In addition to USGS recommendations, SMBSC has adopted the following design objectives to accommodate local conditions:

1. Each gauge should be located so that it is easy to read.
2. The gauges should produce consistent measurements.
3. There should be no pond liner penetration lower than 1 foot above the high water elevation.
4. The installation should withstand winter and ice conditions.
5. The installation should not interfere with:
  - a. pond sediment removal,
  - b. dike access, and
  - c. typical maintenance activities.

### 3.3 SMBSC's design

#### 3.3.1 Overview of SMBSC's Design

Two designs will be utilized based upon whether the pond is typically subject to ice formation. Pond 1 does not typically form ice due to its function as a high-volume-rate cooling pond. Thus, a vertical staff gauge is utilized on Pond 1. The other ponds typically do or can have ice formation. For those ponds, an inclined staff gauge design that is protected by the pond's riprap has been developed.

The Pond 1 staff gauge will be installed on an existing vertical concrete wing wall. The gauge will be a Type A gauge as manufactured by Stevens.

The SMBSC design for Ponds 2-7 will include a composite foundation of concrete and structural steel. The gauges will be inclined along the pond dikes and mounted near corners allowing reading from an

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<sup>4</sup> Sauer, V.B. and Turnipseed, D.P., Stage Measurement at Gaging Stations: U.S. Geological Survey Techniques and Methods book 3, chap. A7. 2010.

adjacent dike. As noted above, the inclined staff gauge is protected on the sides by the pond's riprap erosion protection.

### 3.3.1.1 Composite Foundation

Staff gauge segments for Ponds 2-7 will be affixed to permanent composite foundations mounted in each pond. The foundation will consist of structural steel members with cast-in-place concrete fill (Figure 3-1).

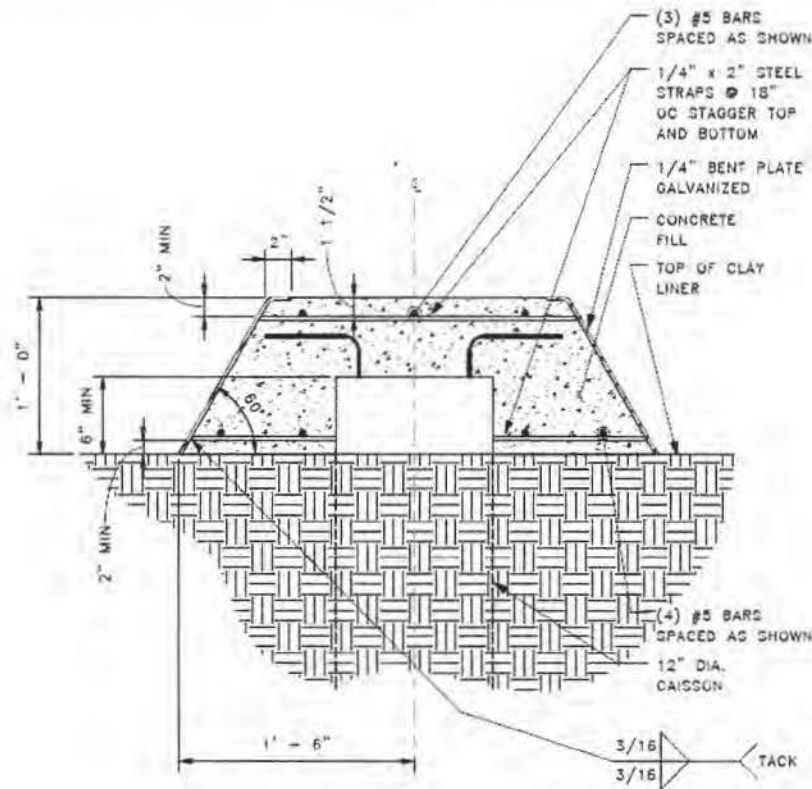


Figure 3-1 Staff gauge foundation

The foundation will be anchored near the top with a concrete pier drilled into the pond dike a minimum of one vertical foot above the high water elevation. The foundation will be anchored at the bottom with a concrete deadman. The concrete deadman will be cast against the clay liner, but will not penetrate the liner.

The foundation will have a depth of 12 inches so that the staff gauge is roughly even with the top surface of riprap in each pond.

The foundation will be painted red above the high water elevation and below the low water elevation.

### 3.3.1.2 Staff Gauges

Staff gauge equipment will be procured from a manufacturer regularly engaged in the production of water level monitoring gauges.

### 3.3.1.2.1 Gauge construction

The gauge for Pond 1 will be constructed per the following specifications:

- Gauge will be 4 inches in width.
- Each segment will be 3.33 feet in length.
- Segments will be fabricated of 16 gauge iron with a baked-on enamel finish.
- Calibrations will be black on a white background.
- Predrilled holes (0.188 inch) will be provided in each segment for attachment with screws with plastic washers.
- Segments will be attached end-to-end to a pressure treated 2x10 plank.
- The pressure treated plank will be attached to the concrete wingwall using expansion anchors appropriate for the pressure treating chemicals (i.e. 316 ss for ACQ lumber).

Gauges for Ponds 2-7 will be constructed per the following specifications:

- Gauges will be 4 inches in width.
- Each segment will be 3.33 feet in length.
- Segments will be fabricated of 16 gauge iron with a baked-on enamel finish.
- Calibrations will be black on a white background.
- Predrilled holes (0.188 inch) will be provided in each segment for attachment with screws with plastic washers.
- Segments will be attached end-to-end on pressure treated, cedar, or other rot-resistant 2x10 planks.
- The planks will be attached to the concrete foundation using expansion anchors appropriate for the pressure treating chemicals (i.e. 316 ss for ACQ lumber).

### 3.3.1.2.2 Gauge scale

Standard USGS Style A gauges with 0.02 foot calibrations will be mounted vertically in Pond 1. Pond depth will be read directly from the scale and converted to NAVD elevation based on survey corrections.

Custom USGS Style A scales with 0.02 ft vertical calibrations (approximately 0.063 ft slope length) will be mounted on the foundations for Ponds 2-7.

Pond depth will be read directly from the scale.

### 3.3.1.2.3 QA/QC of scale

Manufacturer's instructions for mounting staff gauges will be followed. Mounting holes will be sealed with silicone prior to inserting anchors to prevent rust.

### 3.3.1.3 Future Calibration

After one year of operation, each gauge will be surveyed at the high water elevation (minimum freeboard) and the then-current water elevation in each pond. Surveys will be completed during periods when pond water elevations are relatively low. A comparison of previous readings will identify any settlement, or

other movement which may have changed the gauge calibration. An appropriate offset will be applied to future gauge readings.

### **3.3.2 Comparison between USGS and SMBSC design**

The SMBSC follows all recommendations of the USGS.

## 4.0 Construction Schedule<sup>5</sup>

A tentative construction schedule is presented in Table 4-1. Stock staff gauge segments are available with a two week lead time. The proposed concrete foundation will require a minimum of 7 days of cure before attachment of the staff gauges.

**Table 4-1 Staff Gauge Construction Schedule**

Pond	Year
Receive approval of Pond Level Gauge Workplan	July 2015
Pond 1	August 2015
Pond 3	November 2015
Ponds 5 and 6	November 2015 (contingent on ability to spray irrigate)
Ponds 2 and 4	August 2016
Pond 7	August 2017

Note: This construction schedule, especially the 2015 work, is contingent upon agency approval of this work plan in July 2015. If agency approval is not granted this quickly, then a revised schedule will need to be proposed and approved by the agencies.

<sup>5</sup> Draft Consent Decree Requirement: *Upon receipt of approval of the Pond Level Gauge Workplan, Defendant shall implement the approved Pond Level Gauge Workplan in accordance with the schedule contained therein.*

## 5.0 Operational Issues

### 5.1 Pond Level Measurements

The level gauges will be readable from the top of an adjacent dike. For reading to the nearest calibration mark, it will likely be necessary to use field glasses.

As the staff gauge is installed in each pond, pond water levels will be determined through visual reading of the staff gauge and the current method of determining pond water elevation will cease (i.e., the current method consisted of a level-loop)

During periods when snow covers the staff gauge, it will be necessary to clear the gauge prior to reading.

It may be necessary to periodically clean the staff gauges of solids which accumulate and obscure the calibrations. Cleaning should be performed in compliance with manufacturer's recommendations.

### 5.2 Survey Level Checks

A post-construction survey will be completed identifying:

1. the elevation at the center of the access road around each pond at 50-foot spacing,
2. the high water elevation on the staff gauge for each pond, and
3. the low water elevation on the staff gauge for each pond.

The two survey points will be used to develop an offset to convert gauge reading into a pond water elevation in feet above mean sea level.

A two-point survey will be conducted on each gauge when it is necessary to recalibrate. This will be done after the first year and then each subsequent year in which a gauge demonstrates additional movement. Gauges which do not demonstrate movement should be rechecked every three years.

## 6.0 Additional Draft Consent Decree Staff Gauge Requirements

The draft consent decree has additional requirements that are repeated in this work plan for clarity and completeness:

- c. Within seven days of completion of all actions required by the approved Pond Level Gauge Workplan, Defendant shall provide written certification of such completion to the Agencies*
- d. Within 30 days of completion of all actions required by the approved Pond Level Gauge Workplan, Defendant shall revise its O&M Plan to include the permanent pond level gauges and shall submit the revised O&M Plan to the Agencies for review and approval.*



**Attachment A**

**Proposed Staff Gauge Locations**

Barr Footer, ArcGIS 10.3, 2015-06-11 15:15 File: I:\Project\2365011\GIS\Maps\Won\_Report\_Maps\Proposed pond gauge locations.mxd User: rre



**Figure**  
**Proposed pond gauge locations**

0 500 1,000 2,000  
Feet



**Legend**

- ▲ Inclined Pond Gauge
- Vertical Pond Gauge

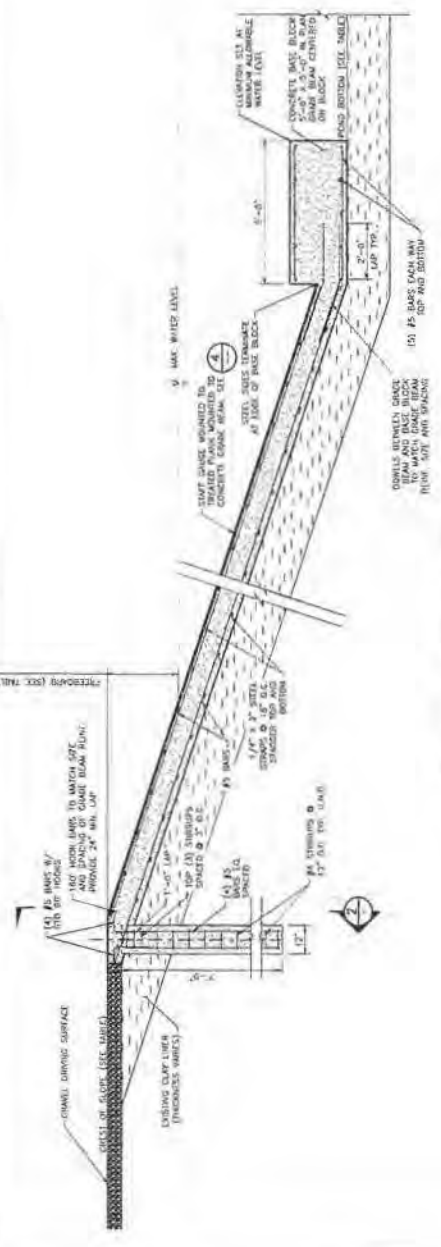
**Attachment B**

**Plans and Specifications**

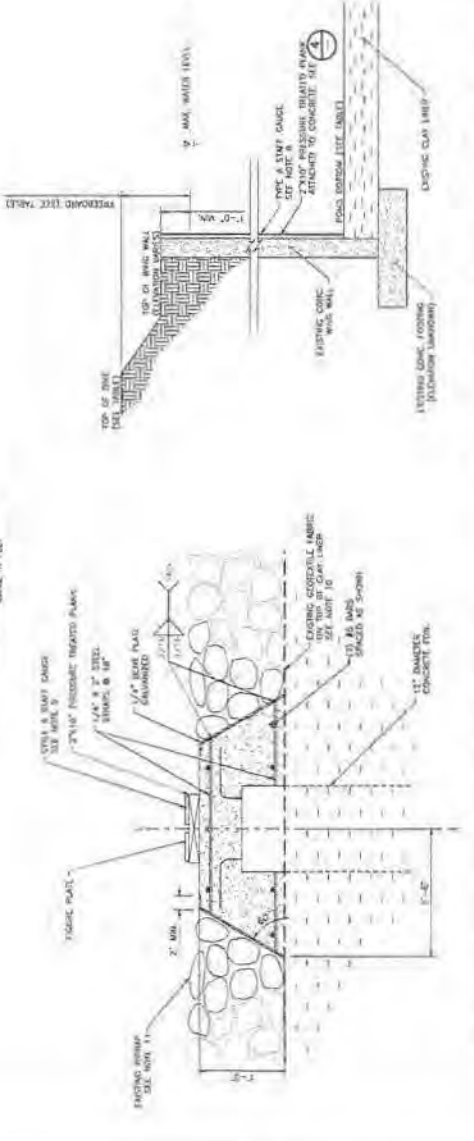
**POND DATA TABLE**

POUND NO.	CREST ELEVATION	BOTTOM ELEVATION	SCOUR LENGTH (FT)	TREASURER (FT)
1	1076.0	1066.0	9/4	7
2	1076.0	1065.0	3/4	7
3	1033.0	1022.0	3/4	7
4	1070.0	1059.0	3/4	7
5	1065.5	1055.5	55.3	3
6	1065.3	1055.3	55.3	3
7	1072.0	1057.0	47.4	3

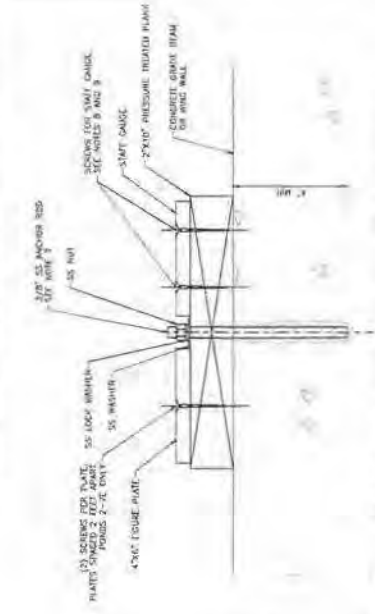
- NOTES**
1. STAFF GAUGES AND CONCRETE BEAMS TO BE PROVIDED BY OTHER CONTRACTOR SHALL INSTALL DETAILS INDICATED MATERIALS AS SHOWN.
  2. CONTRACTOR SHALL PROVIDE ALL OTHER MATERIALS NECESSARY TO COMPLETE THE WORK.
  3. CONCRETE SHALL BE PLACED WITHIN 24 HOURS OF POURING AND SHALL BE CURING PROTECTED.
  4. REINFORCING BARS SHALL BE PLACED WITHIN 24 HOURS OF POURING AND SHALL BE CURING PROTECTED.
  5. STAFF GAUGES SHALL BE PLACED WITHIN 24 HOURS OF POURING AND SHALL BE CURING PROTECTED.
  6. STAFF GAUGES SHALL BE PLACED WITHIN 24 HOURS OF POURING AND SHALL BE CURING PROTECTED.
  7. REINFORCING BARS SHALL BE PLACED WITHIN 24 HOURS OF POURING AND SHALL BE CURING PROTECTED.
  8. THE STAFF GAUGE FOR POND 1 IS A STEEL GAUGE AND IS COMPOSED OF MULTIPLE SECTIONS 3'-4" IN LENGTH. EACH GAUGE SECTION IS ATTACHED TO THE BEATED PLANK WITH (1) SCREWS. FABRIC PLATES ARE ATTACHED TO THE GAUGE. THEREFORE, THE GAUGE SHALL BE CENTERED ON THE PLANK.
  9. THE STAFF GAUGE FOR PONDS 2-7E ARE STEEL AND ARE COMPOSED OF MULTIPLE SECTIONS 3'-4" IN LENGTH. EACH GAUGE SECTION IS ATTACHED TO THE BEATED PLANK WITH (1) SCREWS.
  10. CONCRETE SHALL BE PLACED WITHIN 24 HOURS OF POURING AND SHALL BE CURING PROTECTED.
  11. REINFORCING BARS SHALL BE PLACED WITHIN 24 HOURS OF POURING AND SHALL BE CURING PROTECTED.
  12. CONCRETE SHALL BE PLACED WITHIN 24 HOURS OF POURING AND SHALL BE CURING PROTECTED.
  13. CONCRETE SHALL BE PLACED WITHIN 24 HOURS OF POURING AND SHALL BE CURING PROTECTED.



SECTION - CONCRETE GRADE BEAM WITH MOUNTED STAFF GAUGE (PONDS 2-7)



SECTION - CONCRETE GRADE BEAM WITH MOUNTED STAFF GAUGE



DETAIL - STAFF GAUGE, FIGURE PLATE AND PLANK MOUNTING

PRELIMINARY DRAFT  
NOT FOR CONSTRUCTION

NO.	DATE	REVISION DESCRIPTION
1	03/10/15	ISSUED FOR PERMIT
2	03/10/15	ISSUED FOR PERMIT
3	03/10/15	ISSUED FOR PERMIT
4	03/10/15	ISSUED FOR PERMIT
5	03/10/15	ISSUED FOR PERMIT
6	03/10/15	ISSUED FOR PERMIT
7	03/10/15	ISSUED FOR PERMIT
8	03/10/15	ISSUED FOR PERMIT
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98	03/10/15	ISSUED FOR PERMIT
99	03/10/15	ISSUED FOR PERMIT
100	03/10/15	ISSUED FOR PERMIT

PROJECT NO.	2580011.58
CITY	REMNILLE, MN
CLIENT	SOUTHERN MINNESOTA BEET SUGAR COOPERATIVE
SCALE	1" = 1'-0"
DATE	03/10/15
DESIGNED BY	D.A. WILSON
CHECKED BY	D.A. WILSON
DATE	03/10/15
PROJECT NO.	2580011.58
CITY	REMNILLE, MN
CLIENT	SOUTHERN MINNESOTA BEET SUGAR COOPERATIVE
SCALE	1" = 1'-0"
DATE	03/10/15
DESIGNED BY	D.A. WILSON
CHECKED BY	D.A. WILSON
DATE	03/10/15

PROJECT NO.	2580011.58
CITY	REMNILLE, MN
CLIENT	SOUTHERN MINNESOTA BEET SUGAR COOPERATIVE
SCALE	1" = 1'-0"
DATE	03/10/15
DESIGNED BY	D.A. WILSON
CHECKED BY	D.A. WILSON
DATE	03/10/15

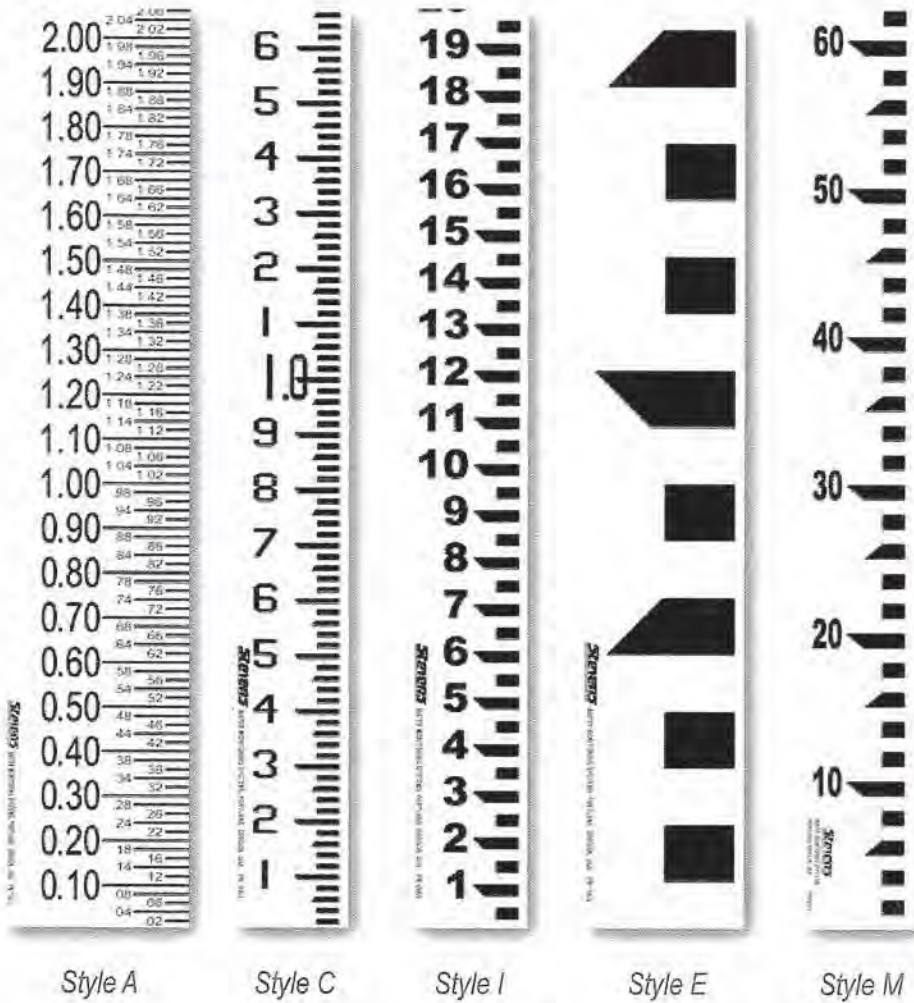
PROJECT NO.	2580011.58
CITY	REMNILLE, MN
CLIENT	SOUTHERN MINNESOTA BEET SUGAR COOPERATIVE
SCALE	1" = 1'-0"
DATE	03/10/15
DESIGNED BY	D.A. WILSON
CHECKED BY	D.A. WILSON
DATE	03/10/15

**Attachment C**

**Manufacturer's Data Sheet**

# Porcelain Enamelled Standard & Custom Staff Gages

Stevens - The original developer of  
Style A, C, I, E & M staff gages



## Features

- Time-proven basic visual reference of water level measurement
- Easy to see and read
- Available in many standard sizes (english or metric)
- Custom scales, sizes and colors available
- Pre-numbered or "build your own" options
- Rugged and durable weather resistant design

## Applications

- Rivers, lakes, streams, dams and reservoirs
- Wastewater treatment plants
- Flumes and weirs
- Visual flow measurement
- Tanks

## Description

The Staff Gage has a long history of providing a direct visual indicator for determining water level. Stevens staff gages are designed for easy mounting to a wall or pier, with heavy metal grommets and a 0.188 inch opening for screws or nails.

Each gage consists of a metal core, coated with porcelain enamel and marked with accurate measurement markings at specific intervals. The metal core is heavy 16 gauge (0.075 in / 1.9 mm) iron, which is completely covered with a baked-on porcelain enamel finish to resist rust or discoloration. Different colors of enamel are used to provide the markings; typically black numbers on a white background. Stevens staff gages are designed for years of trouble-free use, and can be easily cleaned.

### Custom Staff Gages - a unique service offered by Stevens Water!

Stevens designs and provides custom staff gages for applications requiring larger displays, unique mounting angles, slopes or visual flow measurements.

[www.stevenswater.com](http://www.stevenswater.com)

1.800.452.5272

**Stevens**  
Water Monitoring Systems, Inc.

# Standard Staff Gages Styles

## Style A

The Style A staff gage is 4 inches wide and comes in 3.33 ft. sections. The standard maximum height is 13.33 feet. The Style A has graduated marks every ft., 1/10th ft., and 0.02 ft. with total elevations.



Part Number	Range
15415	0 to 3.33 feet
15395	3.33 to 6.66 feet
15396	6.66 to 10.0 feet
15397	10.0 to 13.33 feet
15398	13.33 to 16.66 feet

## Style C

The Style C staff gage is 2.5 inches wide and is available in separate lengths of 0 - 1.06 feet., 0 - 1.56 feet, 0 - 1.56 feet, 0 - 2.06 feet, 0 - 3.06 feet, 0 - 4.06 feet, and 3.06 - 5.06 feet. Style C also comes in standard 3.33 ft. sections. Style C has graduations every 100th of a foot with numerical marks every ft. and every tenth of a ft.



Part Number	Range	Part Number	Range
15402	0 to 1.06 ft.	15409	13.33 to 16.66 ft.
15403	0 to 1.56 ft.	15410	16.66 to 20.00 ft.
15404	0 2.06 ft.	15411	20.00 to 23.33 ft.
15418	0 to 3.06 ft.	15412	23.33 to 26.66 ft.
15419	3.06 to 5.06 ft.	15413	26.66 to 30.00 ft.
43082	0 to 4.06 ft.	15414	30.00 to 33.33 ft.
15405	0 to 3.33 ft.	14509	33.33 to 36.66 ft.
15406	3.33 to 6.66 ft.	14510	36.66 to 40.00 ft.
15407	6.66 to 10.00 ft.	14511	40.00 to 43.33 ft.
15408	10.00 to 13.33 ft.	Please contact Stevens for availability of other ranges.	

## Style I

The Style I staff gage is 2.5 inches wide and has graduation every 0.25 inches with numerical marks every inch. Style I is available in any length ranging from 0 to 48 inches.



Part Number	Range
90223	0 to 14.0 inches
44405	0 to 18.0 inches
44406	0 to 24.0 inches
44407	0 to 30.0 inches
45637	0 to 36.0 inches
45480	0 to 48.0 inches

## Style E

The Style E is an English measurement staff gage that is 3.5 inches wide and is available in 1, 2 or 5 ft. sections. Style E is graduated in feet every tenth of a ft. Separate figure plates (see below) can be fastened on a pier, wall or other surface next to the Style E staff gage to number any desired elevation.



Part Number	Range
15420	1 foot section
15421	2 foot section
15422	5 foot section

## Style M

The Style M is a metric measurement staff gage that is 65 mm wide and is available in 1 meter sections. The Style M is divided into centimeters with each decimeter numbered. Separate figure plates (see below) can be fastened on a pier, wall or other surface next to the Style M staff gage to number any desired elevation.



Part Number	Range
15423	1 meter section

## Figure Plates

Separate numerical figure plates are available in 2" x 3", 3" x 4" and 4" x 6" sizes. Figure plates are commonly used with Style E or Style M staff gages and are fastened to a pier or wall to mark custom elevations.

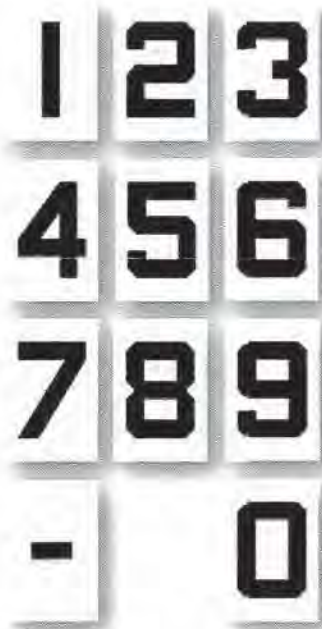


Figure Plate Number	Figure Plate Dimensions 2" x 3"	Figure Plate Dimensions 3" x 4"	Figure Plate Dimensions 4" x 6"
0	15424	90980	28134
1	15425	90981	28135
2	15426	90982	28136
3	15427	90983	28137
4	15428	90984	28138
5	15429	90985	28139
6 or 9	15430	90986	28140
7	15431	90987	28141
8	15432	90988	28142
Minus figure (-)	24187	-	-





### Corporate Headquarters

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Suite 106  
Portland, Oregon 97220

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503.445.8001 Fax  
info@stevenswater.com  
www.stevenswater.com

Since 1911, Stevens Water Monitoring Systems, Inc. has been a leading manufacturer of:

- Water Level Sensors
- Water Quality Sensors
- Soil Moisture Sensors
- Chart Recorders
- Staff Gages
- Telemetry Systems
- Data Collection Platforms

## Porcelain Enameled Staff Gage DATA SHEET

### Custom Staff Gages

Stevens is the leading provider of custom staff gages for unique applications. Staff gages can be designed for applications requiring large displays, flow measurement, slopes, or other unique mounting angles for easy visual measurements. Numbers, graduated markings, and colors used on the gage can also be customized to present a clear, visual measurement of water flow.

Contact Stevens today to discuss your custom staff gage requirements.



Custom Stevens staff gage mounted on a sloped pier on the Willamette River in Portland, Oregon. The submarine pictured is the USS *Blueback*.

**Attachment D**

**Manufacturer's Installation Instructions**



Toll Free: 1.800.452.5272 Fax: 503.469.8100

Web: <http://www.stevenswater.com>

## PLEASE BE CAREFUL

These porcelain enamel staff gages are very durable once installed. However, they are most susceptible to damage while uncrating and installing.

To ensure that damage does not incur, please follow these instructions carefully:

1. Remove gages carefully from box. Do not use steel tools to pry panels free. Cut styrofoam or surrounding packing as necessary.
2. Set on flat clean surface, being careful not to overflex panels.
3. Do not bump edges against other surfaces, especially other panels.
4. Do not put bolts, screws or other steel retaining devices in immediate contact with panel surface. Always use neoprene rubber or plastic washers. TO ENSURE WARRANTY COVERAGE, HOLES MUST BE SEALED AGAINST RUST WITH SILICONE PRIOR TO INSTALLATION OF BOLTS, SCREWS OR OTHER STEEL RETAINING DEVICES.
5. Do not overtighten mounting hardware.
6. Keep panel edges and faces protected while installing.

Given the nature of ceramic surfaces on Stevens Gages, there is minimum maintenance required. The most common need is periodic cleaning to remove debris or random spotting from rain or other matter. Following the simple steps outlined below:

- a. Cleaning should be performed with a clean, soft cloth using soap and water, commercial window cleaners such as "windex" or ammonia. Treatment is similar to what would be used to clean exterior windows. Vigorous rubbing may sometimes be required for particular difficult stains. Frequency of cleaning would depend upon the need for maintaining a suitably clean appearance. Obviously this will vary depending on where these gages are installed.
- b. To ease the cleaning process, we suggest that an automotive car wax coating be applied. This is a particularly advisable where panels are exposed to tree sap or are in salt water areas where they can accumulate "hard water scum". The presence of wax coating facilitates an easier removal of dirt and other undesirable natural debris.
- c. Graffiti can readily be removed with paint remover or solvent which will dissolve the offending material. Any residual haze can be cleaned as outlined in step. a.
- d. DO NOT USE ABRASIVE CLEANERS – Over a period of time, the use of abrasive cleaners will damage the ceramic surface similar to what could be expected on any glass material.

To Repair Chip Damage on your Porcelain Enameled Gages:

1. Clean surrounding area to be repaired with Windex or other cleaner.
2. Clean out chip area with hard bristle brush or Scotch-brite. If chip area is heavily rusted, use naval jelly to remove rust. When using naval jelly, be sure to apply to the chip area only since it may mar surrounding porcelain finish.
3. Dry and remove any dust from chip area.
4. Apply thin coat of Duro Appliance Touch-up (not supplied by Stevens). Allow to air dry for 15 minutes or expedite drying process with heat gun or hair dryer.
5. Apply second coat of touch-up slightly thicker than surrounding porcelain to allow for slight shrinkage upon drying.