

Federal Clean Water Act Section 319

Project workplan

520 Lafayette Road North St. Paul, MN 55155-4194

Doc Type: Contract

Swift #:	169806
Purchase Order #:	3000025500
Agency Interest ID #:	190445
Activity ID #:	PRO20190001

Project title: Sweeney Lake Water Quality Improvement Project

1. Project summary:

Organization: Bassett Creek Watershed Management Commission (BCWMC)

Contractor contact name: Laura Jester

Title: Administrator

Address: 16145 Hillcrest Lane

Eden Prairie, MN 55346

Phone: 952-270-1990

Email: Laura.jester@keystonewaters.com

Subcontractor/Partner:

Barr Engineering Co. (and their subcontractors: Carp Solutions, a firm specializing in alum

treatments—TBD, and a firm specializing in aquatic herbicide treatment—TBD)

Project manager: Greg Wilson, PE

Organization:

Address: 4300 MarketPointe Drive, Suite 200

Minneapolis, MN 55435

Phone: (952) 832-2672 Email: gwilson@barr.com

Minnesota Pollution Control Agency (MPCA) contact:

MPCA project manager: Timothy Schwarz

Title: Environmental Specialist **Address:** 520 Lafayette Road North

St. Paul, MN 55155

Phone: (651) 757-2426

E-mail: timothy.schwarz@state.mn.us

Project information

Latitude/Longitude: 44.993135, -93.338771

County: Hennepin

Start Date: 12/20/2019 **End Date:** 08/31/2023

Total project cost: Grant: \$330,000, Match: \$238,080, Total: \$568,080

Pro	ject location:							
a)	Basin:							
	☐ Lake Sup	erior	☐ Lower Mi	ssissippi/Cedar	□ Upper Mississipp	i 🗌 Mi	nnesota	☐ Rainy
	☐ Red Rive	r 🔲	Des Moines	Missouri	St. Croix			
b)	Watershed r	name:	Bassett Cre Twin Cities	,	Mississippi River –	HUC8:	070102	06
Organiz	zation type:	☐ St	ocal/Regional ate governmentate powers or	•	cal government			

2. Statement of problems, opportunities, and existing conditions

Project background

This project aims to significantly improve the water quality and reduce total phosphorus in Sweeney Lake by 1) removing and managing carp in Schaper Pond, immediately upstream of the lake; and 2) performing an alum treatment within the lake.

Sweeney Lake is a 67-acre lake in the City of Golden Valley, Minnesota, with a maximum depth of 25 feet and an average depth of 12 feet. The lake provides recreational value for fishing, boating, and swimming; and it harbors a variety of panfish, a limited game fishery, and an average plant community. The lake is the receiving waterbody of a 2,400-acre fully developed watershed. Nearly all of the flow to the lake enters through the Sweeney Branch of Bassett Creek. The creek flows from the south and through Schaper Pond, which is immediately upstream of Sweeney Lake. The creek exits the lake through a natural outlet to the north. Sweeney Lake was added to the 303(d) list of impaired waters in 2004 due to excess phosphorus. A Total Maximum Daily Load (TMDL) was completed and approved by the Environmental Protection Agency (EPA) in 2011 and identified the need to reduce internal phosphorus loading by 32% or 175 pounds per summer season.

Despite numerous best management practices (BMPs) installed or implemented in its watershed over the years, water quality in Sweeney Lake has not improved significantly. Regular monitoring from 1985 to the present indicates that total phosphorus concentrations exceeded the state standard of 40 ug/L 74% of the time. Further, the lake has a history of Harmful Algae Blooms, negatively impacting the lake's recreational usability.

In order for an alum treatment to be most effective, watershed loading of phosphorus should be reduced to the greatest extent possible before carrying out the treatment. To that end, in 2015 the BCWMC and the City of Golden Valley implemented the Schaper Pond Diversion Project in Schaper Pond, immediately upstream of Sweeney Lake. The project diverted water, via a 380-foot floating water baffle, within the pond along a longer flow path, allowing water to remain in the pond for a longer period of time, providing for a greater amount of sediment, phosphorus, and other suspended solids to settle out before flowing into Sweeney Lake. Unfortunately, post project monitoring indicates that phosphorus levels leaving the pond are still elevated. Upon further study, it was determined that a large population of common carp in the pond (estimated at 368 kg/hectare; nearly four times the recommended threshold for carp management) is likely responsible for the elevated phosphorus levels in Schaper Pond. The BCWMC is currently tracking the movements of the carp in order to implement a carp removal and management plan.

Project impact

BCWMC believes the combination of carp management in Schaper Pond and an alum treatment in Sweeney Lake will effectively "flip" this lake from a eutrophic, algae dominated system, to a healthy, clear water system that can fully support aquatic recreation and a balanced ecosystem for aquatic biota. More than 35 watershed BMPs were constructed or improved between the mid-1980s and 2011. The city of Golden Valley recently inventoried more than 17 BMPs that have been implemented within the direct drainage to Sweeney Lake, alone. Watershed modeling completed for the TMDL study confirmed that the Schaper Pond outflow is the most critical source of watershed phosphorus entering Sweeney Lake and inlake water quality modeling confirmed that the internal phosphorus load (from sediment phosphorus release) accounts for approximately 320 pounds of the summer phosphorus budget for the lake. Implementation of the proposed improvement options will address the final critical sources of internal and external phosphorus loads needed to meet the TMDL wasteload and load allocation objectives, and attain the State and BCWMC goals and standards for Sweeney Lake.

651-296-6300 800-657-3864 Use your preferred relay service Available in alternative formats Page 2 of 4

3. Goals, objectives, tasks, and subtasks

Goal: Reduce total phosphorus concentrations in Sweeney Lake to meet water quality standards

Objective 1: Perform in-lake alum treatment in Sweeney Lake

Task A: Communicate with lake residents and other stakeholders

This task includes engaging and communicating with the Sweeney Lake Homeowners Association, lake residents, lake users, and other stakeholders about the alum treatment itself and expectations for changes in water quality and aquatic vegetation.

Responsible Party: BCWMC Administrator

Task B: Survey and treat curly-leaf pondweed in Sweeney Lake

This task includes an early spring survey of curly-leaf pondweed (CLP) in Sweeney Lake, applying for a Minnesota Department of Natural Resources permit for herbicide treatment of CLP, treating up to five acres of CLP with diquat or similarly effective herbicide, and performing a post treatment survey of CLP, as needed. Treating CLP before the alum treatment is expected to reduce the chances of significant expansion of CLP with improved water clarity. If left untreated, a CLP expansion would interfere with recreational opportunities, reduce the effectiveness of the alum treatment by introducing phosphorus into the water column during summer senescence, and would be even more costly to manage in the future.

Responsible Party: BCWMC Administrator (permit coordination), Barr Engineering Co., and herbicide treatment subcontractor (TBD)

Task C: Engineer and perform in-lake alum treatment

This task includes the development of contract documents, along with a bid-procurement process with an experienced contractor, to apply the appropriate dose of alum and buffering agent to the sediment of Sweeney Lake in two separate phases of work, both at the beginning and towards the end of the grant agreement; receiving MPCA permit for treatment; and overseeing treatment activities to ensure that chemical is properly and safely applied for each phase of the alum treatment.

Responsible Party: Barr Engineering Co. and their subcontractor (TBD)

Task D: Perform post treatment monitoring

This task includes lake water quality monitoring during the summer season following each phase of the in-lake alum treatment to quantify water quality response to phosphorus reductions associated with internal load control. Monitoring methods and data evaluations will follow BCWMC's Quality Assurance Project Plans (QAPP) for water quality parameter testing and follow requirements as outlined in the Grant Agreement.

Responsible Party: Barr Engineering Co.

Objective 1 Timeline: January 2020 - August 2023

Objective 1 Cost: Grant: \$300,000, Match: \$217,000, Total: \$517,000

Objective 1 Deliverables: Completed curly-leaf pondweed herbicide treatment (if needed), completed in-lake alum treatment and summary of pre- and post-treatment lake water quality monitoring results.

Objective 2: Control carp biomass in Schaper Pond

Task A: Design and permitting of carp removal activities

This task includes the final design and permitting of the recommended carp control option(s) including removing a significant biomass of carp from the pond.

Responsible Party: Barr Engineering Co.

Task B: Implementation of carp removal and control options for Schaper Pond and Sweeney Lake

This task includes the drawdown and electrofishing of Schaper Pond to remove carp under low flow, as well as the installation of four baited box nets for the removal of carp from the shallow areas of Sweeney Lake.

Responsible Party: Barr Engineering Co. and their subcontractor (Carp Solutions)

https://www.pca.state.mn.us wq-cwp7-20e-fy19 • 2/12/19 Objective 2 Timeline: April 2020 - October 2021

Objective 2 Cost: Grant: \$30,000, Match: \$20,000, Total: \$50,000

Objective 2 Deliverables: Completed carp removal and summary of pre- and post-treatment carp population monitoring results, including assessments of changes to the overall populations and migration between Schaper Pond and Sweeney Lake.

Objective 3: Manage project

Task A: Manage project and perform grant reporting

This task includes maintaining communication and coordination among subcontractors; monitoring of project budget and timeline; regular updates to the BCWMC Commissioners; and preparation and submittal of semi-annual and annual grant reports.

Objective 3 Timeline: January 2020 - August 2023

Objective 3 Cost: Grant: \$0, Match: \$1,080, Total: \$1,080

Objective 3 Deliverables: Semi-annual and annual grant reports

4. Measurable outcomes

Lake ID or stream AUID	Sweeney Lake (#27- 0035)					
Phosphorus	350	lbs/yr	943	\$/lb	35	%

The Sweeney Lake TMDL total phosphorus load reduction goals call for 274 pounds of total phosphorous load reduction during the critical summer season, which was split between the potential watershed (wasteload) and internal (load allocation) phosphorus loads reductions to meet the assimilative capacity of Sweeney Lake. Implementation of both of the project objectives are expected to exceed 100% of the needed phosphorus load reduction prescribed in the TMDL report. It is expected that restoration of the water quality treatment capacity of Schaper Pond will result in a 100-pound reduction of total phosphorus delivered to Sweeney Lake (Barr, 2012). It is expected that the initial lake response to an in-lake alum application will exceed 250 pounds per summer season, which will slowly recede over the lifespan of the treatment.

The Sweeney Lake Aeration Study (Barr, 2018) included the updated analyses necessary to perform TMDL-equivalent assessments and re-confirm the water quality improvement benefits and feasibility of an in-lake aluminum treatment, including sediment core sampling analyses for phosphorus, alum dose and cost determinations. All of these recent analyses were compiled and described, with respect to the state standards and water quality goals, in the report. Recommendations were made based on overall BMP effectiveness, feasibility, practicality and public acceptance of changes to aquatic plant growth. Since 2017, water quality monitoring and carp population surveys have been conducted to quantify phosphorus export from Schaper Pond and the potential benefit of controlling carp on the water quality of the inflow to Sweeney Lake.

Post-treatment lake water quality monitoring will occur following each phase of the alum treatment and pre- and post-treatment carp population monitoring results will be summarized for the semi-annual and final grant reports.

Deliverables of this project include a completed in-lake alum treatment, carp removal and a summary of pre- and post-treatment lake water quality monitoring results.

800-657-3864

Project budget (attached)

https://www.pca.state.mn.us wq-cwp7-20e-fy19 • 2/12/19 Sweeney Lake Water Quality Improvement Project
Bassett Creek Watershed Management Commission (BCWMC)

Objective	Cost category	Unit cost	Rate	Quantity	Grant	In kind match	h Cash match		To	Total match		Budget total	
Objective 1: Perform Alum Treatment in Sweeney Lake													
Task A: Communicate with lake residents/stakeholders													
BCWMC Administrator	Project Manager	\$72.00	/hour	40.00			\$	2,880.00	\$	2,880.00	\$	2,880.00	
Printing and Postage	Materials	variable					\$	500.00	\$	500.00	\$	500.00	
Task B: Survey and treat curly-leaf pondweed													
Barr Engineering Company	Subconsultant	variable					\$	12,000.00	\$	12,000.00	\$	12,000.00	
Herbicide Treatment Contractor	Subcontractor	variable					\$	5,000.00	\$	5,000.00	\$	5,000.00	
Task C: Engineer and perform in-lake alum treatment													
Barr Engineering Company	Subconsultant	variable			\$ 40,000.00		\$	26,620.00	\$	26,620.00	\$	66,620.00	
Alum Treatment Contractor	Subcontractor	variable			\$ 240,000.00		\$	160,000.00	\$	160,000.00	\$	400,000.00	
Task D: Perform post treatment monitoring													
Barr Engineering Company	Subconsultant	variable			\$ 20,000.00		\$	10,000.00	\$	10,000.00	\$	30,000.00	
Objective 1 - Total					\$ 300,000.00		\$	217,000.00	\$	217,000.00	\$	517,000.00	
Objective 2: Control Carp Biomass in Schaper Pond													
Task A: Design and permitting of carp control options													
Barr Engineering Company	Subconsultant	variable			\$ 6,000.00		\$	4,000.00	\$	4,000.00	\$	10,000.00	
Task B: Implementation of carp control options													
Carp Solutions	Subcontractor	variable			\$ 24,000.00		\$	16,000.00	\$	16,000.00	\$	40,000.00	
Objective 2 - Total					\$ 30,000.00	\$ -	\$	20,000.00		20,000.00		50,000.00	
Objective 3: Manage Project													
Task A: Manage project and perform grant reporting													
BCWMC Administrator	Project Manager	72.00	/hour	15.00			\$	1.080.00	\$	1.080.00	\$	1.080.00	
Objective 3 - Total	1 Toject Manager	72.00	/riodi	10.00	\$ -		\$	1,080.00		1,080.00		1,080.00	
	TOTAL				\$ 330,000.00	\$ -	\$ 238,080.00		0.00 \$ 238,080.00		\$	568,080.00	

Attachment B

EPA General Terms and Conditions Effective October 1, 2018

Introduction

The recipient and any sub-recipient must comply with the applicable EPA general terms and conditions outlined below. Failure to comply with the general terms and conditions outlined below and those directly reflected on the official assistance award document may result in enforcement actions as outlined in 2 CFR 200.338 and 200.339.

Uniform Administrative Requirements, Cost Principles and Audit Requirements for Federal Awards

This award is subject to the requirements of the Uniform Administrative Requirements, Cost Principles and Audit Requirements for Federal Awards; Title 2 CFR, Parts 200 and 1500. This award is also subject to applicable requirements contained in EPA programmatic regulations located in 40 CFR Chapter 1 Subchapter B.

Selected Items of Cost

Consultant Cap

EPA participation in the salary rate (excluding overhead) paid to individual consultants retained by recipients or by a recipient's contractors or subcontractors shall be limited to the maximum daily rate fora Level IV of the Executive Schedule, available at: https://www.opm.gov/policy-data-oversight/pay-leave/salaries-wages/, to be adjusted annually. This limit applies to consultation services of designated individuals with specialized skills who are paid at a daily or hourly rate. This rate does not include transportation and subsistence costs for travel performed (the recipient will pay these in accordance with their normal travel reimbursement practices).

Establishing and Managing Subawards

If the recipient chooses to pass funds from this assistance agreement to other entities, the recipient must comply with applicable provisions of 2 CFR Part 200 and the EPA Subaward Policy, which may be found at: https://epa.gov/grants/epa-subaward-policy.

As a pass-through entity, the recipient agrees to:

Be responsible for selecting subrecipients and as appropriate conducting subaward competitions using a system for properly differentiating between subrecipients and procurement contractors under the standards at 2 CFR 200.330 and EPA's supplemental guidance in Appendix A of the EPA Subaward Policy.

- For-profit organizations and individual consultants, in almost all cases, are not eligible
 subrecipients under EPA financial assistance programs and the pass-through entity must obtain
 prior written approval from EPA's Award Official for subawards to these entities unless the EPAapproved budget and work plan for this agreement contain a precise description of such
 subawards.
- Stipends and travel assistance for trainees (including interns) and similar individuals who are not
 are not employees of the pass-through entity must be classified as participant support costs rather
 than subawards as required by 2 CFR 200.75 and 2 CFR 200.92.

November, 2019 Page 1 of 11

Establish and follow a system that ensures all subaward agreements are in writing and contain all of the elements required by 2 CFR 200.331(a).

Subrecipients are subject to the same requirements as those that apply to the pass-through entity's EPA award as required by 2 CFR 200.331(a)(2). These requirements include, among others:

- Title VI of the Civil Rights Act and other Federal statutes and regulations prohibiting discrimination in Federal financial assistance programs, as applicable.
- Limitations on individual consultant fees as set forth in 2 CFR 1500.9
- EPA's prohibition on paying management fees as set forth in General Condition of the pass-through entity's agreement with EPA entitled "Management Fees."

Establish and follow a system for evaluating subrecipient risks of noncompliance with Federal statutes, regulations and the terms and conditions of the subaward as required by 2 CFR 200.331(b) and document the evaluation. Risk factors may include:

- Prior experience with same or similar subawards;
- Results of previous audits;
- Whether new or substantially changed personnel or systems, and;
- Extent and results of Federal awarding agency or the pass-through entity's monitoring.

Establish and follow a process for deciding whether to impose additional requirements on subrecipients based on risk factors as required by 2 CFR 200.331(c). Examples of additional requirements authorized by 2 CFR 200.207 include:

- Requiring payments as reimbursements rather than advance payments;
- Withholding authority to proceed to the next phase until receipt of evidence of acceptable performance within a given period of performance;
- Requiring additional, more detailed financial reports;

Establish and follow a system for monitoring subrecipient performance that includes the elements required by 2 CFR 200.331(d) and report the results of the monitoring in performance reports as provided in the reporting terms and conditions of this agreement.

Establish and follow written procedures under 2 CFR 200.302(b)(7) for determining that subaward costs are allowable in accordance with 2 CFR Part 200, Subpart E and the terms and conditions of this award. These procedures may provide for allowability determinations on a pre-award basis, through ongoing monitoring of costs that subrecipients incur, or a combination of both approaches provided the pass-through entity documents its determinations.

Establish and maintain a system under 2 CFR 200.331(d)(3) and 2 CFR 200.521(c) for issuing management decisions for audits of subrecipients that relate to Federal awards.

Management Fees

Management fees or similar charges in excess of the direct costs and approved indirect rates are not allowable. The term "management fees or similar charges" refers to expenses added to the direct costs in order to accumulate and reserve funds for ongoing business expenses; unforeseen liabilities; or for other similar costs which are not allowable under this assistance agreement. Management fees or similar charges may not be used to improve or expand the project funded under this agreement, except to the extent authorized as a direct cost of carrying out the scope of work.

November, 2019 Page 2 of 11

Reporting and Additional Post-Award Requirements

Central Contractor Registration/System for Award Management and Universal Identifier Requirements

Requirement for System for Award Management (SAM)

Unless exempted from this requirement under 2 CFR 25.110, the recipient must maintain the currency of the organization's information in SAM until the submittal of the final financial report required under this award or receipt of the final payment, whichever is later. This requires that the recipient reviews and updates the information at least annually after the initial registration, and more frequently if required by changes in the information or another award term.

Requirement for Data Universal Numbering System (DUNS) numbers.

If the recipient is authorized to make subawards under this award, the recipient:

- Must notify potential subrecipients that no entity may receive a subaward unless the entity has provided its DUNS number.
- May not make a subaward to an entity unless the entity has provided its DUNS number.

Definitions. For the purposes of this award term:

- **System for Award Management (SAM)** means the Federal repository into which an entity must provide information required for the conduct of business as a recipient. Additional information about registration procedures may be found at the System for Award Management (SAM) Internet site: https://www.sam.gov.
- Data Universal Numbering System (DUNS) number means the nine-digit number established and assigned by Dun and Bradstreet, Inc. (D&B) to uniquely identify business entities. A DUNS number may be obtained from D&B by telephone (currently 866-705-5711) or the Internet (currently at http://fedgov.dnb.com/webform).
- **Entity**, as it is used in this award term, means all of the following, as defined at 2 CFR part 25, subpart C:
 - o A Governmental organization, which is a State, local government, or Indian tribe;
 - o A foreign public entity;
 - o A domestic or foreign nonprofit organization;
 - o A domestic or foreign for-profit organization; and
 - o A Federal agency, but only as a subrecipient under an award or subaward to a non-Federal entity.
- **Subaward:** This term means a legal instrument to provide support for the performance of any portion of the substantive project or program for which the recipient received this award and that the recipient awards to an eligible subrecipient.
 - The term does not include procurement of property and services needed to carry out the project or program (for further explanation, see 2 CFR200 Subpart D).
 - o A subaward may be provided through any legal agreement, including an agreement that the recipient considers a contract.
- **Subrecipient** means an entity that:
 - o Receives a subaward from the recipient under this award; and
 - o Is accountable to the recipient for the use of the Federal funds provided by the subaward.

November, 2019 Page 3 of 11

Reporting Total Compensation of Recipient Executives.

Applicability and what to report. The recipient must report total compensation for each of their five most highly compensated executives for the preceding completed fiscal year, if:

- the total Federal funding authorized to date under this award is \$25,000 or more;
- in the preceding fiscal year, the recipient received:
 - o 80 percent or more of their annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (and subawards);
 - o and \$25,000,000 or more in annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (and subawards); and
- The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at: http://www.sec.gov/answers/execomp.htm.)

Where and when to report.

The recipient must report executive total compensation

- As part of the registration Central System for Award Management profile available at www.sam.gov.
- By the end of the month following the month in which this award is made, and annually thereafter.

Reporting of Total Compensation of Subrecipient Executives. Applicability and what to report.

The recipient shall report the names and total compensation of each of the subrecipient's five most highly compensated executives for the subrecipient's preceding completed fiscal year, if:

- in the subrecipient's preceding fiscal year, the subrecipient received:
 - 80 percent or more of its annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (and subawards); and
 - \$25,000,000 or more in annual gross revenues from Federal procurement contracts (and subcontracts), and Federal financial assistance subject to the Transparency Act (and subawards); and
- The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at: http://www.sec.gov/answers/execomp.htm.)

Where and when to report. The recipient must report subrecipient executive total compensation:

- To the recipient.
- By the end of the month following the month during which the recipient makes the subaward. For example, if a subaward is obligated on any date during the month of October of a given year (i.e., between October 1 and 31), the recipient must report any required compensation information of the subrecipient by November 30 of that year.

November, 2019 Page 4 of 11

Exemptions

If, in the previous tax year, the recipient had gross income, from all sources, under \$300,000, the recipient is exempt from the requirements to report subawards, and the total compensation of the five most highly compensated executives of any subrecipient.

Definitions. For purposes of this award term:

- Entity means all of the following, as defined in 2 CFR Part 25:
 - o A Governmental organization, which is s State, local government, or Indian tribe;
 - o A foreign public entity;
 - o A domestic or foreign nonprofit organization;
 - o A domestic or foreign for-profit organization;
 - A Federal agency, but only as a subrecipient under an award or subaward to a non-Federal entity.
- Executive means officers, managing partners, or any other employees in management positions.

• Subaward:

- This term means a legal instrument to provide support for the performance of any portion of the substantive project or program for which you received this award and that the recipient award to an eligible subrecipient.
- The term does not include procurement of property and services needed to carry out the project or program (for further explanation, see 2 CFR 200 Subpart D).
- o A subaward may be provided through any legal agreement, including an agreement that the recipient or a subrecipient considers a contract.
- **Subrecipient** means an entity that:
 - o Receives a subaward from the recipient under this award; and
 - o Is accountable to the recipient for the use of the Federal funds provided by the subaward.
- **Total compensation** means the cash and noncash dollar value earned by the executive during the recipient's or subrecipient's preceding fiscal year and includes the following (for more information see 17 CFR 229.402(c)(2)):
 - o Salary and bonus.
 - Awards of stock, stock options and stock appreciation rights. Use the dollar amount recognized for financial statement reporting purposes with respect to the fiscal year in accordance with the Statement of Financial Accounting Standards No. 123 (Revised 2004) (FAS 123R), Shared Based Payments.
 - Earnings for services under non-equity incentive plans. This does not include group life, health, hospitalization or medical reimbursement plans that do not discriminate in favor of executives, and are available generally to all salaried employees.
 - o Change in pension value. This is the change in present value of defined benefit and actuarial pension plans.
 - o Above-market earnings on deferred compensation which is not tax-qualified.
 - Other compensation, if the aggregate value of all such other compensation (e.g. severance, termination payments, value of life insurance paid on behalf of the employee, perquisites or property) for the executive exceeds \$10,000.

Suspension and Debarment Recipient shall fully comply with Subpart C of 2 C.F.R. Part 180 entitled, "Responsibilities of Participants Regarding Transactions Doing Business With Other Persons," as implemented and supplemented by 2 C.F.R. Part 1532.

November, 2019 Page 5 of 11

Disclosing Conflict of Interests

For awards to Non-federal entities and individuals

EPA's COI Policy requires that subrecipients have systems in place to address, resolve and disclose COI's. Disclosure of a potential COI will not necessarily result in EPA disallowing costs, with the exception of procurement contracts that the Agency determines violate 2 CFR 200.318(c)(1) or (2), provided the recipient notifies EPA of measures the recipient or subrecipient has taken to eliminate, neutralize or mitigate the conflict of interest when making the disclosure.

Programmatic General Terms and Conditions

Copyrighted Material and Data

In accordance with 2 CFR 200.315, EPA has the right to reproduce, publish, use and authorize others to reproduce, publish and use copyrighted works or other data developed under this assistance agreement for Federal purposes.

Patents and Inventions

Rights to inventions made under this assistance agreement are subject to federal patent and licensing regulations, which are codified at Title 37 CFR Part 401 and Title 35 USC Sections 200-212. In accordance with Executive Order 12591, as amended, government owned and operated laboratories can enter into cooperative research and development agreements with other federal laboratories, state and local governments, universities, and the private sector, and license, assign, or waive rights to intellectual property "developed by the laboratory either under such cooperative research or development agreements and from within individual laboratories."

Acknowledgement Requirements for Non-ORD Assistance Agreements

The recipient agrees that any reports, documents, publications or other materials developed for public distribution supported by this assistance agreement shall contain the following statement:

"This project has been funded wholly or in part by the United States Environmental Protection Agency under assistance agreement (number) to (recipient). The contents of this document do not necessarily reflect the views and policies of the Environmental Protection Agency, nor does the EPA endorse tradenames or recommend the use of commercial products mentioned in this document."

Electronic and Information Technology Accessibility

Recipients are subject to the program accessibility provisions of Section 504 of the Rehabilitation Act, codified in 40 CFR Part 7. In compliance with Section 504, EIT systems or products funded by this award must be designed to meet the diverse needs of users (e.g., U.S. public, recipient personnel) without barriers or diminished function or quality. Systems shall include usability features or functions that accommodate the needs of persons with disabilities, including those who use assistive technology. At this time, the EPA will consider a recipient's websites, interactive tools, and other EIT as being in compliance with Section504 if such technologies meet standards established under Section 508 of the Rehabilitation Act, codified at 36 CFR Part 1194.

Recipients may wish to consult the latest Section 508 guidelines issued by the U.S. Access Board orW3C's Web Content Accessibility Guidelines (WCAG) 2.0 (see http://www.access-board.gov/sec508/guide/index.htm).

Tangible Personal Property Reporting

Pursuant to 2 CFR 200.312 and 200.314, property reports, if applicable, are required for Federally-owned property in the custody of a non-Federal entity upon completion of the Federal award or when the property is no longer needed. Additionally, upon termination or completion of the project, residual unused

November, 2019 Page 6 of 11

supplies with a total aggregate fair market value exceeding \$5,000 not needed for any other Federally-sponsored programs or projects must be reported. For Superfund awards under Subpart O, refer to 40 CFR 35.6340 and 35.6660 for property reporting requirements. Recipients should utilize the Tangible Personal Property Report form series (SF-428) to report tangible personal property.

Disposition

Most Recipients. Consistent with 2 CFR 200.313, unless instructed otherwise on the official award document, this award term, or at closeout, the recipient may keep the equipment and continue to use it on the project originally funded through this assistance agreement or on other federally funded projects whether or not the project or program continues to be supported by Federal funds.

Dual Use Research of Concern (DURC)

The recipient agrees to conduct all life science research* in compliance with *EPA's Order on the Policy and Procedures for Managing Dual Use Research of Concern* (EPA DURC Order, https://www.epa.gov/research/epa-order-100019-policy-and-procedures-managing-dual-use-research-concern) and *United States Government Policy for Institutional Oversight of Life Sciences Dual Use Research of Concern (iDURC Policy*, http://www.phe.gov/s3/dualuse/Documents/durc-policy.pdf).

Scientific Integrity Terms and Conditions

The recipient agrees to comply with EPA's Scientific Integrity Policy, https://www.epa.gov/osa/policy-epa-scientific-integrity, when conducting, supervising, and communicating science and when using or applying the results of science. For purposes of this award condition scientific activities include, but are not limited to, computer modelling, economic analysis, field sampling, laboratory experimentation, demonstrating new technology, statistical analysis, and writing a review article on a scientific issue. The recipient agrees to:

• Scientific Products

- o Produce scientific products of the highest quality, rigor, and objectivity, by adhering to applicable EPA information quality guidelines (https://www.epa.gov/quality/frequent-questions-about-epas-quality-system#tab-11), quality policy (https://www.epa.gov/irmpoli8/epas-policy-and-procedures-ensure-and-enhance-its-quality-program), and peer review policy.
- o Prohibit all recipient employees, contractors, and program participants, including scientists, managers, and other recipient leadership, from suppressing, altering, or otherwise impeding the timely release of scientific findings or conclusions.
- Adhere to EPA's Peer Review Handbook, 4th Edition (https://www.epa.gov/osa/peer-review-handbook-4th-edition-2015), for the peer review of scientific and technical work products generated through EPA grants or cooperative agreements which, by definition, are not primarily for EPA's direct use or benefit.

• Scientific Findings

- Require that reviews regarding the content of a scientific product that are conducted by the project manager and other recipient managers and the broader management chain be based only on scientific quality considerations, e.g., the methods used are clear and appropriate, the presentation of results and conclusions is impartial.
- o Ensure scientific findings are generated and disseminated in a timely and transparent manner, including scientific research performed by employees, contractors, and program participants, who assist with developing or applying the results of scientific activities.
- o Include, when communicating scientific findings, an explication of underlying assumptions, accurate contextualization of uncertainties, and a description of the probabilities associated with both optimistic and pessimistic projections, if applicable.

November, 2019 Page 7 of 11

- o Document the use of independent validation of scientific methods.
- Document any independent review of the recipient's scientific facilities and testing activities, as occurs with accreditation by a nationally or internationally recognized sanctioning body.
- Make scientific information available online in open formats in a timely manner, including access to data and non-proprietary models.

• Scientific Misconduct

- O Prohibit intimidation or coercion of scientists to alter scientific data, findings, or professional opinions or non-scientific influence of scientific advisory boards. In addition, recipient employees, contractors, and program participants, including scientists, managers, and other leadership, shall not knowingly misrepresent, exaggerate, or downplay areas of scientific uncertainty.
- O Prohibit retaliation or other punitive actions toward recipient employees who uncover or report allegations of scientific and research misconduct, or who express a differing scientific opinion. Employees who have allegedly engaged in scientific or research misconduct shall be afforded the due process protections provided by law, regulation, and applicable collective bargaining agreements, prior to any action. Recipients shall ensure that all employees and contractors of the recipient shall be familiar with these protections and avoid the appearance of retaliatory actions.
- Require all recipient employees, contractors, and program participants to act honestly and refrain from acts of research misconduct, including publication or reporting, as described in EPA's Policy and Procedures for Addressing Research Misconduct (https://www.epa.gov/osa/epa-order-policy-and-procedures-addressing-research-misconduct), Section 9.C. Research misconduct does not include honest error or differences of opinion. While EPA retains the ultimate oversight authority for EPA-supported research, grant recipients conducting research bear primary responsibility for prevention and detection of research misconduct and for the inquiry, investigation, and adjudication of research misconduct alleged to have occurred in association with their own institution.
- Take the actions required on the part of the recipient described in EPA's Policy and Procedures for Addressing Research Misconduct, Sections 6 through 9, when research misconduct is suspected or found.

• Additional Resources

For more information about the Scientific Integrity Policy, an introductory video can be accessed at: https://youtu.be/FQJCy8BXXq8. A training video is available at: https://youtu.be/Zc0T7fooot8.

Public Policy Requirements

Civil Rights Obligations

This term and condition obligates the recipient to comply fully with applicable civil rights statutes and implementing EPA regulations.

Statutory Requirements

The recipient must comply with:

- Title VI of the Civil Rights Act of 1964.2.
- Section 504 of the Rehabilitation Act of 1973.

November, 2019 Page 8 of 11

If the recipient is conducting an education program or activity under this agreement, it must also comply with:

• Title IX of the Education Amendments of 1972.

If this agreement is funded with financial assistance under the Clean Water Act (CWA), the recipient must also comply with:

• Section 13 of the Federal Water Pollution Control Act Amendments of 1972.

Regulatory Requirements

The recipient agrees to comply with all applicable EPA civil rights regulations, including:

- For Title IX obligations, 40 C.F.R. Part 5; and
- For Title VI, Section 504, Age Discrimination Act, and Section 13 obligations, 40 CFR Part 7.

TITLE VI – LEP, Public Participation and Affirmative Compliance Obligation

- As a recipient of EPA financial assistance, you are required by Title VI of the Civil Rights Act to provide meaningful access to LEP individuals. In implementing that requirement, the recipient agrees to use as a guide the Office of Civil Rights (OCR) document entitled "Guidance to Environmental Protection Agency Financial Assistance Recipients Regarding Title VI Prohibition Against National Origin Discrimination Affecting Limited English Proficient Persons." The guidance can be found at: https://www.federalregister.gov/documents/2004/06/25/04-14464/guidance-to-environmental-protection-agency-financial-assistance-recipients-regarding-title-vi.
- If the recipient is administering permitting programs under this agreement, the recipient agrees to use as a guide OCR's Title VI Public Involvement Guidance for EPA Assistance Recipients Administering Environmental Permitting Programs. The Guidance can be found at http://edocket.access.gpo.gov/2006/pdf/06-2691.pdf.
- In accepting this assistance agreement, the recipient acknowledges it has an affirmative obligation to implement effective Title VI compliance programs

Drug-Free Workplace

The recipient must make an ongoing, good faith effort to maintain a drug-free workplace pursuant to the specific requirements set forth in Title 2 CFR Part 1536 Subpart B. Those recipients who are individuals must comply with the drug-free provisions set forth in Title 2 CFR Part 1536 Subpart C. The consequences for violating this condition are detailed under Title 2 CFR Part 1536 Subpart E. Recipients can access the Code of Federal Regulations (CFR) Title 2 Part 1536 at www.ecfr.gov/.

Hotel-Motel Fire Safety

Pursuant to 15 USC 2225a, the recipient agrees to ensure that all space for conferences, meetings, conventions or training seminars funded in whole or in part with federal funds complies with the protection and control guidelines of the Hotel and Motel Fire Safety Act (PL 101-391, as amended). Recipients may search the Hotel-Motel National Master List at https://apps.usfa.fema.gov/hotel/ to see if a property is in compliance, or to find other information about the Act.

Lobbying Restrictions (Updated 11/19/18)

• The recipient shall abide by the Cost Principles available at 2 CFR 200 which generally prohibits the use of federal grant funds for litigation against the U.S. or for lobbying or other political activities.

November, 2019 Page 9 of 11

- The recipient agrees to comply with Title 40 CFR Part 34, New Restrictions on Lobbying. The recipient shall include the language of this provision in award documents for all subawards exceeding \$100,000 and require that subrecipients submit certification and disclosure forms accordingly.
- In accordance with the Byrd Anti-Lobbying Amendment, any recipient who makes a prohibited expenditure under Title 40 CFR Part 34 or fails to file the required certification or lobbying forms shall be subject to a civil penalty of not less than \$10,000 and not more than\$100,000 for each such expenditure.
- Contracts awarded by a recipient shall contain, when applicable, the anti-lobbying provision as stipulated in the Appendix II to Part 200.
- By accepting this award, the recipient affirms that it is not a nonprofit organization described in Section 501(c)(4) of the Internal Revenue Code of 1986 as required by Section 18 of the Lobbying Disclosure Act; or that it is a nonprofit organization described in Section 501(c)(4) of the Code but does not and will not engage in lobbying activities as defined in Section 3 of the Lobbying Disclosure Act.

Applicable to assistance agreements when the amount of the award is over \$100,000:

- The recipient certifies, to the best of its knowledge and belief, that:
 - No Federal appropriated funds have been or will be paid, by or on behalf of the recipient, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
 - o If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, or any employee of a Member of Congress in connection with this Federal grant or cooperative agreement, the recipient shall complete and submit the linked Standard Form -- LLL, "Disclosure Form to Report Lobbying (https://app_gsagov_prod_rdcgwaajp7wr.s3.amazonaws.com/SFLLL_1_2_P-V1.2.pdf)," in accordance with its instructions.
- This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each failure.

Recycled Paper

When directed to provide paper documents, the recipient agrees to use recycled paper and double-sided printing for all reports which are prepared as a part of this agreement and delivered to EPA. This requirement does not apply to reports prepared on forms supplied by EPA.

Resource Conservation and Recovery Act

Consistent with goals of section 6002 of RCRA (42 U.S.C. 6962), State and local institutions of higher education, hospitals and non-profit organization recipients agree to give preference in procurement programs to the purchase of specific products containing recycled materials, as identified in 40 CFR Part 247.

November, 2019 Page 10 of 11

Consistent with section 6002 of RCRA (42 U.S.C. 6962) and 2 CFR 200.322, State agencies or agencies of a political subdivision of a State and its contractors are required to purchase certain items made from recycled materials, as identified in 40 CFR Part 247, when the purchase price exceeds \$10,000 during the course of a fiscal year or where the quantity of such items acquired in the course of the preceding fiscal year was \$10,000 or more. Pursuant to 40 CFR 247.2 (d), the recipient may decide not to procure such items if they are not reasonably available in a reasonable period of time; fail to meet reasonable performance standards; or are only available at an unreasonable price.

Trafficking Victims Protection Act

The Trafficking Victims Protection Act of 2000 Section 106(g), as amended (22 U.S.C. 7104(g)) requires the Minnesota Pollution Control Agency to include the prohibition statement below:

"You, as the recipient, your employees, subrecipients under this award, and subrecipients' employees may not engage in any form of trafficking in persons during the period of time that the award is in effect; procure a commercial sex act during the period of time that the award is in effect; or use forced labor in the performance of the award or subawards under the award. Violation of this subpart is cause for termination of this award in addition to other remedies for noncompliance that may be used."

November, 2019 Page 11 of 11