

AGREEMENT REGARDING TSS PROJECTS

In consideration of the mutual agreements set forth in this Agreement, and in consideration of the benefits to public health and the environment to be derived from the implementation of the projects described below, the Idaho Department of Environmental Quality (DEQ) and the City of Twin Falls (City) hereby enter into this Agreement.

I. Background and Purpose of Agreement

1. The City discharges wastewater from its wastewater treatment facility to the Snake River under the terms of a NPDES permit issued by the federal Environmental Protection Agency (EPA). The permit requires the City to meet, by July 1, 2014, limits for total suspended solids (TSS) that are based on the wasteload allocation provided to the City in the Upper Snake Rock Subbasin TMDL issued by DEQ, and approved by EPA in 2000. This will require a significant reduction in the amount of TSS the City currently discharges.

2. The City seeks to increase the wasteload allocation in the TMDL so that it reflects the TSS levels the City is currently discharging. As the City has requested, DEQ has proposed to revise the EPA approved 2000 TMDL TSS wasteload allocation so that the City's wasteload allocation is increased by 244.52 tons/year. In order to increase the City's allocation and still ensure the goals of the TMDL and the Idaho Water Quality Standards (WQS) are met, there must be additional reductions, at least equal to the amount of the City's increase, from other sources discharging TSS to the Snake River. In addition, in order to make the City's wasteload allocation less stringent, there must be a reasonable assurance that these additional reductions from other sources will occur.

3. Under the terms of this Agreement, the City agrees to implement projects that will reduce TSS discharges from nonpoint sources that contribute TSS to the Snake River. By entering into this Agreement and agreeing to implement such projects, the City is providing assurance that sufficient reductions from nonpoint sources will occur that will allow a less stringent wasteload allocation for the City. In addition, by agreeing to implement the projects the City will ensure the goals of the TMDL are met.

4. DEQ and the City are both vitally interested in improving water quality in the Snake River and recognize that reductions in pollutant loads, such as TSS, provide benefits to the City, the surrounding community and the state. This Agreement is also intended to provide more than just an offset for the increase in the City's wasteload allocation, but to provide a net benefit to the environment and to water quality through the implementation of projects that result in reductions of TSS beyond those necessary to offset the increase.

II. Terms of Agreement

1. The City agrees it shall implement projects to reduce TSS from nonpoint sources that contribute TSS to the Snake River in an amount equal to at least 733 tons/year. Attached to this Agreement as Appendix A is a general description of two projects (Police Gun Range Lateral 26 and Auger Falls Lateral 30) the City shall implement in order to meet the required reduction. However, if DEQ determines that the projects described in Appendix A are insufficient to meet the required reductions, the City shall implement additional projects to meet the required reductions.

2. Within 90 days of issuance of the revised NPDES Permit reflecting the increased wasteload allocation for TSS, as contemplated by this agreement, the City shall provide to DEQ for approval a plan for implementation of the projects to reduce TSS from nonpoint sources (the Plan). The Plan shall include the following:

- a. Identification of specific projects/BMPs that will achieve the enhanced nonpoint source reductions. This shows locations including latitude/longitude (GPS) and maps.
- b. Quantification of load reductions expected from these projects, and how they will achieve the required load reductions. These estimates may be based from research and data collected by the Kimberly Research Station, or from actual projects already completed in the Mid Snake by the Canal Company or others.
- c. Identification of funding committed to these projects. The City must identify needed land ownership or access. The City shall provide a copy of any contracts, easements or other authorizations or agreements necessary to implement the projects.
- d. Identification of timeframes for project/BMP completion. This includes discussing the time lag from installing the BMP and it reaching its full potential for removal. DEQ expects the necessary projects be completed and functional within five years from the effective date of this Agreement.
- e. Discuss plans for monitoring BMP effectiveness (effectiveness monitoring). Particularly relevant is where inflows and outflows are monitored etc.
- f. Include an EPA compliant "QAPP" for the effectiveness monitoring.

3. The City shall be responsible for ensuring the ongoing maintenance of the Projects to ensure the Projects continue to deliver the required TSS reductions in

perpetuity or until such time as DEQ determines the Snake River is meeting WQSs or the Projects are no longer needed to meet WQS.

4. In the event the initial projects do not deliver the required TSS reductions, the City shall identify additional projects to meet the required reductions, and shall provide all the information set forth in paragraph 2 with respect to such projects.

5. The City shall provide access, or if needed provide landowner permission, for DEQ and/or EPA to visit and inspect the Projects.

6. Within one year of the effective date of this Agreement, and every year thereafter for the life of the Agreement, the City shall submit to DEQ a Project Report that includes the following:

- a. A description of the Projects implemented in the last year. If any Project is not fully implemented, the City shall describe the stage of implementation.
- b. The results of the effectiveness monitoring or other methods of determining TSS reductions.
- c. A summary of progress towards achieving the required TSS reductions.

7. DEQ and the City agree that a failure to meet the terms and conditions of this Agreement is subject to all remedies available under applicable law, including without limitation, injunctive relief to compel specific performance of the Agreement.

8. The Parties recognize and agree that the proposed revision to the Upper Snake Rock Subbasin TMDL that would increase the TSS wasteload allocation for the City is subject to public comment and approval by EPA. In addition, each Party recognizes and agrees that a NPDES permit must be issued by EPA that reflects an increased wasteload allocation in order for the City to avoid the reductions in the discharge of TSS currently required by 2014, and that both the permit and DEQ's 401 certification are subject to public comment. In the event the Upper Snake Rock Subbasin TMDL is not revised as proposed, or is not approved by EPA, or in the event that a NPDES permit is not issued that reflects the intent of this Agreement, then the City may, upon 30 days notice, terminate this Agreement.

9. The City and DEQ each warrants and represents that it has the authority to enter into this Agreement, and that the individual signing this Agreement is authorized to sign on behalf of and bind the Party.

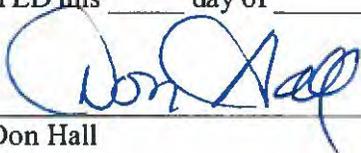
10. This Agreement shall be construed and interpreted in accordance with the laws of the state of Idaho.

11. The effective date of this Agreement shall be the date the Agreement was signed by all Parties.

DATED this 24 day of January, 2011.

By: 
Toni Hardesty, Director
Idaho Department of Environmental Quality

DATED this _____ day of _____, 2011.

By: 
Don Hall
Mayor, City of Twin Falls, Idaho

Appendix A: City of Twin Falls Proposal

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P.O. Box 1907

324 Hansen Street East Twin Falls, Idaho 83303-1907
Fax: (208) 736-2293

ENGINEERING

208-735-7265

December 28, 2010

Project Title: Auger Falls Sediment Ponds and Constructed Wetlands (Lateral 30A)

Project Field Officer: Mike J Trabert P.E.

Phone: 208-735-7323

Fax: 208-736-2293

Email: mtrabert@tfid.org

Project Location

Primary County: Twin Falls

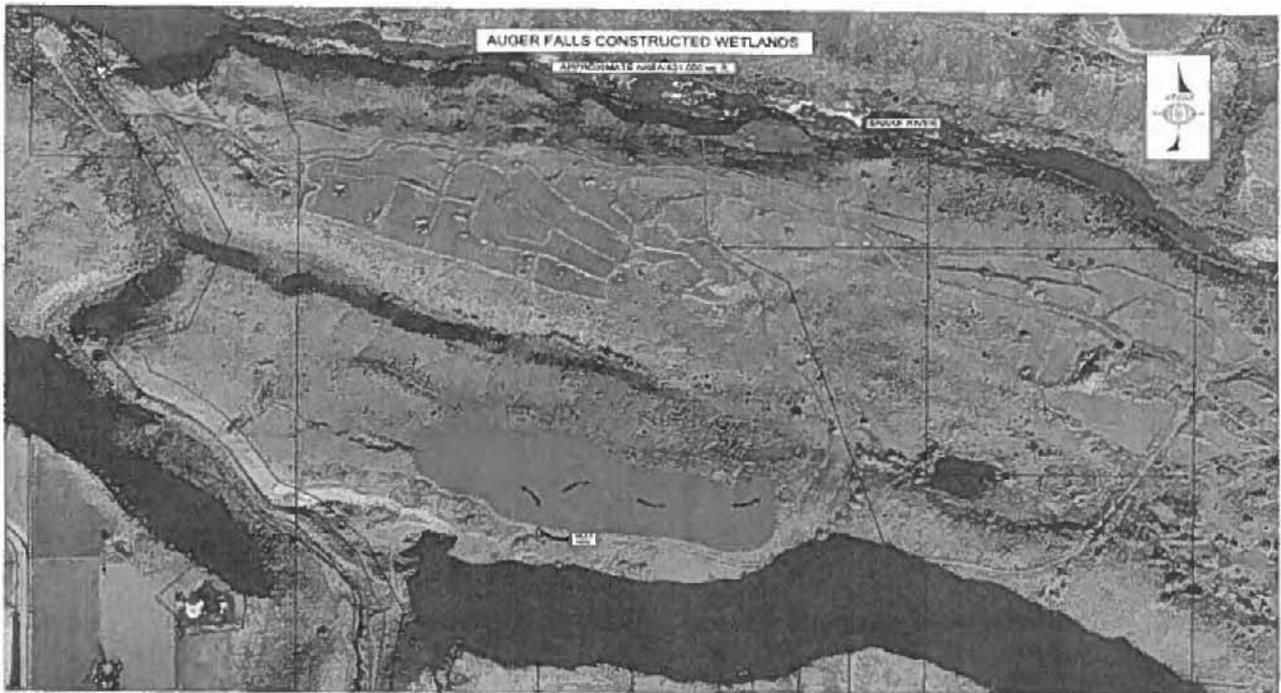
HUC: 17040212

Latitude: 42° 37 '34"

Longitude: 114° 31 '41"

Project Location: The proposed project is located ½ mile South of Auger Falls and North of Rock Creek on City of Twin Falls Snake River property. The project is located on the Twin Fall Canal Company lateral 30A spill.





TMDL Name/Description

This project is located within the Upper Snake Rock Subbasin, and falls within the Middle Snake River (Upper Snake Rock) TMDL. The Middle Snake River is a §303(d) listed stream for sediment, pathogens (*Escherichia coli*), and phosphorus. This project will improve the water quality in lateral 30A spill, which directly discharges into Rock Creek approximately ½ mile south of the confluence with Snake River. There has been no water quality monitoring on this drain, but the Twin Falls Canal Company (TFCC) believes that average TSS load is 150 mg/l throughout the irrigation season. By improving the water quality of lateral 30A, the amount of nutrients, sediments, and bacteria being discharged into Rock Creek and the Middle Snake River will be greatly decreased.

Expected Project Outcomes and Benefits

This project will consist of constructing a diversion structure on the rim and diverting the irrigation waste water into an existing 12 inch pipe with discharge to a series of sediment basins and wetlands on City owned Auger Falls property. Being an agricultural return drain, the flow rates are quite variable; The TFCC estimates the average flow at 8 cfs in the summer and little to no flow during the winter. These sediment ponds and wetlands will filter suspended sediment, phosphorus, nitrogen, and bacteria out of the lateral 30A spill, thus improving water quality in Rock Creek and the Snake River to which the lateral discharges to. This project will construct approximately 10 acres of wetlands, and is located northeast of Rock Creek and south of the

Snake River at Auger Falls. This project will construct both deep and shallow sediment ponds and a series of wetland areas which will further filter out suspended sediment, nutrients, and bacteria. After construction of these sediment ponds and wetland areas has been complete, it is estimated that there could be 92-96% reduction in total suspended solids. (Constructed Wetlands for Water Quality Improvement, Edited by Gerald A. Moshir, 1993- Chapter 37 pg 359-366 Controlling Agricultural Runoff by use of Constructed Wetlands). Idaho Department of Environmental Quality used the modeling program called STEPL for estimating pollutant loads, which estimates the pollutant removal at 64%.

How is the project tied into overall water quality management efforts or planning process?

The Middle Snake River and Rock Creek are §3030(d) listed streams for sediments, pathogens (Escherichia coli), and phosphorus. This project will improve the water quality in the Middle Snake River and Rock Creek, to which lateral 30A discharges into. Improving the water quality of lateral 30A will help meet the requirements of the City of Twin Falls NPDES permits requirements for sediment removal and the TMDL requirements for the Middle Snake River (Upper Snake Rock) TMDL. The average pollutant loads that lateral 30A discharges into the Rock Creek and the Snake River are based on water quality monitoring supplied by the Twin Falls Canal Company. The TFCC estimated the mean flow rate of lateral 30A at 8 cfs, and the average TSS at 150 mg/l, which translates into 706 tons annually.

Tracking Project Results

What parameters would be monitored to evaluate project results?

This project will be evaluated for effectiveness by performing water quality monitoring on lateral 30A at a monitoring site above and below the sediments basins and wetlands. The parameters being monitored will be temperature, total suspended solids (TSS), and flow. Once the wetlands have been constructed, the City in conjunction with DEQ will determine the sampling locations. The site maps will be updated with the GPS coordinates.

Project Details

Water body Type: River/stream

Project Type: Agriculture
Hydrologic-habitat modification

Primary Pollutant(s) To Be Addressed:

Sediment

Secondary Pollutant(s) To Be Addressed:

Bacteria
Nitrogen
Phosphorous

Beneficial Uses Affected by Project:

Aesthetics
Aquatic Life
Other – Primary and secondary contact recreation
Recreation

Water supply
Wildlife habitat

Primary BMP(s) to be Implemented: (Best Management Practices)

Constructed wetlands
Sediment basin
Structure for water control
Wetland creation
Wetland wildlife habitat management

Estimated Annual Load Reduction

Once the sediment basins and wetlands are installed on lateral 30A spill, there will be significant reductions in total suspended solids (TSS), total phosphorus (TP), and E. coli bacteria. The Twin Falls Canal Company estimated the mean flow to be 8 cfs. The average TSS load is estimated 706 ton/year. Based on the literature it is reasonable to assume a 91 percent removal and using STEPL the model estimated the removal at 64% of the total TSS. This will reduce the pollutant loads of lateral 30A by an amount ranging between 452 tons to 643 tons/ year, depending on removal effectiveness.

Monitoring Plan

Monitoring on the effectiveness of lateral 30A wetland system will be performed on a biweekly basis during the irrigation season. It is expected that the biweekly sampling will be conducted for the first 2 or 3 years until a trend is developed. Once a trend is developed the monitoring may be reduced after consultation with DEQ. In order to determine compliance with the DEQ-City contract the City will monitor TSS and flow on a biweekly basis through the sediment basins and over the course of the vegetative development within the wetlands. The City of Twin Falls will use an Optical Suspended Solids sensor (Insight model 3150). The sensor accuracy is within +/- 2 mg/l after calibration, which will be calibrated before every field visit. The City will also collect monthly water samples to verify the sensor accuracy and repeatability. If it is determined that the sampling methodology has limitations affecting the sample results DEQ will work with the City to develop an improved sampling approach. The QAPP will have more details addressing monitoring methods and lab methods. The monitoring plan and lab analysis is subject to change upon review and concurrence with DEQ.

Project Funding

The City of Twin Falls will Fund this project through the wastewater collection fund on an annual basis.

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P.O. Box 1907

324 Hansen Street East Twin Falls, Idaho 83303-1907
Fax: (208) 736-2293

ENGINEERING
7265

208-735-

December 28, 2010

Project Title: Police Gun Range Constructed Wetlands (Lateral 26 Spill)

Project Field Officer: Mike J Trabert P.E.

Phone: 208-735-7323

Fax: 208-736-2293

Email: mtrabert@tfid.org

Project Location

Primary County: Twin Falls

HUC: 17040212

Latitude: 43° 58'48"

Longitude: 101° 10' 16"

Project Location: The proposed project is located ½ mile west of Shoshone Falls on property owned by City of Twin Falls. The project is located adjacent to the Twin Falls Canal Company lateral 26 spill.



TMDL Name/Description

This project is located within the Upper Snake Rock Subbasin, and falls within the Middle Snake River (Upper Snake Rock) TMDL. The Middle Snake River is a §303(d) listed stream for sediment, pathogens (*Escherichia coli*), and phosphorus. This project will improve the water quality in lateral 26 spill, which directly discharges into the Middle Snake River approximately ½ mile west of Shoshone Falls. There has been no water quality quality monitoring on this drain, but the TFCC believes that average TSS load is 200 mg/l throughout the irrigation season. By improving the water quality of lateral 26, the amount of nutrients, sediments, and bacteria being discharged into the Middle Snake River will be greatly decreased.

Expected Project Outcomes and Benefits

This project will consist of the construction of a series of sediment basins and wetlands on lateral 26 waste water return spill, which is used as an agricultural spill to the Snake River. Being an agricultural return drain, the flow rates are quite variable. The TFCC estimates the average flow at 5 cfs in the summer and little to no flow during the winter. These wetlands will filter suspended sediment, phosphorus, nitrogen, and bacteria out of the lateral 26 spill, thus improving water quality in the Snake River to which the lateral discharges. This project will construct approximately 6 acres of wetlands, and is located south of the Twin Falls Police Gun Range. This project will construct both deep and shallow sediment ponds and a series of wetland areas which will further filter out suspended sediment, nutrients, and bacteria. After construction of these sediment ponds and wetland areas has been complete, it is estimated that there will be 92-96% reduction in total suspended solids. (Constructed Wetlands for Water Quality Improvement, Edited by Gerald A. Moshir, 1993- Chapter 37 pg 359-366 Controlling Agricultural Runoff by use of Constructed Wetlands). Idaho Department of Environmental Quality uses the modeling program called STEPL for estimating pollutant loads, which estimates the pollutant removal at 64%.

How is the project tied into overall water quality management efforts or planning process?

The Middle Snake River is a §303(d) listed stream for sediments, pathogens (*Escherichia coli*), and phosphorus. This project discharges into the Middle Snake River and will improve water quality in the river. Improving the water quality of lateral 26 will help meet the requirements of the City of Twin Falls NPDES permits requirements for sediment removal and the TMDL requirements for the Middle Snake River (Upper Snake Rock) TMDL. The average pollutant loads that lateral 26 discharges into the Snake River are based on water quality monitoring supplied by the Twin Falls Canal Company. The TFCC estimated the mean flow rate of lateral 26 at 5 cfs, and the average TSS at 200 mg/l, which translates into 589 tons annually.

Tracking Project Results

What parameters would be monitored to evaluate project results?

This project will be evaluated for effectiveness by performing water quality monitoring on lateral 26 at a monitoring site above and below the sediments basins and wetlands. The parameters being monitored will be temperature, total suspended solids (TSS) and flow. Once the wetlands

have been constructed, the City in conjunction with DEQ will determine the sampling locations. The site maps will be updated with the GPS coordinates.

Project Details

Water body Type: River/stream

Project Type: Agriculture
Hydrologic-habitat modification

Primary Pollutant(s) To Be Addressed:

Sediment

Secondary Pollutant(s) To Be Addressed:

Bacteria

Nitrogen

Phosphorous

Beneficial Uses Affected by Project:

Aesthetics

Aquatic life

Other – Primary and secondary contact recreation

Recreation

Water supply

Wildlife habitat

Primary BMP(s) to be Implemented: (Best Management Practices)

Constructed wetlands

Sediment basin

Structure for water control

Wetland creation

Wetland wildlife habitat management

Estimated Annual Load Reduction

Once the sediment basins and wetlands are installed on lateral 26 spill, there will be significant reductions in total suspended solids (TSS), total phosphorus (TP), and E. coli bacteria. The Twin Fall Canal Company estimated the mean flow to be 5 cfs. The average TSS load is estimated at 589 tons/year. Based on the literature it is reasonable to assume a 91 percent removal. The STEPL the model estimates TSS removal at 64% of the total TSS. This will reduce the pollutant loads of lateral 26 between 374 tons/year to 536 tons/ year depending upon removal effectiveness.

Monitoring Plan

Monitoring the TSS removal effectiveness for the lateral 26 wetland system will be performed on a biweekly basis. It is expected that the biweekly sampling will be conducted during the irrigation season for a two to three years until a trend is developed. Once a trend is developed the monitoring may be reduced after consultation with DEQ. In order to determine compliance

with the DEQ-City contract the City will monitor TSS and flow on a biweekly basis through the sediment basins and over the course of the vegetative development within the wetlands. The City of Twin Falls will use an Optical Suspended Solids sensor (Insight model 3150). The sensor accuracy is within +/- 2 mg/l after calibration, which will be calibrated before every field visit. The City will also collect monthly water samples to verify the sensor accuracy and repeatability. If it is determined that the sampling methodology has limitations affecting the sample results DEQ will work with the City to develop an improved sampling approach. The QAPP will have more details addressing the monitoring methods and lab methods. The monitoring plan and lab analysis is subject to change upon review and concurrence with IDEQ.

Project Funding

The City of Twin Falls will Fund this project through the wastewater collection fund on an annual basis.