

Project 1.8 Lake Granbury Coves Water Quality Improvement Project

Introduction

Problem Statement

Elevated concentrations of *E. coli* and fecal coliform bacteria have been found in the coves of Lake Granbury over a long period of time causing water quality to sometimes not meet the criteria set for contact recreation use. A substantial portion of the developed area around Lake Granbury, which lies wholly within Hood County, consists of unincorporated subdivisions that do not have sewage collection systems and centralized sewage treatment facilities. There are an estimated 9,000 septic tanks located around Lake Granbury with absorption fields installed on small lots in close proximity to the lake. Most of the inhabited areas around the lake exist on man-made coves. The coves are shallow, dead-end bodies of water with little mixing or interaction with the main body of the reservoir. New development in areas without collection and treatment systems relies on individual on-site septic tanks and absorption fields.

Project Description

This project will provide an assessment of existing and potential water quality threats from on-going nonpoint source (NPS) water pollution within the Lake Granbury Watershed (located in the Brazos River Basin) and will also provide a Watershed Protection Plan to improve and protect water quality within the basin. Information obtained from this project will provide Federal, State and local decision makers with a variety of mechanisms that can be employed to promote the orderly restoration of the basin aquatic environment and to prevent additional degradation.

Lake Granbury's Watershed Protection Plan will identify the causes and sources of pollution affecting the lake's coves and canals. The Plan will estimate the load reductions expected to be achieved through management strategies, as well as describe the management measures to be implemented. The Plan will estimate the amounts of technical and financial assistance needed, associated costs, and/or the sources and authorities that will be relied upon to implement the Plan. An implementation schedule will be included in the Plan, as well as a description of interim, measurable milestones for determining whether NPS management measures or other control actions are being implemented. The Plan will include a set of criteria that can be used to determine whether loading reductions are being achieved over time and substantial progress is being made toward meeting the WPP goal. Monitoring the effectiveness of the implementation efforts over time will be used to measure against the goal established in the WPP. In addition, these 319(h) NPS grant dollars may be used to develop 100% engineering design drawings for a wastewater treatment plant (WWTP), if the planning efforts moves them in that direction. The Brazos River Authority (BRA) will work closely with local stakeholders to leverage SRF loan dollars from the Texas Water Development Board to build a WWTP, if point source solutions are incorporated in the Plan to rectify nonpoint source loadings. These planning efforts may be proposed by BRA in planning stages.

A public education component will be used to seek local support and participation in developing the Plan and implementation strategies. To this end, a watershed coordinator will be assigned to facilitate stakeholder outreach and involvement activities throughout the life of the project. The watershed coordinator will provide a single point of contact for the activities of workgroups, track all workgroup activities, facilitate information exchange among the participants, and manage and monitor the progress of water quality restoration strategy development. Other roles of the watershed coordinator will include identification and acquisition of additional resources for the watershed steering committee and the workgroups, dispute resolution, and education and outreach efforts.

Current Efforts

Currently, there are two water quality improvement projects being conducted in Hood County. County and City of Granbury staff are cooperating on a project to extend city sewer lines to areas on the north end of the lake and on the southwest side of the lake where no sewer service is currently available. The project will also involve the construction of a wastewater treatment plant on the north end of the lake. Both entities have conducted discussions with various Federal and State agencies regarding funding potential for the project. The City of Granbury has currently submitted a proposal to the Texas Water Development Board for a grant from the Clean Water State Revolving Fund to fund preliminary design.

The Sky Harbour Homeowner's Association, in cooperation with the Authority, has conducted a pilot project at one of the subdivisions problem sites for the last two years. The project involves improving aeration and circulation in the canal. Results to date have been very positive and the site is no longer considered to be impaired. The pumps and hoses used to circulate and aerate were intended as a temporary solution and are borrowed from the Sky Harbour Volunteer Fire Department.

Existing Infrastructure: There are eight permitted wastewater treatment plants in Hood County and the population served by the existing permitted facilities is estimated to be less than 50 percent of the current county population.

Historical Studies: In 1993 a cooperative study between the Texas Water Commission, the Brazos River Authority and the Hood County Health Unit first identified an increase in fecal coliform levels in the lake. The *On-site Wastewater Treatment Units at Lake Granbury and the Possible Impact Upon the Water Quality of the Lake Study* identified the most notable area of concern to be in the coves.

In 1995, a study titled *Survey of Conditions and Impact of Septic Tank Pollution on the Water Quality in Lake Granbury*, indicated that the soils in which septic tanks are installed around Lake Granbury are generally not well-suited for septic tanks and absorption fields. Another finding was that almost all on-site systems around the lake include absorption fields that do not provide a capacity that would comply with current State criteria.

The combination of previous studies indicate a concern for water quality from on-site sewage systems and forecasts that show Hood County population increasing from its current level of about 42,000 persons to over 78,000 persons by the year 2030. With this information in mind, the development of a feasibility study to bring a regional sewage system to Hood County and eliminate the on-site sewage facilities was completed in 2000. The *Hood County Regional Sewerage System Feasibility Study* was a cooperative effort between the Brazos River Authority and the Hood County Intergovernmental Coalition. The estimated capital costs for this regional wastewater facility was estimated to be approximately \$149,900,000 with annual operation and maintenance costs estimated to be approximately \$16,231,000.

In 2001, the 77th Texas Legislature formed the Lake Granbury Water Improvement District. The new district encompassed all of Hood County and was granted powers to collect, transport, process, dispose of, and control all domestic, industrial and communal wastes. The formation of the district, which would have taxing authority, was subject to a confirmation election. The confirmation election was held in May 2002, but the district failed to be confirmed by the voters of Hood County. Post-election polling revealed that voters felt that the taxes to fund the district and the regional wastewater system, would be too high and that there was not sufficient data documenting water quality concerns in the canals to justify the expenditure.

Water Quality Monitoring Results: In response to stakeholder concerns, the Authority began a large-scale monitoring initiative in the canals of Lake Granbury to assess the water quality of the coves. Beginning in May 2001, the Authority began collecting water quality samples on a monthly basis at over 50 cove locations. Some of the locations showed no elevated concentrations of *E. coli* and were later discontinued. Some locations were added after a year of monitoring as new information was acquired on possible source locations. The data generated from this effort indicates that many of the canals on Lake Granbury are impacted by *E. coli* issues and indicate a concern for public health and contact recreation. The data also indicates that the water quality in the coves is most influenced by the surrounding land use, rather than by the main body of the lake.

Declining water quality in Lake Granbury has begun to negatively affect the use of the lake. Lake Granbury is the lifeblood of Hood County, with the majority of the county's communities relying on the lake for drinking water, irrigation, industry, and recreation. The economy in Hood County is closely tied to Lake Granbury and the environmental condition of the lake is crucial to the county's residents. The need for this project is to provide, through a Watershed Protection Plan (WPP), a holistic mechanism to address the various water quality issues throughout the Lake Granbury Watershed. As mentioned above, some of the watershed's issues have been addressed and reported, which should allow for prompt development of the WPP.

CONSISTENCY WITH TEXAS NONPOINT SOURCE POLLUTION MANAGEMENT PROGRAM: This project supports the *Texas Nonpoint Source Management Program Long-Term Goal* of protecting and

restoring water quality from nonpoint source pollution by: 1) focusing available resources in watersheds impacted by nonpoint source pollution; and, 2) developing a Watershed-based Plan that includes assessment, implementation, and education activities in an effort to restore water quality from nonpoint source pollution.

This project also supports the *Texas Nonpoint Source Management Program Short-Term Goals* of data collection, assessment, and implementation by: 1) collecting data to help identify nonpoint sources of pollution; 2) conducting assessment activities to determine the effect of the nonpoint source pollution; 3) implementing BMPs that can be put in place during the development of the Watershed Protection Plan; 4) conducting outreach efforts that will help to educate and initiate action at the local level; and 5) determining which BMPs should be used in the watershed and their effective load reduction.

EPA PERFORMANCE ACTIVITY MEASURES: This project supports EPA Performance Activity Measure WQ-15 by reducing the concentration of bacteria in the coves of Lake Granbury so that the Contact Recreation Use is supported, and WQ-27 by producing a watershed-based plan using the nine elements specified by the EPA.

OBJECTIVE 1: PROJECT ADMINISTRATION

Goal: To effectively administer the functions necessary to coordinate and monitor all work done under this contract including technical and financial supervision, preparation of status reports, and maintenance of project files and data. Progress Reports and Reimbursement Forms will reflect activity conducted in each quarter of each State fiscal year of the contract (1st quarter = September thru November; 2nd quarter = December thru February; 3rd quarter = March thru May; 4th quarter = June thru August).

Task 1.1 **Progress Reports** - Provided in the prescribed format and will include the status of deliverables for each task and narrative descriptions of activities during each quarter and due on the 15th of the month following the end of each quarter.

Task 1.2 **Reimbursement Forms** - Provided on the prescribed forms (269a; 269a 1-4; Small and/or Minority Owned Business Report) (where applicable, document why Good Faith Effort did not result in the utilization of a small and/or minority-owned business) and due on the last day of the month following the end of each quarter.

Task 1.3 **Contractor Evaluation** - An annual SELF-evaluation will be completed using the prescribed form.

Task 1.4 **Work Plan Development** - Upon receiving guidance of stakeholders' group regarding areas of concern, a detailed work plan will be developed with the assistance of selected modeling and assessment professional subcontractors. The Work Plan will outline the specific work that will be conducted by different entities involved in this project and the dates for accomplishing each item. BMPs will be scoped out that can be readily implemented during this project. Additional monitoring requirements will be determined based upon modeling and assessment needs defined in the Work Plan.

Task 1.5 **Watershed Management Training** - The BRA Project Manager and Environmental Specialist will attend the Annual EPA Watershed Management Training program.

Measures of Success: Adherence to all TCEQ administrative requirements; timely completion and submittal of all deliverables.

Deliverables:

- Quarterly Progress Reports
- Reimbursement Forms
- Contractor Evaluation
- Detailed Work Plan

OBJECTIVE 2: STAKEHOLDER INVOLVEMENT AND EDUCATION

Goal: This task will support Element 5 of the Watershed Protection Plan. Stakeholder group meetings will be conducted to provide communication of project objectives and receive feedback and information from relevant entities and individuals with respect to selecting, designing, and implementing the management measures. The work conducted under this task will leverage knowledge gained from this effort for application elsewhere in Texas, and the nation.

- Task 2.1 Stakeholder Advisory Group Meetings:** A stakeholder advisory group will be convened soon after project initiation to establish project communication among stakeholders. Specific tasks to be undertaken by the stakeholders group include: identification of areas with greatest concerns that require immediate attention; making recommendations of additional monitoring required to meet project goals; and making recommendations on BMPs. These meetings will be used to discuss and outline project goals; receive input on upcoming activities; and, organize and involve local stakeholders' activities. Meetings will be held to enhance and support participation of stakeholders (including the general public and other interested parties), enhance public understanding of the project, and encourage their early and continued participation in selecting, designing, and implementing management measures. The Brazos River Authority or other members of the project team will conduct periodic meetings with relevant entities on a schedule agreed upon by the advisory group to inform them of developments with the Watershed Protection Plan. These entities may include, but are not limited to: the TCEQ, the Texas State Soil and Water Conservation Board, the United States Department of Agriculture - Natural Resource Conservation Service, Hood County, the City of Granbury, the Acton Municipal Utility District and the Sky Harbour Homeowner's Association. Provide Advisory Group member information with quarterly progress report.
- Task 2.2 Pre-Meeting Preparation:** Solicit input on meeting agenda from all advisory group members and other interested stakeholders. Utilize information gained from previous meetings to develop materials for the meeting and guide the discussion at the meeting.
- Task 2.3 Develop Web Page:** Implement web-based techniques to share information with the general public and those with interest in nonpoint source pollution control and incentives for implementation of BMPs. Place key documents and information about the project on the web site within 30 days of developing and finalizing the material. Post information on upcoming meetings on the web site in advance of meeting date. Information describing changes to the web page will be included with each progress report when changes were made during the preceding quarter.
- Task 2.4 Meeting Minutes** - Report the information exchanged at the stakeholder meetings and post to the web page. Meeting minutes will be submitted with the quarterly progress reports when a meeting was held in the preceding quarter.
- Task 2.5 Present Project Status at Local and Regional Meetings** - Information collected to date will be presented to appropriate local and regional meetings to enhance public information exchange and input. Meetings that apply include, but are not limited to: Clean Rivers Program Steering Committee Meetings and the Hood County Intergovernmental Coalition Meetings.
- Task 2.6 Element 5 of the Watershed Protection Plan** - Follow EPA documentation to complete Element 5 of the Watershed Protection Plan which will describe the steps taken and actions accomplished that: ensured participation of stakeholders (including the general public and other interested parties); enhanced public understanding of the project; and, encouraged stakeholders' early and continued participation in selecting, designing, and implementing management measures.
- Measures of Success:** Conduct meetings with a subset of the stakeholder group participating in the WPP process to receive feedback and information.

- Deliverables:**
- Web Page Development and Updates
 - Meeting Minutes (include list of attendees)
 - Element 5 of the Watershed Protection Plan

OBJECTIVE 3: IDENTIFY THE SOURCES AND CAUSES OF E. COLI CONTAMINATION

Goal: This task will support Element 1 of the Watershed Protection Plan. This task will provide a better understanding of the contributing sources and causes of the elevated levels of bacteria in the coves surrounding Lake Granbury. This task requires an inventory of the land uses occurring within the watershed, selection of sampling sites using land use information, the continued collection of baseline water quality measurements to identify the pollution sources, collection targeted water quality measurements to identify the pollution sources, and the analysis of water quality data to identify areas of greatest concern.

Task 3.1 Map and Describe Land Use and Soil Types - Develop and reference land use maps and historical records to determine detrimental land use activities occurring in the Lake Granbury Watershed. Develop and reference soil and general geologic maps. The maps will be provided showing areas of greatest potential impact due to soil type, geology, and density of sources.

Task 3.2 Evaluate Existing Water Quality Data and Develop Water Quality Monitoring Plan - Review existing data to determine where water quality concerns are the most significant, and if the watershed is adequately monitored to properly characterize nonpoint source loadings. Additional monitoring may include: dye testing of septic tanks, dye testing of wastewater treatment plants, and bacteria source tracking. A report will be developed describing the current status of water quality in the lake, and identifying gaps in the historical monitoring data. The report will incorporate and utilize the land use and soil type maps in describing water quality conditions. A monitoring plan will be developed to ensure enough data is collected to support additional data analysis for the identification of sources and causes as well as modeling efforts. The monitoring plan will be incorporated into the QAPP.

Task 3.3 QAPP Project Planning Meeting - Conduct a meeting with TCEQ staff that will include a review of previously collected data, suggested monitoring plan, and QA protocols in place when historical data were collected.

Task 3.4 QAPP - Prepare a QAPP to address historical and planned environmental data. The QAPP will be updated on an annual basis.

Task 3.5 Water Quality Monitoring - Conduct water quality monitoring at selected locations consistent with the QAPP monitoring plan. Monitoring will consist of routine scheduled sampling and targeted sampling as determined in Task 3.2 to support water quality assessment objectives of the *Water Quality Inventory and 303(d) List* as well as model needs. Site locations will be chosen to accurately identify source and levels of runoff contaminants. Secure any landowner agreements as necessary to access sampling sites on any private lands. The water quality monitoring data collected under this contract will be sent to the TCEQ in the prescribed TCEQ format three times per year and water quality monitoring efforts will be described in the Progress Reports.

Task 3.6 Attend Coordinated Monitoring Meetings - Present monitoring in support of this project at coordinated monitoring meetings.

Task 3.7 Element 1 of the Watershed Protection Plan - Document the sources of nonpoint source bacteria problems and the contributing sources. Sources that need to be controlled should be identified at the subcategory level with estimates of the extent to which they are present in the watershed.

Measures Success will be measured by an improved water quality data set, a determination of sources of

of Success: bacteria problems and quantification of percent contribution by each source.

- Deliverables:**
- Map and description of land use and soil types
 - Historical water quality assessment report indicating data needs
 - Draft QAPP
 - Final QAPP
 - Water quality monitoring data
 - Element 1 of the Watershed Protection Plan

OBJECTIVE 4: IMPLEMENT INTERIM BMPs

Goal: Where sources are known and BMPs are readily available (e.g., restricting livestock access to streams) to address known sources. Begin working with local agencies to begin implementation of identified BMPs. This Objective does not include a comprehensive list of BMPs for the project, instead it provides a mechanism for initiating and acknowledging efforts that are ongoing and/or can be readily put in place.

Task 4.1 **Evaluate Local Plans and Water Quality Improvement Projects** - Review and identify existing water quality improvement projects currently initiated by local entities for inclusion in the Implementation Plan. Existing known projects include: Sky Harbour Homeowner's Association Aeration Project and Hood County/City of Granbury proposed sewer expansion project that targets problem areas on the north end of the lake.

Task 4.2 **Identify Readily Available BMPs** - Review results of Task 3.1 and 3.2 and identify any established BMPs associated with land use that could be immediately implemented.

Task 4.3 **Implement Aeration BMP and other Readily Implemented BMPs** - Assist Sky Harbour Homeowner's Association with developing a permanent aeration system to aerate three areas of concern within the Sky Harbour Subdivision. An Interim BMP work plan will be developed detailing the project specifications and including maps showing the locations of the planned work. Information on activities will be reported in Progress Reports and an Interim BMP Implementation Report will be developed describing the construction efforts and activities under the BMP.

Task 4.4 **Conduct Interim BMP Effectiveness Monitoring** - Develop a monitoring plan defining the water quality constituents to be monitored, the type of monitoring needed (routine/targeted), the amount of monitoring needed, the field and laboratory methods to be followed, and the period of time needed to collect the information needed to determine whether load reductions and water quality goals are being met. Update the QAPP with the additional monitoring plan. This monitoring will be conducted as specified in the QAPP and used to evaluate the effectiveness of the selected interim BMPs. Although data will likely be useful for demonstrating BMP effectiveness over time, demonstrating water quality improvements through monitoring data may not be possible within the timeframe of this project. The data acquired from these monitoring efforts will be submitted with the data from Task 3.5.

Measures

of Success: Success will be measured by ensuring that existing projects are identified, incorporated into the Implementation Plan, and the successful implementation of selected interim BMPs.

- Deliverables:**
- BMP Work Plan(s)
 - BMP Implementation Report
 - Amended QAPP
 - Water quality data submitted with data from Task 3.5

OBJECTIVE 5: IMPLEMENTATION PLAN

Goal: To develop an Implementation Plan in support of Elements 2, 3, 4, 6, 7, and 8 of the Watershed Protection Plan. For each management measure described in the Plan there will be: an estimate of the expected load reduction(s); an estimate of the amount of technical and financial assistance needed and the entities to be involved in the implementation efforts; an implementation schedule; measurable milestones to determine how implementation is proceeding; and, a set of criteria to determine if load reductions are being met. This Implementation Plan will be submitted at a distinct section of the larger Watershed Protection Plan.

Task 5.1 Management Measures - Specify all the nonpoint source pollution controls that will achieve the water quality goals. The work conducted under this task will result in the development of Element 3 of the Watershed Protection Plan.

Task 5.2 Estimate Load Reductions - Estimate the expected load reductions from the management measures specified in Task 5.1. Models will be developed using SWAT linked to QUAL-TX to evaluate existing loads and assess the impact of septic systems, run-off, and other potential sources. The models will be calibrated to both historic and newly collected monitoring data. Development, calibration, operation and use of models will be documented and reported to TCEQ. Information about models will also be provided to stakeholders as the project advances. The work conducted under this task will result in the development of Element 2 of the Watershed Protection Plan.

Task 5.3 Technical and Financial Assistance - Investigate and report on the technical and financial assistance needed to achieve the management measures. Provide a list of authorities that may be relied upon to implement the plan and specify their area(s) of expertise or authority. Interact with developers and land managers as they make decisions to provide them with information concerning opportunities for alternative approaches. The work conducted under this task will result in the development of Element 4 of the Watershed Protection Plan.

Task 5.4 Implementation Schedule - Outline a schedule of activities that will ensure the plan includes the appropriate time-schedule for implementing activities. The work conducted under this task will result in the development of Element 6 of the Watershed Protection Plan.

Task 5.5 Measurable Milestones - Develop a list of measurable milestones for determining if management measures are being implemented on schedule. The work conducted under this task will result in the development of Element 7 of the Watershed Protection Plan.

Task 5.6 Evaluation Criteria - Develop a set of criteria that will be used to determine if load reductions/water quality goals are being met. The work conducted under this task will result in the development of Element 8 of the Watershed Protection Plan.

Measures of Success: Completion of an Implementation Plan that includes Elements 2, 3, 4, 6, 7, and 8 of the Watershed Protection Plan.

- Deliverables:**
- Element 2 - Estimate Load Reductions for each Management Measure
 - Element 3 - Define Applicable Management Measures
 - Element 4 - Outline the available Technical and Financial Assistance
 - Element 6 - Prepare an Implementation Schedule
 - Element 7 - Develop a List of Measurable Milestones to determine if management measures are being implemented on schedule
 - Element 8 - Develop a set of Evaluation Criteria to determine if load reductions/water quality goals are being met.

OBJECTIVE 6: EFFECTIVENESS MONITORING

Goal: To develop a monitoring plan in support Element 9 of the Watershed Protection Plan. To establish a water quality monitoring component to be conducted over time that will evaluate the

effectiveness of plan implementation.

Task 6.1 **Develop a BMP Effectiveness Monitoring Plan:** Based on the information provided in Element 8 of the Watershed Protection Plan, outline the water quality constituents to be monitored, the type of monitoring needed (routine/targeted), the amount of monitoring needed, the field and laboratory methods to be followed, and the period of time needed to collect the information needed to determine whether load reductions and water quality goals are being met. Monitoring designed to gauge the effectiveness of the entire Watershed Protection Plan will not be conducted under this work plan. This monitoring plan will be incorporated as a distinct section of the Watershed Protection Plan.

Measures A complete sampling protocol designed to evaluate BMPs based on the set of criteria developed

of Success: for Element 8 of the Watershed Protection Plan.

Deliverables: • Element 9 of the Watershed Protection Plan.

OBJECTIVE 7: WATERSHED PROTECTION PLAN

Goal: Incorporate each of the nine elements developed in the previous tasks into a comprehensive Watershed Protection Plan document using the guidelines and documentation provided by the EPA.

Task 7.1 **Watershed Protection Plan** - The plan will include the following elements as outputs of Tasks 2, 3, 5, and 6 of this work plan:

- sources and causes of nonpoint source pollution
- expected load reductions from management measures
- management measures
- technical and financial assistance needed to accomplish management measures
- informational/educational component
- schedule for implementing the plan
- measurable milestones for determining whether implementation measures are being implemented on time
- set of evaluation criteria that can be used to determine if management measures are meeting water quality goals
- effectiveness monitoring to assess water quality over time

Measures

of Success: Completed Watershed Protection Plan.

Deliverables: • Watershed Protection Plan

SCHEDULE OF DELIVERABLES

Task	Deliverable	Due Date
1.1	Progress Report/Update to Web Page/Meeting Minutes	March 15, 2006
1.2	Reimbursement Request	March 30, 2006
3.4	Draft Quality Assurance Project Plan	April 30, 2006
3.1	Map and Description of Land Use and Soil Types	May 30, 2006
3.2	Historical Water Quality Assessment Report	May 30, 2006
1.1	Progress Report/Update to Web Page/Meeting Minutes	June 15, 2006
1.2	Reimbursement Request	June 30, 2006
1.4	Detailed Work Plan	June 30, 2006
3.4	Final Quality Assurance Project Plan	June 30, 2006
3.5	Water quality data	August 1, 2006
1.3	Contractor Self-Evaluation	August 30, 2006
4.3	Draft QAPP Amendment for Aeration BMP Effectiveness Monitoring	September 10, 2006
1.1	Progress Report/Update to Web Page/Meeting Minutes	September 15, 2006
4.3	Aeration BMP Work Plan	October 31, 2006
4.3	Final QAPP Amendment for Aeration BMP Effectiveness Monitoring	October 31, 2006
3.5	Water quality data	December 1, 2006
1.1	Progress Report/Update to Web Page/Meeting Minutes	December 15, 2006
1.2	Reimbursement Request	December 30, 2006
3.5	Water quality data	March 1, 2007
1.1	Progress Report/Update to Web Page/Meeting Minutes	March 15, 2007
1.2	Reimbursement Request	March 30, 2007
1.1	Progress Report/Update to Web Page/Meeting Minutes	June 15, 2007
1.2	Reimbursement Request	June 30, 2007
3.5	Water quality data	August 1, 2007
1.3	Contractor Self-Evaluation	August 30, 2007
1.1	Progress Report/Update to Web Page/Meeting Minutes	September 15, 2007
1.2	Reimbursement Request	September 30, 2007
3.5	Water quality data	December 1, 2007
1.1	Progress Report/Update to Web Page/Meeting Minutes	December 15, 2007
1.2	Reimbursement Request	December 30, 2007
3.5	Water quality data	March 1, 2008
1.1	Progress Report/Update to Web Page/Meeting Minutes	March 15, 2008
1.2	Reimbursement Request	March 30, 2008
1.1	Progress Report/Update to Web Page/Meeting Minutes	June 15, 2008
1.2	Reimbursement Request	June 30, 2008
3.5	Water quality data	August 1, 2008
1.3	Contractor Self-Evaluation	August 30, 2008
1.1	Progress Report/Update to Web Page/Meeting Minutes	September 15, 2008
1.2	Reimbursement Request	September 30, 2008
3.5	Water quality data	December 1, 2008
1.1	Progress Report/Update to Web Page/Meeting Minutes	December 15, 2008
1.2	Reimbursement Request	December 30, 2008
4.3	BMP Implementation Report for Aeration BMP	February 1, 2009
3.5	Water quality data	March 1, 2009
1.1	Progress Report/Update to Web Page/Meeting Minutes	March 15, 2009
1.2	Reimbursement Request	March 30, 2009
7.1	Draft Watershed Protection Plan (includes all 9 Elements)	April 15, 2009
1.1	Progress Report/Update to Web Page/Meeting Minutes	June 15, 2009
3.5	Water quality data	August 1, 2009
1.3	Contractor Self-Evaluation	August 30, 2009
7.1	Final Watershed Protection Plan (includes all 9 Elements)	August 31, 2009

Task	Deliverable	Due Date
1.2	Reimbursement Request	August 31, 2009