

Texas Watershed Planning Training Project
CWA 319(h) NPS Grant Program
TCEQ Contract No. 582-11-12866

Quarter no. 4 From 3/1/12 Through 5/31/12

I. Abstract

Work this quarter primarily focused on the continued development of the SELECT/LDC Training; Introduction to Modeling training and Water Quality Monitoring Training. In addition, the planning team met to develop and finalize an agenda for the Texas Watershed Coordinator Roundtable to be held on July 26, 2012 in College Station. The planning team also met to discuss changes to the agenda for the September 24-28, 2012 Texas Watershed Planning Short Course; as well as the future of the Texas Watershed Planning Short Course.

II. Overall Progress and Results by Objective and Task

OBJECTIVE 1: PROJECT COORDINATION AND ADMINISTRATION

Task 1.1: Project Oversight – TWRI will provide technical and fiscal oversight of the staff and/or subgrantee(s)/subcontractor(s) to ensure Tasks and Deliverables are acceptable and completed as schedule and within budget. With the TCEQ Project Manager authorization, TWRI may secure the services of subgrantee(s)/subcontractor(s) as necessary for technical support, repairs and training. Project oversight status will be provided to TCEQ with the Quarter Progress Reports (QPRs).

The following actions have been completed during this reporting period:

- a. TWRI continually monitors project status and budget to ensure tasks and deliverables are acceptable and completed as schedule and within budget.

44% Complete

Task 1.2: QPRs – Progress will be reported to TCEQ by the 15th of the month following each state fiscal quarter for incorporation into the Grant Reporting and Tracking System (GRTS). The Reports are to include the following: status of deliverables for each task; narrative description in Progress Report format.

The following actions have been completed during this reporting period:

- a. TWRI submitted Year 1, Quarter 4 Progress Report on June 15, 2012.

44% Complete

Task 1.3: Reimbursement Forms – Reimbursement forms will be submitted to TCEQ by the last day of the month following each state fiscal quarter. For the last reporting period of the project, Reimbursement Forms are required on a monthly basis.

The following actions have been completed during this reporting period:

- a. The total federal funds expended as of 6/1/2012 were \$33,903.

17% Complete

Task 1.4: Contract Communication – TWRI will participate in a post-award orientation meeting with TCEQ within 30 days of contract execution. TWRI will maintain regular telephone and/or email communication with the TCEQ Project Manager regarding the status and progress of the project in regard to any matters that require attention between QPRs. This will include a call or meeting each January, April, July, and October. Minutes recording the important items discussed and decisions made during each call will be attached to each QPR. Matters that must be communicated to the TCEQ Project Manager in the interim between QPRs include:

- *Requests for prior approval of activities or expenditures for which the contract requires advance approval or that are not specifically included in the scope of work*
- *Notification in advance when TWRI has scheduled public meetings or events, or other major task activities under this contract*

Information regarding events or circumstances that may require changes to the budget, scope of work, or schedule of deliverables; these events or circumstances must be reported within 48 hours of discovery.

The following actions have been completed during this reporting period:

- a. A quarterly conference call was conducted on April 26, 2012 providing an update on project deliverables as well as discussing match for the project.
- b. Minutes were emailed to TCEQ project manager on April 30, 2012 and can also be found in Appendix A.

44% Complete

Task 1.5: Annual Report Article – TWRI will provide an article for the Nonpoint Source (NPS) Annual Report upon request by TCEQ. This report is produced annually in accordance with Section 319(h) of the Clean Water Act (CWA), and it is used to report Texas' progress toward meeting the CWA 319 goals and objectives and toward implementing its strategies as defined in the Texas Nonpoint Source Management Program. The article will include a brief summary of the project and describe the activities of the past fiscal year.

The following actions have been completed during this reporting period:

- a. The Texas Watershed Planning Training article for the NPS Annual Report – along with photos and captions was sent to TCEQ in Quarter 1 (August 10, 2011).

33% Complete

OBJECTIVE 2: MAINTAIN WEB-BASED WATERSHED PLANNING RESOURCES FOR TEXAS WATERSHED COORDINATORS

Task 2.1: Watershed Training Webpage – TWRI will host and maintain an Internet website for information sharing and use by watershed coordinators (<http://watershedplanning.tamu.edu>).

The following actions have been completed during this reporting period:

- a. The Year 1, Quarter 3 Progress Report was posted on the watershed training webpage in the “Projects” section
- b. The “Training” section was updated on the Watershed Planning website; information included:
 - July 26, 2012 Texas Watershed Coordinator Roundtable – RSVP system and additional information
 - Fundamentals of Developing a Water Quality Monitoring Plan – workshop date and location
 - Watershed Modeling using LDC and SELECT – workshop date and location with link to additional information (new LDC/SELECT website)
 - January 22, 2013 Texas Watershed Coordinator Roundtable – date and location
 - Introduction to Modeling training – workshop date and location
- c. There were 275 unique visitors to the webpage during this quarter.

44% Complete

Task 2.2: Maintain Directory of Watershed Resources – TWRI will coordinate with the EFC at Boise State University to maintain the Directory of Watershed Resources with data for Texas-specific funding programs. The Director of Watershed Resources is an on-line, searchable database for watershed restoration funding. The database includes information on federal, state, private, and other funding sources and assistance. This will allow Texas users to query information in a variety of ways including agency sponsor, keyword, or by a detailed search.

The following actions have been completed during this reporting period:

- a. TWRI began working with the Environmental Finance Center this quarter to update the directory.

33% Complete

Task 2.3: Report on the Maintenance of Web-based Watershed Planning Resources for Texas Watershed Coordinators – TWRI will submit a report detailing activities conducted under Task 2 during the current contract.

The following actions have been completed during this reporting period:

- a. No activity to report this quarter.

0% Complete

OBJECTIVE 3: CONDUCT WATERSHED PLANNING SHORT COURSE

Task 3.1: Organize and Deliver 3 WPSC Events – TWRI will continue to coordinate and offer WPSC annually. To accomplish this, TWRI with assistance from the Project Team, will identify key speakers for the course, make arrangements for facilities, advertise the WPSC, conduct registration, and facilitate the delivery of three (3) Texas WPSCs to a total of 80-120 water resource professionals in Texas and the surrounding region. Certificates will be provided to participants upon completion of the course. A registration fee of \$375 will be charged to WPSC participants. One WPSC Scholarship will be offered per year to assist those who lack funds to attend the WPSC. TWRI will work closely with TCEQ and the Project Team to assess the need for and timing of these short courses to best meets the needs of the state. As needed, travel for speakers will be paid for through project funds.

The following actions have been completed during this reporting period:

- a. A planning team meeting was held April 20, 2012. Conference call participants to discuss the September Short Course agenda included:
 - EPA: Henry Brewer, Tina Hendon, Leslie Rauscher
 - TCEQ: Lauren Bilbe, Kerry Niemann
 - TSSWCB: Aaron Wendt
 - TIAER: Larry Hauck
 - Kevin Wagner, Nikki Dictson, Courtney Smith
- b. A few changes were made to the short course agenda and the agenda was emailed to the planning team for final review (Appendix B).
- c. An additional planning team meeting was held on May 15, 2012 to discuss the “future of the short course” and concerns on registration numbers. Conference call participants included:
 - EPA: Henry Brewer, Tina Hendon, Leslie Rauscher, Mike Bira
 - TCEQ: Lauren Bilbe, Kerry Niemann
 - TSSWCB: Aaron Wendt, TJ Helton
 - Kevin Wagner, Courtney Smith
- d. This conference call included discussions on the following options that were presented:
 - Discontinue the short course
 - Keep the short course as-is (5-day at the Mayan Dude Ranch)
 - Make the short course a mix of live presentations and videos and/or webinars; offer the short course in College Station
 - Remove case study presentations from the current agenda; condense the agenda to a two-day course with some live presentations and some videos and/or webinars; keep the basics (9 elements and expectations for each).
- e. A follow-up meeting is planned for next quarter.

33% Complete

Task 3.2: Administer Questionnaires and Evaluations – TWRI will oversee the administration of questionnaires and evaluations to gauge the knowledge gained and how effective the course was for each course participant. Questionnaires will be administered at the beginning and end of selected short courses to demonstrate the course’s effectiveness and to identify areas needing

adjustment. Evaluations will be completed at the end of each short course to receive comments and participant input and also determine watersheds represented and new WPPs initiated by participants at the short course.

The following actions have been completed during this reporting period:

- a. Questionnaires and evaluations will be updated as needed for the September 2012 short course.

33% Complete

Task 3.3: Report on Watershed Planning Short Course Task – TWRI will provide a report detailing the WPSC held and associated activities conducted under Task 3.

The following actions have been completed during this reporting period:

- a. No activity to report this quarter.

0% Complete

OBJECTIVE 4: PROVIDE PROFESSIONAL DEVELOPMENT TRAINING

Task 4.1: Organize and Deliver “Introduction to Modeling” Training – A two-day course will be developed by TWRI and Texas A&M University System personnel in years 1-2 and delivered in subsequent years of the project to provide watershed coordinators with an introduction to watershed modeling. Development is year 1 and 2. Delivery is year 2 and 3. Topics of the course will include (1) purposes and limitations of different models, (2) timelines, (3) data needs (watershed characterization, water quality information), (4) cost estimates, (5) literature values vs. monitoring, (6) Quality Assurance Project Plans (QAPPs), (7) request for bids, (8) presenting models to stakeholders, and (9) contractor interaction with stakeholder groups. The course registration fee is to be determined.

The following actions have been completed during this reporting period:

- a. Updates to the draft agenda were made this quarter (Appendix C) and will be emailed to the planning team for final review.
- b. The first training has been scheduled in conjunction with the January 2013 Texas Watershed Coordinator Roundtable in Temple. The training will be January 23-24.
- c. Next quarter will focus on securing speakers; opening registration and advertising the course.

10% Complete

Task 4.2: Organize and Deliver Training on Watershed modeling using LDC and SELECT – LDCs provide a graphical representation of stream flow and pollutant loading whereby real data can be compared to a stream’s maximum allowable load to indicate reductions needed and help identify the type of pollutant load (i.e. point source vs. NPS). SELECT provides a spatially explicit analysis of land use/land cover, animals/humans in watersheds, and other parameters to assess/determine potential sources of bacteria. The models are being used for Total Maximum Daily Load (TMDL) and WPP development. A two-day course will be developed and delivered in

subsequent years of the project. A \$100 registration fee will be charged for these two-day courses.

The following actions have been completed during this reporting period:

- a. The website providing more information on these tools and this training has been developed; edited and finalized: <http://select.tamu.edu/>.
- b. The first training is set for November 6-7, 2012.
- c. The “Education” section of the new website includes information on the training; short instructor bios; the training agenda and registration form (<http://select.tamu.edu/education/>). The final agenda can be found in Appendix D.
- d. The first draft of the training manual was developed this quarter and emailed to Dr. Karthi for review and additions.
- e. TWRI program coordinator will begin advertising for this training.

33% Complete

Task 4.3: Organize and Deliver Training on Stakeholder Facilitation – Stakeholder facilitation continues to be identified by watershed coordinators as a training need in Texas. To provide this, TWRI will deliver 2 day-long trainings on stakeholder facilitation. A \$30 registration fee will be charged for the stakeholder facilitation programs.

The following actions have been completed during this reporting period:

- a. This task is complete:
 - The first Stakeholder Facilitation training was held July 26, 2011 in Austin in conjunction with the January 2011 Texas Watershed Coordinator Roundtable.
 - The second Stakeholder Facilitation Training was held January 24, 2012 in Waco in conjunction with the January 2012 Texas Watershed Coordinator Roundtable.

100% Complete

Task 4.4: Organize and Deliver Training on Water Quality Monitoring – Training will be developed by TWRI and others and will cover monitoring for (1) watershed characterization and (2) evaluation of water quality improvements and BMP effectiveness from implementation activities. Topics of the training will include: data quality objectives; identifying available data; determining data gaps and needs; monitoring plan development to meet data quality objectives and support modeling; selecting monitoring types, locations, equipment and laboratory analysis; obtaining stakeholder input; developing QAPPs for monitoring and acquiring data; and a workshop portion for collaboratively creating monitoring plans. The course(s) will be developed in years 1-2, and a minimum of one course per year will be delivered in subsequent years.

The following actions have been completed during this reporting period:

- a. The final agenda was emailed to TCEQ project manager last quarter for speaker identification for a few presentations. Waiting to hear back to finalize agenda.
- b. The workshop venue and date have been set for the training, “Fundamentals of Developing a Water Quality Monitoring Plan” for October 3-4, 2012 at the LCRA Redbud Center in Austin.
- c. Next quarter will focus on opening registration and advertising the course.

15% Complete

Task 4.5: Administer Questionnaires and Evaluations –TWRI will oversee the administration of questionnaires and evaluations to gauge the knowledge gained and how effective the course was for each course participant. Questionnaires will be administered at the beginning and end of each course to demonstrate the course’s effectiveness and to identify areas needing adjustment.

The following actions have been completed during this reporting period:

- a. TWRI administered questionnaires and evaluations to Stakeholder Facilitation Training participants for each training (July 2011 and January 2012).
- b. TWRI Program Coordinator will develop evaluations for additional trainings to be offered.

25% Complete

Task 4.6: Report on Professional Development Trainings Provided –TWRI will submit a report detailing professional development trainings provided and associated activities conducted under Task 4.

The following actions have been completed during this reporting period:

- a. No activity to report this quarter.

0% Complete

OBJECTIVE 5: ORGANIZE AND FACILITATE TEXAS WATERSHED COORDINATOR ROUNDTABLES

Task 5.1: Facilitate Watershed Coordinator Roundtables – TWRI will coordinate with TCEQ, TSSWCB and EPA to organize and facilitate a total of six (6) semi-annual Watershed Coordinator Roundtables. These face-to-face Roundtables will build upon the fundamental knowledge conveyed through the WPSC and establish a continuing dialogue between watershed coordinators in order to facilitate interactive solutions to common issues being faced by watershed coordinators statewide. Periodically, TWRI, in conjunction with TCEQ and the Project Team will review the continued need for semi-annual Roundtables as well as their specific timing.

The following actions have been completed during this reporting period:

- a. Based on evaluation results from the January 25, 2012 Roundtable – the July Roundtable was scheduled for July 26, 2012 in College Station.
- b. The agenda was finalized this quarter; speakers confirmed; and information was posted on the watershed planning website (<http://naturalresourcestraining.tamu.edu/schedule/july-26-2012-texas-watershed-coordinator-roundtable/>).
- c. As of June 1, 2012, 33 RSVPs have been received. More announcements will be sent out prior via the watershed coordinators listserv prior to July.

50% Complete

Task 5.2: Administer Evaluations – TWRI will oversee the administration of evaluations to gauge the knowledge gained and how effective the Roundtable was for each participant. Evaluations will be administered at the end of each Roundtable to determine future topics of discussion.

The following actions have been completed during this reporting period:

- a. Evaluation will be prepared and distributed at the July Roundtable. Results will be emailed to planning team in preparation for the January 2013 Roundtable.

50% Complete

Task 5.3: Report on the Texas Watershed Coordinator Roundtables – TWRI will submit a report detailing Texas Watershed Coordinator Roundtable meetings provided and associated activities conducted under Task 5.

The following actions have been completed during this reporting period:

- a. No activity to report this quarter.

0% Complete

OBJECTIVE 6: SUBMIT FINAL REPORT

Task 6.1: Draft Report

The following actions have been completed during this reporting period:

- a. No activity to report this quarter.

0% Complete

Task 6.2: Final Report

The following actions have been completed during this reporting period:

- a. No activity to report this quarter.

0% Complete

III. Related Issues/Current Problems and Favorable of Unusual Developments

- TWRI, TCEQ, and EPA worked closely this quarter to provide needed amendments to the contract

IV. Projected Work for Next Quarter

- Conduct the Texas Watershed Coordinator Roundtable on July 26, 2012.
- TWRI will prepare and submit Year 1, Quarter 5 Progress Report.
- Continue preparations for additional trainings to be offered as part of the project.

Appendix A: Quarterly Conference Call – Minutes

Texas Commission on Environmental Quality Nonpoint Source Program

**Contract No. 582-11-12866
Quarterly Conference Call
TWRI Texas Watershed Planning Training Project**

April 26, 2012 (1:00–3:00 p.m.) Conference Call

Goal: *Update on match; registration process; and project deliverables*

MINUTES

1. Contract Terms & Conditions

a. *Matching funds*

The second quarter invoice was rejected because EPA did not approve the use of program income with the grant, according to 40 CFR Part 30.24

TCEQ brought up the issue on documenting non-federal and federal registration funds received from the Texas Watershed Planning Short Course and associated trainings as part of the project.

Lauren Bilbe suggested that TWRI document these funds in the invoice before the 60/40 split.

TWRI will develop form (with help of TCEQ) to send to past training participants in regards to what type of funds were used to register for the following:

- Texas Watershed Planning Short Course (Nov. 2011)
- Stakeholder Facilitation Training (Jan. 2011)
- Stakeholder Facilitation Training (July 2011)

TCEQ will follow up with EPA for approval to use program income as match as long as funds are being documented. TCEQ will follow up with TWRI (first week in May).

b. *Registration Process*

Pending EPA's approval, the registration forms will be updated to include a check box

for the type of funds paid for (federal or non-federal).

Registrants will be strongly encouraged to pay with non-federal funds.

In addition, it is possible that a discounted registration fee will be offered to participants registering with non-federal funds (pending approval from EPA). For example: Short Course participants using state or local funds will continue to pay the \$350 registration fee; participants paying with federal funds will pay a \$650 registration fee (or more).

2. Project Updates

Schedule of Deliverables is being reviewed by Kerry Niemann (TCEQ) for final approval of update dates for future trainings.

Water Quality Monitoring Training

- “Fundamentals of Developing a Water Quality Monitoring Plan” set for October 3-4, 2012
- Location was to be TCEQ Conference Room but may need to change due to water access/availability; TWRI will research new venue
- TCEQ is helping to identify a few instructors for the agenda; agenda is very close to finalization

Introduction to Modeling Training

- Set for January 23-24, 2013 in Temple (after the Roundtable)
- Srinivasan has and is reviewing draft agenda
- Next planning meeting to finalize agenda anticipated for late May

Watershed Modeling using LDC and SELECT

- Set for November 6-7, 2012 in College Station on TAMU campus
- Received materials from Dr. Karthikeyan for website and manual development
- Agenda is close to finalization

Texas Watershed Coordinator Roundtable

- Set for January 22, 2013 prior to the Intro to Modeling Workshop in Temple

Texas Watershed Planning Short Course

- Agenda near finalization based on April 20 conference call with planning team
- Instructors have been contacted
- Registration pending (see previous section)

*Appendix B: Texas Watershed Planning Short Course
September Draft Agenda*

Texas Watershed Planning Short Course
Course Agenda – September 24-28, 2012

Monday, September 24, 2012

Facilitator: Kevin Wagner

- 11:00 – 1:00 pm **Registration (Distribute Knowledge Assessment)**
A pre-course examination will determine the knowledge level of each participant prior to going through the course. The pre-course exam results will be compared to the post-course exam results to assess course impact/knowledge gained.
- 1:00 – 1:30 pm **Introduction..... Wagner**
This session will provide the group (1) the opportunity to introduce themselves and the watersheds they are working in, (2) information on facilities and ground rules, and (3) an overview of the course, its purpose and structure.
- 1:30 – 2:30 pm **Nine Elements of Watershed Protection Plans & EPA’s Expectations..... EPA**
This session will provide an overview of the Nine Elements to be included in a WPP as outlined in Chapter 2 of the *Handbook* and the EPA Region 6 Review Guide for Watershed-Based Plans.
- 2:30 – 3:30 pm **Perspectives on Watershed PlanningPanel**
A panel composed of **EPA** (EPA), Aaron Wendt (TSSWCB), and Kerry Niemann (TCEQ) will discuss (1) the goals and importance of WPPs, (2) how WPPs fit into state and federal objectives and interact with other state and federal programs, and (3) current issues affecting watershed planning efforts.
- 3:30 – 3:50 pm **Break**
- 3:50 – 5:15 pm **Working with Stakeholders to Move the Process ForwardMacPherson**
Stakeholders form the backbone of your watershed planning effort. Learn tips on how to get off on the right foot and keep the energy going throughout your watershed planning and implementation program. Topics to be addressed include: determining who needs to be involved, making meetings count, diffusing conflict, making decisions using a consensus-based approach, and sustaining the stakeholder group. This session will focus on Chapter 3 of the *Handbook*.
- 5:15 – 6:00 pm **Partnership Building Experiences in Plum Creek Dictson**
Experiences in Plum Creek watershed with getting local involvement, announcing meetings, setting up the committee and subcommittees, publicizing the effort, what needs to be discussed/decided at each meeting, and timelines will be discussed. Sample invitation letters, ground rules, press releases, and other materials will be provided.
- 6:45 pm **Dinner**

Tuesday, September 25, 2012

Facilitator: Nikki Dictson

7:00 – 8:00 am	Breakfast
8:15 – 8:30 am	Expectations for Element E Dictson The expectations for and an example of Element E will be reviewed and discussed to provide the group an understanding of the information/education components of the WPP.
8:30 – 9:30 am	Using Outreach to Develop & Implement WPPs.....MacPherson Outreach is a powerful tool to get stakeholders involved early in the planning process, promoting behavior change in the watershed, and enhancing the implementation of your management strategies in the watershed. Learn tips and tools to conduct effective outreach without breaking the bank. This session will focus on Chapter 12.2 of the <i>Handbook</i> .
9:30 – 9:45 am	Texas Watershed Steward Program Dictson This session provides an overview of the Texas Watershed Steward Program, a sciences-based, watershed education designed to help citizens identify and take action to address local water quality issues. Incorporation of this program into WPP efforts empowers stakeholders by providing them with the knowledge to make informed decisions about water resources.
9:45 – 10:05 am	Break
10:05 – 10:35 am	Expectations for Element A EPA The expectations for and an example of Element A will be reviewed and discussed to provide the group an understanding of what is necessary to identify causes and sources of water quality impairments and concerns.
10:35 – 11:15 am	Defining the Scope of the WPP Wendt This session will discuss identifying issues of concern, developing preliminary goals, and selecting indicators of environmental conditions as outlined in Chapter 4 of the <i>Handbook</i> .
11:15 – 12:00 pm	Gathering data to assess your watershed..... Dictson What data do you need? Where do you find the data? How do you get info from TCEQ and other agencies? This session will examine (1) materials from Chapters 5-6 of the <i>Handbook</i> ; (2) how GIS may be used for watershed analysis, source identification and watershed characterization; and (3) sources of data in Texas and how best to obtain it.
12:00 – 1:00 pm	Lunch
1:00 – 2:10 pm	Analyzing Data to Characterize Your Watershed Davenport How do you analyze your data? What tools are available? Is modeling needed? This session will concentrate on materials from Chapters 7 and 8.1-8.2 of the <i>Handbook</i> in order to provide the group an understanding of the methods/options available for analyzing watershed data and estimating pollutant loads. Simplistic methods for calculating loads and assessing sources will be presented. The

session will also examine refining goals, identifying management objectives, and determining load reductions needed as described in Chapter 9 of the *Handbook*.

2:10 – 3:10 pm **The Good, the Bad, and the Ugly****MacPherson**
Participants will learn techniques to improve their outreach materials and critique samples to determine their effectiveness in reaching the audience and communicating the message.

3:10 – 3:30 pm **Break**

3:30 – 4:00 pm **Expectations for Element B****Wendt**
The expectations for Element B will be reviewed and discussed to provide the group with an understanding of the level of detail and effort needed to determine 'acceptable' pollutant loadings, and whether or not load reductions are needed to reach acceptable levels.

4:00 – 5:15 pm **Overview of Models for Estimating Pollutant Loads & Reductions****Hauck**
If modeling is needed, what models are available and how do you select a model? This session will present materials from Chapter 8.3-8.5 of the *Handbook* to give the group an overview of the models available, expectations for what each model can deliver (i.e. what you can and cannot get from them), costs, and factors to consider when selecting models (i.e. timelines and data needs for complex watershed models).

6:45 pm **Dinner**

Wednesday, September 26, 2012

Facilitator: Kevin Wagner

7:00 – 8:00 am **Breakfast**

8:00 – 9:00 am **Simple Tools for Estimating Loads and Load Reductions**.....**Hauck**
This session will describe and demonstrate simple tools (i.e. load duration curves (LDC) and SELECT model) to determine needed pollutant load reductions and assess potential sources of the pollutants. This session will also demonstrate the use and integration of LDC, and SELECT models in the development of the Plum Creek WPP.

9:00 – 9:30 am **Overview and Expectations for Element C** **EPA**
This session will provide a discussion of expectations for Element C as well as steps to select management practices as described in Chapter 10 of the *Handbook*.

9:30 – 10:00 am **TSSWCB Presentation Title Here**.....**Wendt**

10:00 – 10:20 am **Break**

10:20 – 11:10 am **Agricultural NPS Measures** **Wagner**
Agricultural NPS measures in Texas are typically implemented through the SWCDs, TSSWCB, and NRCS as part of a Water Quality Management Plan or Resource Management System. This session provides an overview of (1)

agricultural BMPs and these plans, (2) how to develop a preliminary list of agricultural BMPs to address the issues of concern, (3) finding information on the effectiveness of agricultural BMPs, and (4) estimating BMP implementation costs.

11:10 – 12:00 pm **Urban NPS Measures Davenport**
This session will provide an overview of (1) urban NPS measures, (2) how to develop a preliminary list of urban BMPs to address the issues of concern, (3) finding information on the effectiveness of urban BMPs, (4) estimating BMP implementation costs; and (5) stormwater permitting.

12:00 – 1:00 pm **Lunch**

1:00 – 2:30 pm **Wastewater Treatment Systems, Wastewater Issues,..... Magin/Gerlich Permits and Online Wastewater Treatment Modules**
A presentation providing a brief overview of wastewater treatment systems (WWTFs and OSSFs), their impacts, and effectiveness in removing pollutants in addition to identifying and addressing wastewater treatment system issues in your watershed. As well as an overview of Online Educational Modules on wastewater treatment plants, onsite wastewater treatment systems and fats, oils, and grease.

2:30 – 3:10 pm **Building Trust among Watershed Stakeholders Vargas**
This session will summarize a case study that employed Narrative communication tools to gain stakeholder trust and obtain their support for incorporating triple bottom line analysis in the WPP process.

3:10 – 3:30 pm **Break**

3:30 – 4:30 pm **Decision Support Tools for Advancing Triple Bottom Line Analysis... Vargas**
This session will present decision methods empowering stakeholders to better evaluate economic, social, and environmental impacts and benefits (Triple Bottom Line Analysis) associated with WPP management strategies.

4:30 – 5:00 pm **Expectations for Elements F, G, and H..... Wagner**
The expectations for Element F, G, and H will be reviewed and discussed to provide the group with an understanding of the level of detail and effort needed to schedule implementation, describe interim milestones, and establish criteria to determine if load reductions are achieved.

6:45 pm **Dinner**

Thursday, September 27, 2012

Facilitator: Nikki Dictson

7:00 – 8:00 am **Breakfast**

8:00 – 9:30 am **Selecting BMPs: Economics and Finance IssuesPanel**
A panel composed of Ed Rister (TAMU), Robert Adair (Houston Land/Water Sustainability Forum), and Ken Banks (City of Denton) will discuss the numerous BMPs, including Low Impact Development/Green Infrastructure which can be used to attain the site-specific objectives of watershed management.

In addition, an overview of the economic evaluations used to analyze BMP implementation in the Hickory Creek Watershed, Denton, Texas, will be provided.

- 9:30 – 10:00 am **Targeting Critical Areas and Scheduling Implementation.....Davenport**
To achieve the most effective and immediate benefit, BMP implementation must be targeted to the most critical areas. This session discusses the targeting of control measures and the importance of this effort to the ultimate success of the WPP. This session also discusses scheduling implementation efforts (Element F) as described in the final management strategy (Chapter 12.3 of the *Handbook*).
- 10:00 – 10:20 am **Break**
- 10:20 – 11:00 am **Developing Interim Milestones & Criteria to Measure Progress....Davenport**
This component of the WPP is where you define in realistic terms how you will determine (1) if you are on track and making progress or not, (2) how/when you evaluate your progress, and (3) what to do if watershed improvements are not on track. This session will discuss developing interim measurable milestones (Element G) and establishing a set of criteria to measure progress (Element H) toward meeting water quality goals as presented in Chapter 12.4-12.5 of the *Handbook*.
- 11:00 – 12:00 pm **Designing & Implementing Effectiveness Monitoring – Element I.....Hauck**
This session will provide guidance on developing Element I as described in Chapter 12.6 of the *Handbook*. Selecting an appropriate experimental design that incorporates previous and ongoing monitoring efforts will be discussed.
- 12:00 – 1:00 pm **Lunch**
**Meet at the Pavilion at 1 p.m. for hayride to river for next presentation.
Please note: Participants will divide into 3 groups for the presentations below*
- 1:00 – 2:30 pm **Water Quality Monitoring:Harmel/Banks/Denton**
Practical Guidelines & Lessons Learned
An overview of the how to use automated samplers and data sondes will be discussed. Practical guidance on installation and operation will be presented along with information on difficulties encountered and data uncertainty and how to communicate to stakeholders. In addition, an overview of the Texas Stream Team; stream side presentation will describe how trained citizen monitoring efforts are valuable components to any WPP or ambient monitoring program. Staff will demonstrate field collection data techniques and provide hands-on opportunities for interested participants.
**sessions are 30 minutes each*
- 2:30 – 2:50 pm **Break**
- 2:50 – 3:20 pm **Expectations for Element DEPA**
This session will discuss expectations for Element D which describes the financial and technical assistance needs and identifies the sources/authorities that will be relied on for implementation as described in Chapter 12.7 of the *Handbook* (Element D). Funding sources in Texas will be discussed along with match requirements and the mechanisms for requesting it.

3:20 – 4:05 pm **Implementing Watershed Protection and ManagementBanks
Strategies in Hickory Creek**

This presentation will discuss implementing BMPs in Hickory Creek, Denton, Texas. The presentation will briefly discuss modeling and analyses conducted for the watershed and describe the process of working with modeling information, economic analyses, and a stakeholder group to target and implement demonstration management practices within the watershed. The presentation will also cover how the information learned during this process and additional analyses were used to implement best management practices in a large master planned development in the Hickory Creek Watershed.

4:05 – 4:30 pm **Sustaining Watershed Groups for Implementation Success Wagner**

This demonstration will provide an overview of the Directory of Watershed Resources developed by the Environmental Finance Center (EFC) Network for helping implement watershed plans.

6:45 pm **Dinner**

Friday, September 28, 2012

Facilitator: Kevin Wagner

7:00 – 8:00 am **Breakfast**

8:15 – 8:45 am **Putting It All Together Dictson**

This session will discuss assembling a WPP, gaining stakeholder approval, submitting the WPP for state and federal review, developing an evaluation framework and devising a method for tracking progress as described in Chapter 12.8-12.11 of the *Handbook*.

8:45 – 9:15 am **Implementing Your WPP – Arroyo Colorado Case StudyFlores**

This session will focus on Arroyo Colorado watershed protection plan implementation efforts built upon the stakeholder efforts and partnerships developed during the WPP development process. Topics include implementation strategies, adaptive management, and approaches to addressing long-term sustainability of your WPP (i.e. grant writing, developing 501(c)(3), merging/collaborating with existing organizations and creating community level commitment).

9:15 – 10:30 am **Watershed Protection Plan Implementation in Oklahoma..... Phillips**

This session will focus on watershed protection plan development and implementation efforts in Oklahoma, their experiences, and lessons learned.

10:30 – 10:50 am **Break**

10:50 – 11:20 am **Perspectives on Watershed Group Organization..... Dictson**

As watershed protection efforts move beyond planning stages, transition to implementation and maintaining public involvement raise some challenges with implications on long-term sustainability. This presentation will discuss approaches for sustaining your watershed group once your watershed plan has been developed.

11:20 – 11:30 am **Course Wrap-Up..... Wagner**
Review of Nine Key Elements & the EPA Review Guide.

11:30 – 12:00 pm **Knowledge Assessment/Course Evaluation**
A post-course examination will be distributed and the results compared to the pre-course exam in order to determine course impact and knowledge gained. A course evaluation will also be distributed to gain feedback on how to improve the course.

12:00 pm **Adjourn; Lunch**
Certificates will be distributed as the class turns in their post-course exam and course evaluations.

Appendix C: DRAFT Introduction to Modeling Training Agenda

Introduction to Modeling Training

January 23-24, 2013

Agenda

Wednesday, January 23

9 a.m. to 4 p.m.

- 9:00 – 9:15 a.m. **Introductions & Workshop Overview** [Srini]
Workshop purpose: Provide participants with an in depth introduction to watershed modeling and models available for use. Participants will gain an understanding of what model is needed for watershed protection planning and the resources needed to take next steps.
- 9:15 – 9:45 a.m. **How Modeling Fits in to Watershed Protection Planning** [Kevin Wagner]
This presentation will provide an overview on watershed modeling and how modeling results fit in to 9 Elements of watershed protection plans.
- 9:45 – 10:45 a.m. **Models Overview: Purposes and Limitations** [Srini]
This presentation will provide a broad overview of purposes and limitations of currently available models including their strengths and weakness; including validation and calibration. Models presented will include: SWAT, HSPF, STEPL, EFDC, SELECT, QUAL2K, WAS, CE-QUAL-W2, GULFW, APEX.
- 10:45 – 11:00 a.m. **Break**
- 11:00 – 12:00 p.m. **Models Overview: Purposes and Limitations ... continued**
- 12:00 – 1:00 p.m. **Lunch** (*catered lunch or bring your own*)
- 1:00 – 2:00 p.m. **Factors to Consider when Modeling: Time & Money** [Srini]
What are the data needs and requirements for models; capabilities; time; money; etc. What data is available for calibrating/validating selected model?
- 2:00 – 3:00 p.m. **Selecting the Correct Model: How to Interview your Contractor** [TCEQ/TSSWCB]
Working with contractors; request for bids including process and timeframe. How to verify the appropriate model is being used and contractor interactions with stakeholders.
- 3:00 – 3:15 p.m. **Break**
- 3:15 – 4:00 p.m. **Stakeholder Communications and Modeling Results** [Stephanie Johnson]
Stephanie Johnson of Houston Engineering will provide examples on her experiences in presenting modeling results to stakeholders and communicating effectively with stakeholders.

- 9:00 – 10:00 a.m. **Quality Assurance Project Plans (QAPPs)**.....[**Kyle Girten, TCEQ**]
Kyle Girten, TCEQ will present QAPPs from a conceptual standpoint. What needs to be covered; how the data need to be described; references to uncertainty estimation and sensitivity analysis; requirements for gathering existing data.
- 10 – 10:45 a.m. **Literature values vs. monitoring**.....[**Srini or Larry TAIER**]
How to model with limited observations? What are some of the minimum data or analysis needed (LDC, estimator, export coefficient, literature values, GIS landuse based)
- 10:45 – 11:00 a.m. **Break**
- 11 – 12 p.m. **Timelines and Cost of Modeling**.....[**Srini**]
Cost and how far each of these models will take you
- 12:00 – 1:00 p.m. **Lunch** (*catered lunch or bring your own*)
- 1:00 – 2:00 p.m. **BMP Modeling and Modeling for Implementation Plan and on-going wq goals**
- 3:00 – 3:30 p.m. **Wrap Up (Kevin)**
Discuss overview and how modeling results fit in to 9 Elements of watershed protection plans.

Handouts:

- copies of presentations;
- one page handout from each presentation or cheat sheet type of document – condensed
- Decision matrix flow chart – summarize steps to choose an appropriate model

Include on Flash Drive/CD:

- 2005 EPA document
- Chapter 8 of handbook
- Watershed academy modeling module
- One page sheet of Modeling QAPPS and website – list of good examples

Appendix D: Watershed Modeling using LDC and SELECT Training – Agenda

**Watershed modeling using LDC and SELECT
November 6-7, 2012**

Texas A&M University • Horticulture/Forest Science Bldg. • Lab 125

Agenda

Tuesday, November 6

10 a.m. to 5 p.m.

- 10–10:30 a.m. **Introductions & Workshop Overview** [Kevin Wagner, TWRI]
- 10:30–11:15 a.m. **Introduction to Load Duration Curves** [R. Karthikeyan & Kyna Borel, AgriLife Research]
- 11:15–12 p.m. **LDC Demonstration** [R. Karthikeyan & Kyna Borel, AgriLife Research]
- 12–1 p.m. **Lunch** (catered lunch or bring your own)
- 1–2 p.m. **Assignment: Estimating Pollutant Loads for Plum Creek Using LDCs** [Group]
- 2–3 p.m. **Discuss LDC Assignment** [Group]
- 3–3:20 p.m. **Break**
- 3:20–5 p.m. **Introduction to SELECT** [R. Karthikeyan & Kyna Borel, AgriLife Research]

Wednesday, November 7

9 a.m. to 3:45 p.m.

- 9–9:30 a.m. **Gathering animal density data for SELECT** [Kevin Wagner, TWRI]
- 9:30–11 a.m. **SELECT Demonstration** [R. Karthikeyan & Kyna Borel, AgriLife Research]
- 11–11:20 a.m. **Break**
- 11:20–12 p.m. **Assignment: Estimating Pollutant Sources for Plum Creek Using SELECT** [Group]
- 12–1 p.m. **Lunch** (catered lunch or bring your own)
- 1–2:30 p.m. **Complete SELECT Assignment** [Group]
- 2:30–3:30 p.m. **Discuss SELECT Assignment** [Group]
- 3:30–3:45 p.m. **Wrap Up** [Kevin Wagner, TWRI]