

**Texas AgriLife Extension Service
Texas Water Resources Institute**

**Texas Watershed Planning Short Course Project
EPA Clean Water Act §319(h) Grant
TCEQ Agreement No. 582-7-77049**

Quarter no. 8 From 12/1/08 Through 2/28/09

I. Abstract

This quarter, activities focused on finalizing preparations for and conducting the second offering of the Texas Watershed Planning Short Course. A total of 41 water professionals participated in the January 12-16, 2009 course. On a scale of 1-5, the course received a rating of 4.43, up from a rating of 4.0 for the first short course. As indicated by the pre- and post-course exam, a 24% increase in knowledge was documented. Preparations for the third short course began this quarter. Minor adjustments to the agenda and exam are being made to further improve the training. The Watershed Planning Short Course Website (<http://watershedplanning.tamu.edu/>) has been visited by a total of 2,106 visitors since it became accessible online. It will continue to be updated as new material is developed for the course. Next quarter, preparations will continue for the third short course scheduled for August 17-21, 2009. Finally, TWRI is working with TetraTech to offer “Getting In Step” training around the state in September.

II. Overall Progress and Results by Objective and Task

OBJECTIVE 1: PROJECT COORDINATION AND ADMINISTRATION

Task 1.1: Team Organization – TWRI will assemble a team made up of university, TCEQ, TSSWCB, EPA, TCE and Texas River Systems Institute personnel, along with EPA trained Watershed Coordinators, to guide the development and delivery of the Texas Watershed Planning Short Course to water professionals throughout Texas. This team will meet quarterly to discuss project status, provide input, and coordinate project activities. Quarterly meetings will consist of face-to-face meetings, teleconferences, and TTVN meetings as appropriate.

The following actions have been completed during this reporting period:

- a. On February 20, a planning team meeting was held via conference call to discuss the outcomes of the January Short Course. Recommendations were made on how best to revise the Agenda and the Pre-/Post-Short Course Exam for the August Short Course.
- b. On February 16, the TWRI Project Manager contacted instructors for the August Short Course to confirm availability.

80% Complete

Task 1.2: Project Coordination – TWRI will coordinate the project with other ongoing watershed efforts including, but not limited to the Southern Region Water Quality Coordination Project, TSSWCB Wharton Regional Office Watershed Coordination Project, TCE Watershed Stewardship Program, and TCEQ TMDL Program.

The following actions have been completed during this reporting period:

- a. Texas AgriLife Extension Service (Extension), formerly TCE, is a member of the planning team and has been subcontracted to assist with the Short Course, ensuring coordination with the Watershed Stewardship Program and Southern Region Water Quality Coordination Project.
- b. TSSWCB is a member of the planning committee and has participated in all planning team meetings. Extension and TWRI regularly participate in the TSSWCB Wharton Regional Office Watershed Coordination Project, further ensuring coordination.
- c. TCEQ TMDL Program personnel are members of the planning team and participate in planning meetings when possible.

80% Complete

Task 1.3: Quarterly Progress Reports – TWRI will prepare electronic quarterly progress reports (QPRs) for submission to the TCEQ, TSSWCB, EPA, and all members of the team. QPRs will be submitted 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 (1) Status of deliverables for each objective and (2) Narrative description in Progress Report format.

The following actions have been completed during this reporting period:

- a. TWRI submitted Year 2, Quarter 3 Progress Report on December 15, 2008.

80% Complete

Task 1.4: Project Oversight – TWRI Project Manager will provide technical and fiscal oversight to ensure Tasks and Deliverables are acceptable and completed as scheduled and within budget. With TCEQ Project Lead authorization, TWRI may secure the services of contractors as necessary. Project oversight status will be provided with the Quarterly Progress Status Reports. In addition, TWRI will attend meetings with project manager and other meetings, as needed, to review project status, deliverables, etc.

The following actions have been completed during this reporting period:

- a. Subcontracts were initiated with the Texas Institute for Applied Environmental Research (TIAER) at Tarleton State and the River Systems Institute (RSI) at Texas State to secure assistance with development and delivery of the Short Course. As of 2/28/09, the following expenditures had been reported:
 - TIAER = \$1,444
 - RSI = \$1,027

- b. Subaccounts were initiated with Texas AgriLife Research (Biological and Agricultural Engineering Department) and Texas AgriLife Extension Service (Soil and Crop Sciences Department) to secure assistance with development and delivery of the Short Course. As of 11/31/08, the following expenditures had been reported:

- Texas AgriLife Research = \$13,939
- Texas AgriLife Extension Service = \$8,716

80% Complete

Task 1.5: Reimbursement Forms – TWRI will submit appropriate Reimbursement Forms (2 copies), purchase vouchers (269a, and 269a 1-4) and Small and/or Minority Owned Business Report (where applicable) by the last day of the month following each state fiscal quarter.

The following actions have been completed during this reporting period:

- a. The total federal funds expended as of November 2008 were \$85,349.04.

45% Complete

Task 1.6: Contractor Evaluation – TWRI will participate in Contractor Evaluation.

The following actions have been completed during this reporting period:

- a. Contractor Performance Evaluation Reports for years 1 and 2 have been submitted to TCEQ. The third evaluation is expected in August 2009.

66% Complete

OBJECTIVE 2: DEVELOP TRAINING MATERIALS AND EDUCATIONAL PROGRAM FOR WATERSHED PLANNING SHORT COURSE

Task 2.1: Compile and Summarize Existing Programs – TWRI will collect and compile information about existing training programs.

The following actions have been completed during this reporting period:

- a. Information on existing programs was compiled and discussed with the planning team during the first and second quarters. No further work is planned.

100% Complete

Task 2.2: Develop Training Program – As directed by the TCEQ and Project Team, TWRI will modify existing training programs, such as the EPA Watershed Training Materials and those found as a result of subtask 2.1, to fit the needs of Texas professionals.

The following actions have been completed during this reporting period:

- a. Based on input from the Planning Team and second short course participants, the course agenda is being revised to improve the third Short Course. The tentative agenda for August 17-21, 2009 Short Course is attached (Appendix A).

90% Complete

Task 2.3: Watershed Training Webpage – TWRI will develop (Months 1-3), host, and maintain (Months 3-36) an Internet Web site for information sharing and use by short course participants.

The following actions have been completed during this reporting period:

- a. TWRI developed the Website (<http://watershedplanning.tamu.edu/>) in May 2007 for information sharing and use by short course participants.
- b. The Website was viewed by 341 unique visitors in December 2008.
- c. The Website was viewed by 200 unique visitors in January 2009.
- d. The Website was viewed by 114 unique visitors in February 2009.
- e. This quarter, the Website was viewed by 655 unique visitors. In 2008, the Website was viewed by a total of 1,612 unique visitors. Including the 180 unique visitors in 2007, a grand total of 2,447 unique visitors have viewed the Website.

80% Complete

OBJECTIVE 3: CONDUCT WATERSHED PLANNING SHORT COURSE AND OTHER WATERSHED TRAINING

Task 3.1: Organize Short Course Events – TWRI will identify key speakers for training, make all arrangements for facilities, advertise the short course, conduct registration, and make all travel arrangements for speakers. Travel for speakers will be fully paid for through project funds.

The following actions have been completed during this reporting period:

- a. The third *Watershed Planning Short Course* is set for August 17-21, 2009
- b. TWRI has reserved the Mayan Ranch for the third course.
- c. Eighteen speakers will assist as instructors for the third Short Course.
- d. Registration for the third Short Course was opened on February 17, 2009. Registration reminders will be emailed to prospective participants identified by EPA, TCEQ, TSSWCB and others on a monthly basis until registration is filled.
- e. In February, TWRI mailed *Water Resources Training Courses* postcards highlighting upcoming training courses hosted by TWRI (including the *Watershed Planning Short Course*) to 5,200 engineers in training statewide.
- f. On January 15, February 5, and March 4, TWRI sent *Water Resources Training Courses* e-mail updates regarding training courses (including the *Watershed Planning Short Course*) to state agencies, river authorities, consulting firms, and academia.

66% Complete

Task 3.2: Deliver Short Course – TWRI will facilitate the delivery of the Texas Watershed Planning Short Course to 120 water professionals in Texas and the surrounding region, providing certifications to participants. A \$350 registration fee will be charged to short course participants. As funding and need allow, additional offerings of the course will be considered.

The following actions have been completed during this reporting period:

- a. A total of 84 water professionals have participated in the Texas Watershed Planning Short Courses held June 2-6, 2008 (43) and January 12-16, 2009 (41).

70% Complete

Task 3.3: Organize Applied Fluvial Geomorphology Short Course Event – TWRI will coordinate with Wildland Hydrology to provide Applied Fluvial Geomorphology Short Course to 40 water professionals in Texas. A registration fee of \$500 will be charged to short course participants.

The following actions have been completed during this reporting period:

- a. Forty-four participants from TPWD, TCEQ, TXDOT, TFS, Extension, and TWRI participated in the AFG Short Course held on January 28-February 1, 2008.

100% Complete

Task 3.4: Develop and Administer Questionnaire – TWRI will oversee the development of a questionnaire to gauge the knowledge gained by the course participants. This questionnaire will be administered at the beginning and end of each short course to demonstrate the course's effectiveness and identify areas of the course needing adjustment.

The following actions have been completed during this reporting period:

- a. The short course evaluation (Appendix B) indicated that participants of the second short course were very satisfied with the course. On a scale of 1-5, the rating for the overall satisfaction of the short course was 4.43 (i.e. 87% satisfied). Ratings for individual presentations ranged from 3.70 – 4.66.
- b. The pre- / post-course exam again turned out to be very difficult for the course participants. The average on the pre-course exam was 58 and the average on the post-course exam was 71. The exam is being re-evaluated in preparation for the Third Course. The River Systems Institute is leading this effort. However, despite the difficulty of the exam, it did demonstrate an overall improvement in knowledge of almost 24%.

66% Complete

OBJECTIVE 4: SUBMIT FINAL REPORT

Task 4.1: Draft Report

The following actions have been completed during this reporting period:

- a. No activity.

0% Complete

Task 4.2: Final Report

The following actions have been completed during this reporting period:

- a. No activity.

0% Complete

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

- N/A

IV. Projected Work for Next Quarter

- Prepare and submit Year 2, Quarter 4 Progress Report
- Update Website as materials are developed
- Make needed adjustments to short course agenda & materials and complete arrangements for third short course
- Market and conduct registration for third *Texas Watershed Planning Short Course*

Appendix A

Texas Watershed Planning Short Course

Course Agenda – August 17-21, 2009

Monday, August 17, 2009

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 – 2:00 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, (3) an overview of the course, its purpose and structure, and (4) an introduction and background on the watershed planning process as described in Chapter 2 of EPA's *Handbook for Developing Watershed Plans to Restore and Protect Our Waters (Handbook)*.
- 2:00 – 2:30 pm **Nine Elements of a Watershed Protection Plan Rush**
Provide an in-depth overview of the Nine Elements to be included in a WPP as outlined in Chapter 2 of the *Handbook*.
- 2:30 – 3:30 pm **Perspectives on WPPsPanel**
EPA, TSSWCB, TCEQ, and local groups will discuss (1) the goals and importance of WPPs, (2) how WPPs fit into local, state and federal objectives and interact with other local, 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**
- 8:00 – 9:00 pm (optional) **Q & A Dictson**
 This session provides participants new to the watershed protection planning process the opportunity to discuss issues and questions regarding partnership building, the nine key elements, and WPP perspectives with other watershed coordinators, EPA, TCEQ and TSSWCB. Participants will also review a list of commonly used acronyms in watershed planning.

Tuesday, August 18, 2009

Facilitator: Nikki Dictson

- 8:00 – 8:45 am **Breakfast**
- 8:45 – 9:30 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 *Handbook*.
- 9:30 – 10:40 am **Gathering data to assess your watershed..... Dictson/Wagner**
 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 *Handbook*; (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.
- 10:40 – 11:00 am **Break**
- 11:00 – 12:00 pm **Using Outreach to Develop & Implement WPPs - Element E.....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 *Handbook*.
- 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 *Handbook* 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 UglyMacPherson**
 Participants will learn techniques to improve their outreach materials and critique samples to determine their effectiveness in reaching the audience and communicating the message.

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| 3:10 – 3:30 pm | Break |
| 3:30 – 4:30 pm | Web-Based Tools for Watershed Assessment & Management McDonnell Web-based tools available from EPA to support watershed planning will be reviewed. |
| 4:30 – 5:15 pm | Revising the Texas Water Quality Standards Hamilton What can watershed groups do if they think, after completing data analysis for Element A, that the water quality standards are not appropriate and it might be advisable to do a Use Attainability Analysis? This session will outline the steps that must take place as well as the status of current triennial standards review, especially as related to standard for contact recreation/bacteria. |
| 5:15 – 6:00 pm | Expectations for Element A Rush 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. |
| 6:45 pm | Dinner |
| 8:00 – 9:00 pm (optional) | Q & A McDonnell This session provides participants the opportunity to discuss issues and questions regarding Web-based tools to support watershed planning. |

Wednesday, August 19, 2009

Facilitator: Eric Mendelman

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| 8:00 – 8:45 am | Breakfast |
| 8:45 – 10:00 am | Overview of Models for Estimating Pollutant Loads & ReductionsHauck 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 <i>Handbook</i> 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). |
| 10:00 – 10:20 am | Break |
| 10:20 – 10:40 am | Simple Tools for Estimating Loads and Load Reductions..... Kenimer This session will demonstrate how to use load duration curves (LDC) to determine needed pollutant load reductions and assess potential sources of the pollutants. |
| 10:40 – 11:15 am | Assignment 1: Perform LDC to Estimate Bacteria Loads/Reductions Flow and bacteria concentration data will be provided to develop an LDC and assess bacteria reductions needed. |
| 11:15 – 12:00 pm | Perspectives on Monitoring, Modeling and Decision Making Harmel An overview of the difficulties of data collection, the uncertainty in collected data, and how to use data in modeling and decision making will be discussed. |

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| 12:00 – 1:00 pm | Lunch |
| 1:00 – 1:30 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. |
| 1:30 – 2:00 pm | Pollutant Fate and Transport Mechanisms Kenimer Knowing the fate and transport mechanisms of the pollutant(s) being addressed will help decision-makers select the most appropriate BMPs for their watershed. This session will discuss the fate and transport mechanisms for major pollutants encountered in the state and what types of practices are most appropriate for addressing them. |
| 2:00 – 2:45 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. |
| 2:45 – 3:05 pm | Break |
| 3:05 – 3:45 pm | 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. |
| 3:45 – 4:15 pm | Assignment 2: Select Agricultural NPS BMPs Using the NRCS Field Office Technical Guide, the class will quickly select BMPs to address a variety of water resource issues and sources. |
| 4:15 – 5:00 pm | Wastewater Treatment Systems Lesikar This session provides a brief overview of wastewater treatment systems (WWTFs and OSSFs), their impacts, and effectiveness in removing pollutants. |
| 5:00 – 6:00 pm | Wastewater Issues TBD The session will address incorporating wastewater treatment into your WPP. **Jennifer Delk speaking to someone in permits Need a “practitioner” or watershed coordinator who has effectively dealt with these issues |
| 6:45 pm | Dinner |
| 8:00 – 9:00 pm (optional) | Q & A Wagner & Dictson This session provides participants the opportunity to discuss and review the Assignments 1 and 2. |

Thursday, August 20, 2009

Facilitator: Nikki Dietson

- 8:00 – 8:45 am **Breakfast**
- 8:45 – 9:45 am **Other Approaches to Managing Pollutant Sources Jacob**
In addition to conventional treatment methods, other options exist for achieving water quality protection and improvement. Among these are low impact development, urban planning and zoning, and development and protection of wetlands and riparian areas. This session will discuss these and other approaches and how to incorporate them into WPPs.
- 9:45 – 10:30 am **Cedar Creek Reservoir Case Study Wolfe**
This session will discuss evaluating and selecting management practices for Cedar Creek Reservoir. Session will also discuss developing decision criteria and summarizing evaluation results for presentation to stakeholders, obtaining feedback from stakeholders, ranking preferences, and selecting the final management strategy.
- 10:30 – 10:50 am **Break**
- 10:50 – 11:45 am **Overview and Expectations for Element C Rush**
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*.
- 11:45 – 12:00 pm **Texas Watershed Steward Program Dictson**
This session provides an overview of the Texas Watershed Steward Program, a science-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.
- 12:00 – 1:00 pm **Lunch**
- 1:00 – 2:00 pm **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*).
- 2:00 – 2:45 pm **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*.
- 2:45 – 3:05 pm **Break**

- 3:05 – 4:05 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.
- 4:05 – 4:20 pm **Using Volunteer Monitoring For Assessment and Outreach..... Pinchback**
This session provides an overview of Texas Stream Team (formerly Texas Watch), a statewide network of volunteers, partners, and institutions that promote a healthy and safe environment through education, data collection, and community action. This session will describe how voluntary efforts such as Texas Stream Team may be a valuable component to any WPP.
- 4:20 – 4:50 pm **Expectations for Element D Rush**
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.
- 4:50 – 5:35 pm **Cost – Benefit Analysis in Hickory CreekBanks**
This session discusses the cost-benefit analysis done for Hickory Creek. This detailed financial analysis of implementation strategies is, by many accounts, considered one of the best completed in Texas and will provide a great example for watershed coordinators to utilize to achieve the expectations for Element D.
- 5:35 – 6:00 pm **Watershed Protection Plan Implementation in Oklahoma..... S. Phillips**
This session will focus on watershed protection plan development and implementation efforts in Oklahoma, their experiences, and lessons learned.
- 6:45 pm **Dinner**
- 8:00 – 9:00 pm
(optional) **Q & A**
This session will be optional and open to the questions on the “discussion board”.

Friday, August 21, 2009

Facilitator: Kevin Wagner

- 8:00 – 8:45 am **Breakfast**
- 8:45 – 10:30 am **Financing Watershed Implementation Jarocki**
This session will provide an overview of Plan2Fund, Plan2Fund OPT, and the Directory of Watershed Resources developed by the Environmental Finance Center (EFC) Network for helping implement watershed plans.
- 10:30 – 10:50 am **Break**
- 10:50 – 11:15 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*.

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| 11:15 – 11:45 am | <p>Implementing Your WPP – Arroyo Colorado Case StudyC. Wagner 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).</p> |
| 11:45 – 12:00 pm | <p>Course Wrap-Up..... K. Wagner</p> |
| 12:00 – 12:30 pm | <p>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.</p> |
| 12:30 pm | <p>Adjourn; Lunch Certificates will be distributed as the class turns in their post-course exam and course evaluations.</p> |

Appendix B

| Topics | Level of Satisfaction | | | | | No answer | Average |
|--|-----------------------|---|----|----|----|-----------|---------|
| | 1 | 2 | 3 | 4 | 5 | | |
| Overall, how would you rate the short course? | | | 1 | 15 | 14 | 9 | 4.43 |
| Nine Elements of a Watershed Protection Plan | | | 8 | 18 | 12 | 1 | 4.11 |
| State and Federal Perspectives on WPPs | | | 13 | 16 | 9 | 1 | 3.89 |
| Working with Stakeholders to Move the Process Forward | | | 2 | 9 | 27 | 1 | 4.66 |
| Partnership Building Experiences in Plum Creek | | | 3 | 12 | 24 | | 4.54 |
| Defining the Scope of the WPP | | 2 | 9 | 11 | 17 | | 4.10 |
| Gathering data to assess your watershed | | | 6 | 14 | 19 | | 4.33 |
| Using Outreach to Develop & Implement WPPs - Element E | | | 2 | 12 | 25 | | 4.59 |
| Analyzing Data to Characterize Your Watershed | | 2 | 9 | 19 | 7 | 2 | 3.84 |
| Communicating to Diverse Audiences to Achieve Your Goals | | | 4 | 8 | 26 | 1 | 4.58 |
| Web-Based Tools for Watershed Assessment & Management | | 1 | 4 | 10 | 23 | 1 | 4.45 |
| Revising the Texas Water Quality Standards | | 2 | 14 | 14 | 7 | 2 | 3.70 |
| Expectations for Element A | | | 14 | 16 | 7 | 2 | 3.81 |
| Overview of Models for Estimating Loads & Reductions | | | 8 | 20 | 11 | | 4.08 |
| Simple Tools for Estimating Loads & Reductions | | | 6 | 16 | 15 | 1 | 4.24 |
| Perspectives on Monitoring, Modeling & Decision Making | | 1 | 2 | 23 | 12 | 1 | 4.21 |
| Expectations for Element B | | 2 | 9 | 20 | 8 | | 3.87 |
| Pollutant Fate and Transport Mechanisms | | | 8 | 9 | 22 | | 4.36 |
| Urban NPS Measures | | | 6 | 16 | 17 | | 4.28 |
| Agricultural NPS Measures and WQMPs | | | 7 | 16 | 16 | | 4.23 |
| Wastewater Treatment Systems | 1 | | 6 | 11 | 21 | | 4.31 |
| Other Approaches to Managing Pollutant Sources | | 1 | 14 | 15 | 8 | 1 | 3.79 |
| Cedar Creek Reservoir Case Study | | | 7 | 13 | 16 | 3 | 4.25 |
| Overview and Expectations for Element C | | | 9 | 19 | 8 | 3 | 3.97 |
| Texas Watershed Steward Program | | | 5 | 11 | 21 | 2 | 4.43 |
| Targeting Critical Areas and Scheduling Implementation | | | 7 | 12 | 17 | 3 | 4.28 |
| Developing Interim Milestones & Criteria to Measure Progress | | | 6 | 16 | 15 | 2 | 4.24 |
| Designing & Implementing Effectiveness Monitoring | | 1 | 5 | 18 | 11 | 4 | 4.11 |
| Using Volunteer Monitoring For Assessment and Outreach | | 2 | 5 | 11 | 18 | 3 | 4.25 |
| Expectations for Element D | | | 7 | 14 | 15 | 3 | 4.22 |
| Cost - Benefit Analysis for Hickory Creek | | | 1 | 21 | 14 | 3 | 4.36 |
| Connecting with the Community | | 1 | 10 | 18 | 7 | 3 | 3.86 |
| Financing Watershed Implementation | 1 | 4 | 3 | 19 | 9 | 3 | 3.86 |
| Putting It All Together – Now What? | | | 2 | 11 | 18 | 8 | 4.52 |
| Implementing your WPP | | 1 | 2 | 15 | 12 | 9 | 4.27 |

| How satisfied were you with each of the short course assignments? | Level of Satisfaction | | | | | | Average |
|---|-----------------------|---|---|----|----|-----------|---------|
| | 1 | 2 | 3 | 4 | 5 | No answer | |
| Assignment 1: Perform LDC to Estimate Bacteria Loads/Reductions | | 6 | 8 | 13 | 8 | 4 | 3.66 |
| Assignment 2: Select Agricultural NPS BMPs | | 3 | 9 | 14 | 10 | 3 | 3.86 |