

# Texas Watershed Planning Short Course

## Course Agenda – June 2-6, 2008

### Monday, June 2, 2008

- 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.
- 12:00 – 12:45 pm      **Lunch**
- 1:00 – 1:45 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, (3) an overview of the course, its purpose and structure and (4) a brief discussion of *The Best Watershed-Based Plans in the Nation* and its implications on the training. It will also provide an introduction to the watershed planning process as described in Chapter 2 of EPA's *Handbook for Developing Watershed Plans to Restore and Protect Our Waters (Handbook)* and briefly discuss why plans should be developed, how watershed protection plans (WPPs) interact with other water resources planning processes, and background on watershed plans/planning.
- 1:45 – 2:45 pm      **Nine Elements of a Watershed Protection Plan ..... Lehman**  
Provide an in-depth overview of the Nine Elements to be included in a WPP as outlined in Chapter 2 of the *Handbook*.
- 2:45 – 3:30 pm      **State and Federal Perspectives on WPPs.....Rush/Wendt**  
This session will describe (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 – 3:45 pm      **Break**
- 3:45 – 4:30 pm      **EPA Watershed Plan Builder ..... Lehman**  
This session will provide a tutorial on the EPA Watershed Plan Builder.
- 4:30 – 5:00 pm      **Assignment 1: Utilize EPA Watershed Plan Builder**  
The class will be split up into 10 teams to utilize the EPA Watershed Plan Builder to develop a WPP outline for various watersheds in the state.
- 5:00 – 6:15 pm      **Working with Stakeholders to Move the Process Forward .....MacPherson**  
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*.
- 6:45 pm      **Dinner**

**Tuesday, June 3, 2008**

8:00 – 8:45 am	<b>Breakfast</b>
8:45 – 9:45 am	<b>Using Outreach to Develop &amp; Implement WPPs - Element E.....MacPherson</b> Outreach is a powerful tool to get stakeholders involved early in the planning process, promoting behavior change in the watershed, 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> .
9:45 – 10:15 am	<b>Partnership Building Experiences in Plum Creek..... Dictson</b> 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.
10:15 – 10:30 am	<b>Break</b>
10:30 – 11:30 am	<b>Communicating to Diverse Audiences to Achieve Your Goals ....MacPherson</b> There is no one-size fits all approach. This session will explore various strategies and techniques to translate technical data into useful information.
11:30 – 11:45 am	<b>Web-Based Tools for Watershed Assessment &amp; Management ..... Lehman</b> Web-based tools available from EPA to support watershed planning will be reviewed.
11:45 – 12:00 pm	<b>Turn In and Discuss Assignment 1</b> The class will briefly discuss (1) their experience using the Watershed Plan Builder, (2) improvements needed, (3) missing links, and (4) utility of the Plan Builder.
12:00 – 12:45 pm	<b>Lunch</b>
1:00 – 1:30 pm	<b>Defining the Scope of the WPP ..... Wendt</b> 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> .
1:30 – 3:00 pm	<b>Gathering data to assess your watershed..... Dictson/Hauck/Wagner</b> 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.
3:00 – 3:15 pm	<b>Break</b>

- 3:15 – 4:00 pm      **Analyzing Data to Characterize Your Watershed..... Kenimer**  
 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.
- 4:00 – 4:30 pm      **Expectations for Element A .....Lamb**  
 The expectations for 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.
- 4:30 – 6:00 pm      **Q & A**  
 This session provides participants the opportunity to discuss issues and questions regarding partnership building and watershed characterization with other watershed coordinators, EPA, TCEQ and TSSWCB.
- 6:45 pm              **Dinner**

**Wednesday, June 4, 2008**

- 8:00 – 8:45 am      **Breakfast**
- 8:45 – 9:30 am      **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).
- 9:30 – 10:15 am      **Spreadsheet/Time Variable Models ..... 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. The use of simple mass balance and spreadsheet models will also be reviewed and demonstrated for use in assessing watershed pollutant loadings, reductions needed, and sources. Chapter 8 of the *Handbook* will be highlighted.
- 10:15 – 10:30 am      **Break**
- 10:30 – 11:15 am      **Assignment 2: Estimating Pollutant Loads For Plum Creek Using LDCs**  
 The class will be split into 10 teams for this exercise. Flow and concentration data will be provided to each team to develop LDCs for Plum Creek and assess bacteria and nutrient reductions needed. Results will be discussed and compared to the findings of the Plum Creek WPP.
- 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.

12:00 – 12:45 pm	<b>Lunch</b>
12:45 – 1:30 pm	<b>Setting Goals &amp; Identifying Load Reductions Needed ..... Miranda</b> This session will discuss refining goals, identifying management objectives, and determining load reductions needed as described in Chapter 9 of the <i>Handbook</i> .
1:30 – 2:00 pm	<b>Expectations for Element B ..... Wendt</b> 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.
2:00 – 2:30 pm	<b>Pollutant Fate and Transport Mechanisms ..... Kenimer</b> 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.
2:30 – 3:00 pm	<b>Agricultural NPS Measures and WQMPs ..... Wagner/Wendt</b> Agricultural NPS measures in Texas are typically implemented through the SWCDs, TSSWCB, and NRCS as part of a Water Quality Management Plan. 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.
3:00 – 3:15 pm	<b>Assignment 3: Select Agricultural NPS BMPs</b> The class will be split into 10 teams for this exercise. Using the NRCS Field Office Technical Guide, each team will quickly select BMPs to address a variety of water resource issues and sources. Results will be discussed as time permits.
3:15 – 3:30 pm	<b>Break</b>
3:30 – 4:15 pm	<b>Urban NPS Measures ..... Davenport</b> 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..
4:15 – 4:45 pm	<b>Wastewater Treatment Systems ..... Miranda</b> This session provides an overview of (1) wastewater treatment systems (WWTFs and OSSFs), (2) their effectiveness in removing various pollutants, (3) how to incorporate them into voluntary WPPs, (4) point source permitting issues, and (5) the costs of implementing these measures.
4:45 – 5:30 pm	<b>Other Approaches to Managing Pollutant Sources ..... Thornton/Rast</b> In addition to conventional treatment methods, other options exist for achieving water quality protection and improvement. Among these are wetland development, riparian protection, and urban planning and zoning. This session will discuss these and other approaches and how to incorporate them into WPPs.

5:30 – 6:15 pm           **Prioritizing and Selecting Management Measures .....** **Thornton/Rast**  
This session will discuss evaluating and selecting management practices developing decision criteria, summarizing evaluation results for presentation to stakeholders, obtaining feedback from stakeholders, ranking preferences, and selecting the final management strategy as described in Chapters 10-11 of the *Handbook*.

6:45 pm                   **Dinner**

**Thursday, June 5, 2008**

8:00 – 8:45 am           **Breakfast**

8:45 – 9:15 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*.

9:15 – 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 (Chapter 12.3 of the *Handbook*) as described in the final management strategy.

10:00 – 10:15 am       **Break**

10:15 – 11:15 am       **Assignment 4: Evaluate Elements A, B and C of selected WPP**  
The class will be split into 10 teams to analyze Elements A, B, and C of the Yellow Bank Creek Watershed Management Plan using EPA’s Nine Elements Evaluation Sheet.

11:15 – 12:00 pm       **Developing Interim Milestones & Criteria to Measure Progress ....** **Davenport**  
This component of the WPP is where the rubber meets the road. It is here that 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 key session will discuss developing interim measurable milestones (Element G) and establishing a set of criteria to measure progress (Element H) toward meeting water quality standards and other goals as presented in Chapter 12.4-12.5 of the *Handbook*.

12:00 – 12:45 pm       **Lunch**

12:45 – 1:45 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.

- 1:45 – 2:15 pm      **Using Volunteer Monitoring For Assessment and Outreach.....Mendelman**  
This session provides an overview of 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 Watch may be a valuable component to any WPP.
- 2:15 – 2:45 pm      **Texas Watershed Steward Program ..... Peterson**  
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.
- 2:45 – 3:00 pm      **Break**
- 3:00 – 4:00 pm      **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) for helping implement watershed plans.
- 4:00 – 5:30 pm      **Assignment 5: EFC Software Demonstration / Blue River Basin Case Study**  
The Blue River Basin will be used as a case study to demonstrate EFC Software.
- 5:30 – 6:15 pm      **Expectations for Element D .....Rush/Wendt**  
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.
- 6:45 pm              **Dinner**

**Friday, June 6, 2008**

- 8:00 – 8:45 am      **Breakfast**
- 8:45 –10:15 am      **Assignment 5: EFC Software Demonstration / Blue River Basin Case Study**  
The class will complete the Blue River Basin case study using Plan2Fund, Plan2Fund OPT, and the Directory of Watershed Resources.
- 10:15 – 10:30 am      **Break**

10:30 – 11:40 am

**Putting It All Together – Then What? ..... Wagner/Wendt**

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*. Also to be discussed is what to do once the WPP is ready for implementation as described in Chapter 13 of the *Handbook*, including implementation strategies, adaptive management, and what you can do to ensure the long-term sustainability of your WPP. Options such as developing 501(c)(3) organizations will be reviewed.

11:40 – 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**

Certificates will be distributed as the class turns in their post-course exam and course evaluations.