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

Quarter no. 1 From 9/1/11 Through 11/30/11

#### I. Abstract

Work this quarter primarily focused on organizing and delivering the November 2011 Texas Watershed Planning Short Course which included material preparation; speaker travel arrangements; and short course wrap-up. Also, TWRI worked with the planning team to finalize the agenda for the Roundtable to be held next quarter (January 2012) in addition to preparing for the Stakeholder Facilitation Training to be held next quarter in conjunction with the Roundtable. The planning team also focused on the development of the SELECT/LDC Training, Introduction to Modeling training and Water Quality Monitoring Training.

# 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. No activity to report this quarter.

## 20% Complete

Task 1.2: QPRs – Progress will be reported to TCEQ by the 15<sup>th</sup> 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 2 Progress Report on December 15, 2011.

20% 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. No reimbursement forms have been submitted for this period.

## **0%** 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. No activity to report this quarter.

### 20% 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 1 Progress Report was posted on the watershed training webpage in the "Projects" section
- b. Information on the Stakeholder Facilitation Training and Texas Watershed Coordinator Roundtable, both to be held next quarter (Jan. 2012), was posted on the watershed training webpage this quarter.
  - Information included: agendas; registration/RSVP system; venue information
- a. There were 466 unique visitors to the webpage during this quarter.

## 20% 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 Texasspecific 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. No activity to report this quarter.

## **0%** 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. After a conference call last quarter (Aug. 17) the agenda was finalized via email and posted on the short course registration website. See Appendix A for final agenda.
- b. A scholarship for the short course was announced over the watershed coordinators listsery on Oct. 6 and Oct. 14. An Oct. 31 deadline was given.
  - 5 enquiries were received and compiled
  - Celina Gauthier with the Texas Coastal Watershed Program was selected to receive the short course scholarship
- c. Training Program Coordinator began contacting speakers in early September in regards to travel information; speaker biographies; and presentations and materials. All presentations were due to TWRI by Oct. 14.
- d. On Oct. 13, Project Manager and Program Coordinator reviewed the pre- and post-exam and made minor changes. See Appendix B for exam.
- e. Course binders were prepared for each participant and EPA Handbooks as well as a cd of additional resources were included.
- f. Early registration ended October 17; late registration began Oct. 18; and registration closed Nov. 10. There were 24 participants in attendance at the Nov. 2011 Short Course. See Appendix C for participant list.
- g. The next short course is planned for September 2012.

## 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:

b. Questionnaires and evaluations were administered and collected for the Nov. 2011 short course. See Appendix D for compiled questionnaire and evaluation results.

## 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. On October 31, a conference call was held to further discuss in detail course topics and outline; workshop materials; and a workshop timeline. Conference call attendees included:
  - R. Srinivasan; Texas A&M University, Spatial Sciences Laboratory
  - R. Karthikeyan; Texas A&M University
  - Kevin Wagner, Courtney Smith; Texas Water Resources Institute
  - Tina Hendon, Leslie Rauscher; EPA
  - Lauren Bilbe, Bill Carter, Kyle Girten; TCEQ
  - Aaron Wendt, TSSWCB
  - Mike White, Tim Dybala; USDA-ARS
  - Stephanie Johnson, Houston Engineering
- b. Training Program Coordinator is working to compile notes from the conference call to create a draft agenda and will email to the planning team. Summary notes of the meeting can be found in Appendix E.

### 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. A preliminary planning meeting was on Nov. 21 with R. Karthikeyan, Kevin Wagner and Courtney Smith.
- b. The planned workshop was discussed in further detail with the first workshop aimed to be offered in Fall 2012 and the second one in Spring 2013.
- c. Training Program Coordinator is working with Dr. Karthikeyan to prepare and format workshop materials; as well as create a workshop website.

# 10% 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. As discussed last quarter, possible dates for the next Stakeholder Facilitation Training were discussed to be held in conjunction with the January 2012 Roundtable.
- b. The second Stakeholder Facilitation Training is set for January 24, 2012 at the Texas Farm Bureau Conference & Training Center in Waco.
- c. Registration was opened on Nov. 2; currently there are 5 registrants for the training. The watershedcoordinators listserv as well as the TWRI training listserv have been utilized to advertise the training.
- d. A press release has been prepared and will be distributed next quarter.

# **50% 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 first planning team meeting/conference call was held on September 7, 2011 to discuss the training purpose; course topics/outline; and workshop materials. Meeting agenda and summary notes were included in last quarters QPR.
- b. An agenda was emailed to Larry Hauck and Kevin Wagner on September 26 and is currently under review.

## 10% 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 will administer questionnaires and evaluations to Stakeholder Facilitation Training participants on Jan. 24, 2012. TWRI Program Coordinator emailed detailed results to TCEQ Project Manager on August 10, 2011. Summary Notes of these results can be found in Appendix D.

## 10% 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. Roundtable follow up and email communications for the Jan. 2012 Roundtable began last quarter (August).
- b. Roundtable agenda items were discussed with the planning team via email last quarter (Aug. 18). The date is set for Jan. 25, 2012 at the Texas Farm Bureau Conference & Training Center in Waco.
- c. Online RSVP system and more information was posted on the watershed training webpage on Nov. 2. Currently, 30 RSVPs have been received for the Roundtable.
- d. The Training Program Coordinator is working to set up the catered lunch.

## 15% 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. Training Program Coordinator will prepare evaluations to administer at the January 2012 Roundtable.

### 15% 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

- Potential issues with match as a result of lower attendance at the Nov. Short Course than anticipated.
- Meeting with TCEQ next quarter to discuss.

## IV. Projected Work for Next Quarter

- Continue to advertise the Stakeholder Facilitation Training and Texas Watershed Coordinator Roundtable.
- Begin preparations for the July 2012 Texas Watershed Coordinator Roundtable.
- Determine dates for the second Texas Watershed Planning Short Course.
- TWRI will prepare and submit Year 1, Quarter 2 Progress Report.
- Continue preparations for additional trainings to be offered as part of the project.

# **Texas Watershed Planning Short Course**

Course Agenda – November 14-18, 2011

Monday, November	r 14, 2011	Facilitator: Kevin Wagner
11:00 – 1:00 pm	Registration (Distribute Knowledge Assessment A pre-course examination will determine the knowledge Assessment to going through the course. The pre-course to the post-course exam results to assess course in	owledge level of each participant se exam results will be compared
1:00 – 1:30 pm	Introduction	ortunity to introduce themselves ormation on facilities and ground
1:30 – 2:30 pm	Nine Elements of Watershed Protection Plans This session will provide an overview of the Ni WPP as outlined in Chapter 2 of the <i>Handbook</i> Guide for Watershed-Based Plans.	ine Elements to be included in a
2:30 – 3:30 pm	Perspectives on WPPs	n Wendt (TSSWCB), and Kerry d importance of WPPs, (2) how teract with other state and federal
3:30 – 3:50 pm	Break	
3:50 – 5:15 pm	Working with Stakeholders to Move the Proce Stakeholders form the backbone of your watersh how to get off on the right foot and keep the watershed planning and implementation prog include: determining who needs to be involved, r conflict, making decisions using a consensus-ba stakeholder group. This session will focus on Ch	ned planning effort. Learn tips on the energy going throughout your gram. Topics to be addressed making meetings count, diffusing used approach, and sustaining the
5:15 – 6:00 pm	Partnership Building Experiences in Plum Creek watershed with announcing meetings, setting up the committee the effort, what needs to be discussed/decided at be discussed. Sample invitation letters, ground materials will be provided.	th getting local involvement, and subcommittees, publicizing each meeting, and timelines will
6:45 pm	Dinner	

Tuesday, Novembe	r 15, 2011	Facilitator: Nikki Dictson
7:00 – 8:00 am	Breakfast	
8:15 – 8:30 am	Expectations for Element E  The expectations for and an example of E discussed to provide the group an understand components of the WPP.	Element E will be reviewed and
8:30 – 9:30 am	Using Outreach to Develop & Implement Will Outreach is a powerful tool to get stakeholde process, promoting behavior change in the implementation of your management strategies tools to conduct effective outreach without bre focus on Chapter 12.2 of the <i>Handbook</i> .	ers involved early in the planning e watershed, and enhancing the s in the watershed. Learn tips and
9:30 – 9:45 am	Texas Watershed Steward Program	as Watershed Steward Program, a to help citizens identify and take ncorporation of this program into ding them with the knowledge to
9:45 – 10:05 am	Break	
10:05 – 10:35 am	Expectations for Element A  The expectations for and an example of E. discussed to provide the group an understandir causes and sources of water quality	lement A will be reviewed and ng of what is necessary to identify
10:35 – 11:15 am	Defining the Scope of the WPP This session will discuss identifying issues of goals, and selecting indicators of environmenta 4 of the <i>Handbook</i> .	f concern, developing preliminary
11:15 – 12:00 pm	Gathering data to assess your watershed	e data? How do you get info from camine (1) materials from Chapters sed for watershed analysis, source
12:00 – 1:00 pm	Lunch	
1:00 – 2:10 pm	Analyzing Data to Characterize Your Water How do you analyze your data? What tools at This session will concentrate on materials from Handbook in order to provide the group an undavailable for analyzing watershed data and estimated for calculating loads and assessing session will also examine refining goals, identical determining load reductions needed as described	re available? Is modeling needed? om Chapters 7 and 8.1-8.2 of the derstanding of the methods/options imating pollutant loads. Simplistic sources will be presented. The fying 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
	communicating the message.
3:10 – 3:30 pm	Break
3:30 – 4:00 pm	Expectations for Element B
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 <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).
6:45 pm	Dinner
Wednesday, Nove	mber 16, 2011 Facilitator: Kevin Wagner
7:00 – 8:00 am	Breakfast
8:00 – 9:00 am	Simple Tools for Estimating Loads and Load ReductionsHauck 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 – 10:00 am	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
9:00 – 10:00 am 10:00 – 10:20 am	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.  Overview and Expectations for Element C

costs.

11:10 – 12:00 pm	Urban NPS Measures
12:00 – 1:00 pm	Lunch
1:00 – 2:30 pm	Wastewater Treatment Systems, Wastewater Issues,
2:30 – 3:10 pm	Building Trust among Watershed Stakeholders
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 – 5:30 pm	New Mexico Watershed Planning Efforts
5:30 – 6:00 pm	Expectations for Elements F, G, and H
6:45 pm	Dinner
Thursday, Novembo	er 17, 2011 Facilitator: Nikki Dictson
7:00 – 8:00 am	Breakfast
8:00 – 9:00 am	Selecting BMPs: Economics and Finance Issues

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

9:00 - 10:00 am

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

# 

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

3:20 - 4:05 pm

Implementing Watershed Protection and Management ......Banks

### **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 - 6:15 pm

6:45 pm

**Dinner** 

## Friday, November 18, 2011

7:00 – 8:00 am **Breakfast** 

8:15 – 8:45 am

**Facilitator: Kevin Wagner** 

framework and devising a method for tracking progress as described in Chapter 12.8-12.11 of the *Handbook*.

12.0 12.

8:45 – 9:15 am Implementing Your WPP – Arroyo Colorado Case Study ..... Berthold/Flores

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 - 10:15 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.

10:15 – 10:35 am

**Break** 

10:35 - 11:05 am

Perspectives on Watershed Group Organization...... Dictson

As watershed protection efforts move beyond planning stages, tran sition 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.

11:05 - 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.

# **Texas Watershed Planning Short Course Pre-/Post-Test**

List o steps in a comprehensiv	ve watershed planning process. (4 points each)
a.	
_	
b	
c	
d.	
e	
f	
of a fundamentally-successful	ook for Developing Watershed Plans, what are the 9 elements watershed plan? (4 points each)
b	
c	
d	
f	
g	
h.	
i	
What sets a WPP apart from	a TMDL and other water planning efforts? (5 points total)
Who is ultimately responsible	e for approving watershed plans? (5 points total)
a. TSSWCB	d. EPA
b. Stakeholders	e. All of the above
o TCEO	f None of the chove

(5)	Load duration curves can estimate loading during by establishing relationships between: (3 points to	
	<ul><li>a. Stream flow and pollutant concentration</li><li>b. Land use activity and rainfall</li></ul>	<ul><li>c. Rainfall-runoff relationship</li><li>d. None of the above</li></ul>
(6)	Which is the more accurate method of estimating p	pollutant loads? (3 points total)
	<ul><li>a. Unit area load</li><li>b. Calculation of load based on monitoring data</li></ul>	<ul><li>c. Watershed modeling</li><li>d. Watershed surveys</li></ul>
(7)	According to the EPA Handbook, what is the prefeefficiency during watershed planning? (3 points to	
	<ul><li>a. Model BMP effects</li><li>b. Use literature values</li></ul>	<ul><li>c. Monitoring</li><li>d. Best professional judgment</li></ul>
(8)	One of the most common reasons why water qualit (3 points total)	ty control measures fail is failure to
	<ul> <li>a. Spend adequate funds up front for the most effect</li> <li>b. Provide adequate oversight during the construction</li> <li>c. Locate the controls properly</li> <li>d. Budget and fund maintenance costs</li> <li>e. Implement post project monitoring</li> </ul>	
(9)	When developing management measures for water which of the following aids in determining BMP ef	
	<ul><li>a. Proximity to impaired segment</li><li>b. Self-reporting data</li></ul>	<ul><li>c. A mixed analysis approach</li><li>d. Total load management analysis</li></ul>
(10)	What factors need to be taken into account when d within your watershed protection plan? (3 points	
	<ul> <li>a. Availability of funds for capital purchases</li> <li>b. Staff skills and talents</li> <li>c. Weather conditions</li> <li>d. Availability of appropriate technical and technol</li> <li>e. All of the above</li> <li>f. None of the above</li> </ul>	ogical solutions
(11)	Critical milestones have to be achieved or the man reach your desired goal. (3 points total)	agement approach must be modified to

b. False

True

a.

# (12) The Element, "interim measurable milestones," outlines how you will measure: (3 points total)

- a. Progress in implementing the management measures
- b. Whether or not loading reductions are being achieved
- c. Progress in attaining water quality standards
- d. All of the above

### (13) At a minimum, what must you measure to evaluate a load reduction? (3 points total)

a. Concentration e. Type of pollutant

b. Temperature
c. Flow
d. Precipitation
f. A and C
g. C and D
h. A and E

# (14) Which of the following questions is most likely to require a model to answer? (3 points total)

- a. Where and when does impairment occur in a water body?
- b. Which combination of BMPs will most effectively meet load targets?
- c. What are the loads associated with individual sources?
- d. None of the above.

#	First Name	Last Name	Company/County/Organization	Pre Exam	Post Exam
1	Randy	Acreman	San Jacinto River Authority	27	83
2	Ashley	Alexander	TSSWCB	34	91
3	Tom	Arsuffi	Texas Tech University	50	85
4	Lauren	Bilbe	Texas Commission on Environmental Quality	63	91
5	Tim	Cawthon	Texas Commission on Environmental Quality	66	80
6	Charles	Coup	Texas Forest Service	23	85
7	Brian	Fontenot	US EPA	67	85
8	Rocky	Freund	Nueces River Authority	84	88
9	Celina	Gauthier	Texas Coastal Watershed Program	31	75
10	Tina	Hendon	USEPA Region 6	82.5	91
11	Curry	Jones	USEPA Region 6	0	67
12	Donny	Latiolais	Capital RC&D Council	23	85
13	Jana	Lloyd (Baker)	TSSWCB	19	88
14	David	Mauk	Bandera County River Authority & Groundwater District	6	85
15	Rusty	Ray	TSSWCB	30	82.5
16	Neal	Schaeffer	NMED	23	91.5
17	Misty	Shepard	University of Houston-Clear Lake	41	84
18	Shane	Simpson	San Jacinto River Authority	15	78
19	Cody	Smith	Texas Forest Service	39	77
20	Anthony	Suttice	USEPA Region 6	56	85.5
21	Brian	Vandelist	TWRI	51	80
22	Santina	Wortman	U.S. EPA Region 5	73.5	85
23	Hong	Wu	Trinity River Authority	58	88
	Lauren	Young	Texas Commission on Environmental Quality	49	80
			Average	42.13	83.77

Level of Satisfaction	1	2	3	4	5	No Answer	Total	Average
Overall Course Rating				6	8	5	19	4.6
Overall course Nating					0		1)	-1.0
Nine Elements of a Watershed Protection Plan (Bira)			3	5	8	3	19	4.3
Perspectives on WPPs (EPA, TSSWCB,TCEQ)			1	7	9	2	19	4.5
Working with Stakeholders to Move The Process Forward (MacPherson)				5	13	1	19	4.7
Partnership Building Experiences in Plum Creek (Dictson)			2	7	9	1	19	4.4
Expectations for Element E (Dictson)	1		1	7	10		19	4.3
Using Outreach to Develop & Implement WPPs (MacPherson)				8	11		19	4.6
Texas Watershed Steward Program (Dictson)			3	3	13		19	4.5
Expectations for Element A (Fontenot)		1	2	4	12		19	4.4
Defining the Scope of the WPP (Wendt)			1	5	13		19	4.6
Gathering data to assess your watershed (Dictson)		2		9	8		19	4.2
Analyzing Data to Characterize Your Watershed (Davenport)		1	5	9	4		19	3.8
The Good, the Bad, and the Ugly (MacPherson)				7	12		19	4.6
Expectations for Element B (Wendt)				7	12		19	4.6
Overview of Models for Estimating Pollutant Loads & Reductions (Hauck)			2	6	11		19	4.5
Simple Tools for Estimating Loads and Load Reductions (Hauck)			2	8	9		19	4.4
Overview and Expectations for Element C (Hendon)			3	4	12		19	4.5
Agricultural NPS Measures (Wagner)			2	5	12		19	4.5
Urban NPS Measures (Davenport)		1	2	8	8		19	4.4
Wastewater Treatment Systems/Issues (Magin/Gerlich)			5	6	8		19	4.2
Building Trust among Watershed Stakeholders (Vargas)	1	1	3	7	7		19	3.9
Decision Support Tools for Advancin Triple Bottom Line Analysis (Vargas)	1		5	4	9		19	4.1
New Mexico Watershed Planning Efforts (Canavan)			1	10	8		19	4.4
Expectations for Element F, G, and H (Wagner)			2	8	7	2	19	4.3
BMP Selection: Economics, and Finance Issues (Rister, Adair, Banks)			1	6	11	1	19	4.6
Targeting Critical Areas and Scheduling Implementation (Davenport)		1	4	5	9		19	4.2
Developing Interim Milestones & Criteria to Measure Progress (Davenport)		1	2	7	9		19	4.3
Designing & Implementing Effectiveness Monitoring - Element I (Hauck)				10	9		19	4.5
Water Quality Monitoring (Harmel, Banks, Denton)				2	16	1	19	4.9
Expectations for Element D (Jones)			3	6	10		19	4.4
Implementing Watershed Protection & Mgmt Strategies in Hickory Creek (Banks)				8	11		19	4.6

Level of Satisfaction	1	2	3	4	5	No Answer	Total	Average
Sustaining Watershed Groups for Implementation Success (Jarocki)	2	4	6	2	5		19	3.2
Putting It All Together (Dictson)			2	6	11		19	4.5
Implementing Your WPP - Arroyo Colorado Case Study (Berthold/Flores)			4	4	10	1	19	4.3
Watershed Protection Plan Implementation in Oklahoma (Phillips)			1	3	13	2	19	4.7
Perspectives on Waterhed Group Organization (Dictson)			2	6	8	3	19	4.4

# PRE EXAM AVG = 42.13 POST EXAM AVG = 83.77

OUESTION (multiple choice only)	ANSWER	Pre	Exam	Post Exam		
QUESTION (multiple choice only)	ANSWER	# Missed	Total Exams	# Missed	Total Exams	
Who is ultimately responsible for approving watershed plans?	Stakeholders	17	23	4	24	
Load duration curves can estimate loading during time periods when there is no sampling by establishing relationships between:	Stream flow and pollutant concentration	8	23	0	24	
Which is the more accurate method of estimating pollutant loads?	Calculation of load based on monitoring data	5	23	7	24	
According to the EPA Handbook, what is the preferred method for evaluating BMP efficiency during watershed planning?	Model BMP effects	20	23	15	24	
One of the most common reasons why water quality control measures fail is failure to:	Budget and fund maintenance costs	18	23	16	24	
When developing management measures for watersheds with multiple pollutant sources, which of the following aids in determining BMP effectiveness?	Proximity to impaired segment	20	23	24	24	
What factors need to be taken into account when developing an implementation schedule within your watershed protection plan?	All of the above	1	23	3	24	
Critical milestones have to be achieved or the management approach must be modified to reach your desired goal.	True	2	23	3	24	
The Element, "interim measurable milestones," outlines how you will measure:	Progress in implementing the management measures	15	23	20	24	
At a minimum, what must you measure to evaluate a load reduction?	Concentration and flow	11	23	6	24	
Which of the following questions is most likely to require a model to answer?	Which combination of BMPs will most effectively meet load targets?	7	23	5	24	

#### 3 What could we have done better in order for you to have been completely satisfied?

I was completely satisfied, although I really wouldn't have presentations last more than 1 to 1 1/2 hours.

More interactive - something at least during the middle 3 days.

Longer breaks; more focused flow of presentations - connecting the dots.

The talks are too long. No talk should be longer than 45 minutes. It is difficult for people to pay attention for that long.

Overall excellent.

To add a couple more exercises to practice skills we will need througout the process.

Vargas' presentations not very helpful -- seemed like a sell-job. Jarocki "workshop" too long. Info could have been done in 1 hour.

Overall I was pretty satisfied with this course. I would have liked to have done more hands-on/outdoor activities.

A few presenters were difficult to follow.

Everything was very good and informative. From someone that knew very little about WPPs it was hard to understand at first.

Some of the speakers' topics were not 100% topical to the holistic view of this course.

At time, the delivery of the information was overly relaxing. In other words, I had a tendency to zone out.

Know it's hard - but break it up; more time outside

6 No Answer

#### 4 Most significant things learned from the course

The importance of stakeholders.

The various ways of approaching WPPs. I also learned a lot of the basics, that unfortunately I didn't know beforehand.

Funding, monitoring strategies, expectations for elements.

How to better plan the monitoring program, targeting your audience.

There are many good resources to pull from; no need to reinvent the wheel.

The tremendous overall effort reports to put a plan together.

The high level of interest from participants in EPA's Healthy Watersheds Initiative.

There's always more to learn - but to choose one specific topic - FDCs, LDCs & SELECT

This was a good experience to learn from those who have been through the process and those who review our plans for the 9 elements.

How complex the economic analysis can get.

Getting an overview of the elements. Seeing the whole process of putting a WPP together.

In depth discussion on the Elements of a WPP. EPAs synonym towards agriculture.

The overall process and goals of WPPs, also the extensive stakeholder process required - the skills needed to achieve their participation and continued support.

They don't have to be impaired to have a plan and be pro-active.

I took away a better overall picture of how WPPs are actually implemented.

Steps in WPP planning and detailed information on 9 elements

Private vs. agency approaches to stakeholders.

The 9 Elements

Resources available: watershed plan builder tool; NPS toolbox; funding; watershed central wiki; Plan2Fun

None

#### 5 Topics to dicuss in greater detail

Expectations from EPA about reviewing WPPs

Assessment and evaluation for elements besides water quality goals - what are types, strengths and weaknesses - examples.

Survey development. The concept of why aren't these practices already in place (barriers).

3 Exercises for load duration curves, modeling (exercises)

Participants' interest in WPPs to protect healthy waters.

Exercise in LDCs, FDCs & SELECT

A better delineation between characterization, the plan and implementation.

More intro info on state's water quality standards and assessment process - similar to basic info presented at watershed steward class.

2 Modeling - but was addressed that could/will be a separate training.

Some of the sampling and organization of data.

Split the funding instead of 2 hrs. straight

- 1 N/A
- 1 None
- 3 No Answer

#### 6 Topic of interest but not covered by course

QAPPs/Quality Control?

Having the specific watershed target presentations to how they approached elements, steps, challenges faced.

Best ways/methods for revising/updating a WPP.

Maybe a little more on silvicultural BMPs, on WPP examples that includes a forestry component.

Small scale tribal watershed based planning. How to write a WBP on a limited scale with little funding.

More on the Healthy Watersheds Initiative

I did not expect to receive such good information about funding sources. Thank you!

We discussed working with stakeholders, but I would have like to hear more about how to work with your collaborating entities. Get everyone to cooperate.

None. However, I do think it would be beneficial to get input from other states to compare their processes, successes and setbacks.

Conflict resolution

- N/A
- 3 None
- 5 No Answer

#### 7 Topics to be omitted

EFC - webcast available on the website would be great.

I felt all the topics were relevant.

I enjoyed all of the information.

Screen consultants before their presentations for "commercials" and "hot air" <- "Quilt of Funding". Try not to have 3 people present in one hour; 20 minute presentations are not easy to accomplish.

The Plan2Fund tools, could still be mentioned but doesn't seem to reach the full audience.

- 2 Jarocki's presentation -- too long, boring, and did not provide the information I thought it would.
- 2 Plan2Fund -- environmental funding tool segment was weak and I couldn't see it's utility for WPP.

Some presentations should be shorter in length.

- None
- 4 No Answer

#### 8 How satisfied were you with the quality of the course material? Are there additional resources that should be provided in the future?

Possibly the NRCS FOTG. Print materials are sometimes better than putting a link in a ppt.

Very satisfied. Segment on explaining models to stakeholders. Directory of funding may be helpful.

Glad about the videos of presentations being posted.

Adequate

Materials and resources were great.

Good -- full page and color would help when using as a reference - but impractical.

The materials provided were sufficient. I can't think of anything additional.

Course materials were outstanding.

Well put together materials; sometimes a lot to grasp.

#### 3 Very satisfied.

Quite satisfied, it's information overload but I am so glad that all of the materials are so readily available.

There's more than enough info.

Course material quality was very good.

Very satisfied. No additional resources are needed.

Presenters need to make sure their presentations show up on projected screens when printed.

Most satisfied

Thank you for the organization and materials provided. The notebook will prove to be a great resource in the future.

#### 9 What is your level of satisfaction with the sequencing of topics?

The course had good sequence the first 3 days, but tended to jump around towards the end.

Fine.

Seemed good.

More focused flow of presentations - connecting the dots.

I felt that the 9 elements should have been in a linear sequence.

- 2 Good.
- 2 Very high.

I felt like most of the encouragement (that this is an involved process) & timelines, came late in the course.

3 Satisfied - glad to see public participation moved to beginning of course.

Seemed to be well thought out.

I felt as though they jumped back and forth a bit

Very satisfied

Most satisfactory

More intense topics should be mid-morning or early afternoon; not best at the end of the day.

No Answer

#### 10 What are the first 3 steps you'll implement as a result of taking this training?

- 1. Building partnerships; 2. Meet with stakeholders; 3. Identify pollutants.
- 1. Follow up with my watershed coordinator on his stakeholder contacts and keep getting people to the table; 2. Change some of our outreach materials; 3. Will try to setup watershed tour with stakeholder group for Cedar Bayou.
- 1. Develop and clarify goals; 2. Better identify stakeholders and their respective roles; 3. Identify critical areas.
- 1. Use the info to help in planning/reviewing elements; 2. Discuss EFC's web tools with contracts.
- 1. Determine how I can apply info for update of Arroyo Colorado WPP; 2. Review materials.

I will use this training to inform my work in: New Mexico WBP reviews; Tribal WBP reviews; Healthy Watersheds Initiative Planning strategy.

- 1. Acquire GIS LULC layers; 2. Add items to my five year scope of work; 3. Learn how to develop FDC, LDC & SELECT.
- 1. I am assisting in this effort, so I will relay the information to the project manager; 2. Considering alternative funding sources for future tasks in the project.

I will be more aware of the requirements of a WPP when working on those projects, and now have a good contact group to assist with any future questions.

I think my organization's role still lies heavily in the monitoring and technical support aspects, so I would like to further pursue them (w/ UH-Clear Lake)

- 1. Make PowerPoints and pitch ideas; 2. Organize data and make GIS models; 3. Report to organization and board members
- 1. Improving WPPs; 2. Monitoring for performance (measuring progress); 3. Set goals
- 1. Read through the handbook; 2. Talk to EPA/TCEQ staff regarding our plans; 3. Develop scope of our plans.
- 1. Improve outreach; 2. Research BMPs; 3. Better grasp on modeling
- 3 N/A
- 2 No Answer

#### 11 What could the state and federal agencies do best to serve you in WPP efforts?

Help with QAPP development; more \$\$

Continue and expand training and learning opportunities.

With limited travel/time in consideration, try to get to know the watershed for which you are reviewing a plan.

Better technologies for streamlining processes. Especially coordinating multiple people commenting on reports.

Better communicate EPAs review process and expectations.

Figure out how to shorten the application/review/approval/grant process.

I have not been in direct contact with our state agency project representatives.

EPA should be more directly accessible/involved during plan development.

I need to work more in this area before suggesting improvements.

Give me money or more workshops on specific things like SWAT

Do a better job of defining measurable milestones, setting a criteria to measure performance, and establishing load reductions (TMDLs)

USDA and EPA need to work together

Telling success stories, helping to get the message out.

- N/A
- 5 No Answer

#### 12 What other tools, training, capacity building would you suggest to serve your efforts in WPP planning?

Already have done Stream Team and TWS training; possibly do watershed tour, mini-OSSF training.

Better understanding of models, excel models and how to work, social marketing strategies - especially assessment and evaluation tools.

Online videos great!

In-depth modeling course.

Modeling software training.

FDC, LDC & SELECT Workshop

I'm not sure at this point.

More education/outreach, social science type stuff

Modeling

Breaking down the science for stakeholders.

- 5 N/A
- 1 None
- 3 No Answer

#### 13 Satisfaction with location and facility?

#### 3 Very satisfied.

The training facility was fine. Easy to hear/see all presentations. The food throughout the week was amazing. The lodging was satisfactory.

Very high.

Good.

#### 4 Excellent

Absolutely loved it.

#### Awesome.

I am satisfied with the training location and facility. Easy to access all activities. One transaction for billing.

Love it, but not quite enough daylight hours to really take advantage of it (would have like to have taken a horse back ride)

Very good

The Mayan facility was comfortable and easy to access.

I was satisfied. The Mayan Dude Ranch was unique, but fun.

Most satisfactory.

#### 14 How would you rate the WPP you are involved as of meeting the intent of EPA's guidelines?

I would say we are heading towards meeting EPA's guidelines. We may be behind on our monitoring, but our characterization of the watershed and public participation process are on time.

Very high.

Haven't quite gotten there

On a scale of 1 to 10 -- 6, but we are working on updating it.

Somewhat - my watershed is not on the 303d list - yet.

I would say we are off to a good start. I am excited to not only share this information but put additional efforts in motion.

Plum Creek WPP meets the intent of EPAs WPP guidelines. We are in the process of updating it.

3 Just in the very early stages.

Not currently coordinating a WPP but am providing monitoring (water quality and biological) support - quite frankly and not familiar with their statuses.

On a scale of 1 to 5 (5 being the best); I give my WPP a 2

Our WPP has not started yet.

- N/A
- 1 No Answer

#### 15 In your watershed, what are the local strengths for success?

A lot of participation from the public.

We have some really great stakeholders that are enthusiastic about helping the process of developing the WPP (councilman, community orgs., county staff); subcontractor expertise.

Local landowner/stakeholder organization, university presence.

Local knowledge.

Established partnership and watershed coordinator.

Regional water supplies initiated the process and is providing funding.

Neighboring watersheds with existing WPPs, close knit rural communities that have potential for grassroots efforts.

Having a knowledgable watershed coordinator; having a cooperative steering committee.

Our organization has a lot of resources: PR, financial dept. water quality sampling, GIS dept., etc.

Financial and technical assistance; education and outreach component.

Not sure yet.

- 6 N/A
- 2 No Answer

#### 16 In your watershed what are the local obstacles for success?

Getting compliance from citizens regarding OSSF's.

Local obstacles include the land use type disparity. The watershed land use types are not evenly distributed throughout the watershed. These uneveness has led to the inability to truly bring everyone to the table (who should be there). Another obstacle is the fact that some issues that are affecting the bayou are out of our control or even scope of the WPP. This may prove discouraging to some stakeholders.

Resources, landowner social norms.

Attendance/participation in stakeholder group (meetings).

Struggles between various interest groups.

The majority of the watershed, except for the river itself, is outside of the city limits and therefore outside of its jurisdiction.

5 municipality mix of rural and industrial areas with many NPPES permits. No known environmental groups (specific to watershed) for collaborative efforts. Limted water quality monitoring data.

Ladies within the community are trying to turn others against our WPP, they are wanting to eliminate the plan. They have a lack of understanding of what the program is doing and what voluntary means.

Community efforts

Lack of personnel (support); Planning on local level being documented (payments, etc.); Monitoring progress (on the local level - farmers/landowners); success stories (input from landowners to state); Collaboration with lead state environmental agency (documentation).

Not sure yet.

- 6 N/A
- 2 No Answer

#### **Additional Comments**

# **Introduction to Modeling Workshop**

**Planning Meeting** 

Conference call – October 31, 2011 (2:30 to 4 p.m.)

Call-in number: 979-847-9187

**Training info:** Two-day workshop; registration fee TBD; 20 participants per workshop

Only basic understanding, inputs and outputs of the model, focus on strengths and weaknesses

of the models, program has to be tailor-made. Give participants a basic understanding so they

can go forward and choose the right model. Process-based presentation of information

### I. Course Topics & Outline:

- a) Purposes and limitations of different models
  - Type of water body—Impacts the model used
  - Models aren't always necessary, help people use the resources they already have, make sure it is cost-effective
  - Make watershed coordinators aware of the costs and limitations.
  - Utilizing modules that are already out there for watershed training
- b) Timelines
  - Ready for first workshop in the late spring or late summer
  - Gathering materials will not take very long
- c) Data needs (watershed characterization, water quality information)
  - Decision matrix to help determine what model is best for the participant,
     or be able to recognize a model presented is appropriate
  - Request for bids, what to look for in a contractor
  - Develop quality assurance
  - Monitoring with modeling to determine calibration, validation, verification—Data stakeholders need
- d) Cost estimates
- e) Literature values vs. monitoring
- f) Quality Assurance Project Plans (QAPPs)

- g) Request for bids
  - Timeline; process
- h) Presenting models to stakeholders:
  - Models need to be understandable by stakeholders so they can choose which BMPs to implement
  - Presenting uncertainty
- i) Contractor interaction with stakeholder groups

# II. Workshop Materials

- **a)** Manual, handouts, presentations
- b) Provide watershed academy module
- c) Chapter 8 of the handbook
- d) 1 or 2 page hand out from each presentation—condensed format
- e) Decision Matrix
- f) QABP websites