

Working at a Watershed Level: A Training Course for Project Partners and Stakeholders

Project Information

1. **Proposal Title:**

Working at a Watershed Level: A Training Course for Project Partners and Stakeholders

2. **Proposal applicants:**

Barry Topping, Tetra Tech

3. **Corresponding Contact Person:**

Barry Topping
Tetra Tech
10306 Eaton Place Ste 340 Fairfax VA 22030
703 385-6000 ext 382
tonniba@tetratech-ffx.com

4. **Project Keywords:**

Environmental Education
Water Resource Management
Watershed Management

5. **Type of project:**

Education

6. **Does the project involve land acquisition, either in fee or through a conservation easement?**

No

7. **Topic Area:**

Environmental Education

8. **Type of applicant:**

Private for profit

9. **Location - GIS coordinates:**

Latitude:

Longitude:

Datum:

Describe project location using information such as water bodies, river miles, road intersections, landmarks, and size in acres.

Project will be a week-long aquatic ecology and watershed management training program in Chico or Sacramento.

10. Location - Ecozone:

Code 15: Landscape

11. Location - County:

Alameda, Alpine, Amador, Butte, Calaveras, Colusa, Contra Costa, Del Norte, El Dorado, Fresno, Glenn, Humboldt, Imperial, Inyo, Kern, Kings, Lake, Lassen, Los Angeles, Madera, Marin, Mariposa, Mendocino, Merced, Modoc, Mono, Monterey, Napa, Nevada, Orange, Placer, Plumas, Riverside, Sacramento, San Benito, San Bernardino, San Diego, San Francisco, San Joaquin, San Luis Obispo, San Mateo, Santa Barbara, Santa Clara, Santa Cruz, Shasta, Sierra, Siskiyou, Solano, Sonoma, Stanislaus, Sutter, Tehama, Trinity, Tulare, Tuolumne, Ventura, Yolo, Yuba

12. Location - City:

Does your project fall within a city jurisdiction?

No

13. Location - Tribal Lands:

Does your project fall on or adjacent to tribal lands?

No

14. Location - Congressional District:

ALL-CA

15. Location:

California State Senate District Number: ALL-CA

California Assembly District Number: ALL-CA

16. How many years of funding are you requesting?

1

17. Requested Funds:

a) Are your overhead rates different depending on whether funds are state or federal?

No

If no, list single overhead rate and total requested funds:

Single Overhead Rate: 25

Total Requested Funds: 62000

b) Do you have cost share partners already identified?

No

c) Do you have potential cost share partners?

Yes

If yes, list partners and amount contributed by each:

Workshop attendees 6800

d) Are you specifically seeking non-federal cost share funds through this solicitation?

No

If the total non-federal cost share funds requested above does not match the total state funds requested in 17a, please explain the difference:

18. Is this proposal for next-phase funding of an ongoing project funded by CALFED?

No

Have you previously received funding from CALFED for other projects not listed above?

No

19. Is this proposal for next-phase funding of an ongoing project funded by CVPIA?

No

Have you previously received funding from CVPIA for other projects not listed above?

No

20. Is this proposal for next-phase funding of an ongoing project funded by an entity other than CALFED or CVPIA?

No

Please list suggested reviewers for your proposal. (optional)

Dan Castleberry U.S. Fish and Wildlife Service dan_castleberry@fws.gov

Dale Hoffman-Floerke CA Dept of Water Resources dalehf@water.ca.gov

Craig Fleming U.S. Fish and Wildlife Service Craig_Fleming@fws.gov

21. Comments:

Working at a Watershed Level is an intensive, week-long training program on watershed assessment, planning, and management. Subject matter includes overview of watershed ecology, fluvial geomorphology, chemical/physical/biological issues, planning approaches, problem identification/prioritization/targeting, management practices, and outreach/education. The course has been presented annually over the past three years in cooperation with California State University, which will be a partner in this proposed offering.

Environmental Compliance Checklist

Working at a Watershed Level: A Training Course for Project Partners and Stakeholders

1. CEQA or NEPA Compliance

a) Will this project require compliance with CEQA?

No

b) Will this project require compliance with NEPA?

No

c) If neither CEQA or NEPA compliance is required, please explain why compliance is not required for the actions in this proposal.

This project is a week-long aquatic ecology and watershed management training program.

2. If the project will require CEQA and/or NEPA compliance, identify the lead agency(ies). If not applicable, put "None".

CEQA Lead Agency:

NEPA Lead Agency (or co-lead):

NEPA Co-Lead Agency (if applicable):

3. Please check which type of CEQA/NEPA documentation is anticipated.

CEQA

-Categorical Exemption

-Negative Declaration or Mitigated Negative Declaration

-EIR

Xnone

NEPA

-Categorical Exclusion

-Environmental Assessment/FONSI

-EIS

Xnone

If you anticipate relying on either the Categorical Exemption or Categorical Exclusion for this project, please specifically identify the exemption and/or exclusion that you believe covers this project.

4. CEQA/NEPA Process

a) Is the CEQA/NEPA process complete?

Not Applicable

b) If the CEQA/NEPA document has been completed, please list document name(s):

5. Environmental Permitting and Approvals (If a permit is not required, leave both Required? and Obtained? check boxes blank.)

LOCAL PERMITS AND APPROVALS

Conditional use permit

Variance

Subdivision Map Act

Grading Permit

General Plan Amendment

Specific Plan Approval

Rezone

Williamson Act Contract Cancellation

Other

STATE PERMITS AND APPROVALS

Scientific Collecting Permit

CESA Compliance: 2081

CESA Compliance: NCCP

1601/03

CWA 401 certification

Coastal Development Permit

Reclamation Board Approval

Notification of DPC or BCDC

Other

FEDERAL PERMITS AND APPROVALS

ESA Compliance Section 7 Consultation

ESA Compliance Section 10 Permit

Rivers and Harbors Act

CWA 404

Other

PERMISSION TO ACCESS PROPERTY

Permission to access city, county or other local agency land.

Agency Name:

Permission to access state land.

Agency Name:

Permission to access federal land.

Agency Name:

Permission to access private land.

Landowner Name:

6. Comments.

This project is a training program that does not require any federal or state permits.

Land Use Checklist

Working at a Watershed Level: A Training Course for Project Partners and Stakeholders

1. **Does the project involve land acquisition, either in fee or through a conservation easement?**

No

2. **Will the applicant require access across public or private property that the applicant does not own to accomplish the activities in the proposal?**

Yes

3. **Do the actions in the proposal involve physical changes in the land use?**

No

If you answered no to #3, explain what type of actions are involved in the proposal (i.e., research only, planning only).

This project is a training program that may require access to public or private land for the purpose of conducting a field trip to demonstrate assessment techniques (e.g., pebble count, channel cross-section measurement, etc.) and/or previously installed or adopted management practices (diversion screen, fish ladder, bank stabilization, stream restoration). This project will not result in any changes to land uses, stream configuration, water quality/quantity, etc.

4. **Comments.**

This proposal involves a training program only. No changes to land uses or water resources will result from this project.

Conflict of Interest Checklist

Working at a Watershed Level: A Training Course for Project Partners and Stakeholders

Please list below the full names and organizations of all individuals in the following categories:

- Applicants listed in the proposal who wrote the proposal, will be performing the tasks listed in the proposal or who will benefit financially if the proposal is funded.
- Subcontractors listed in the proposal who will perform some tasks listed in the proposal and will benefit financially if the proposal is funded.
- Individuals not listed in the proposal who helped with proposal development, for example by reviewing drafts, or by providing critical suggestions or ideas contained within the proposal.

The information provided on this form will be used to select appropriate and unbiased reviewers for your proposal.

Applicant(s):

Barry Topping, Tetra Tech

Subcontractor(s):

Are specific subcontractors identified in this proposal? No

Helped with proposal development:

Are there persons who helped with proposal development?

No

Comments:

This is a training program that will involve speakers from California with specific knowledge of aquatic ecosystems and watershed planning/management. Such speakers have not been identified as of yet.

Budget Summary

Working at a Watershed Level: A Training Course for Project Partners and Stakeholders

Please provide a detailed budget for each year of requested funds, indicating on the form whether the indirect costs are based on the Federal overhead rate, State overhead rate, or are independent of fund source.

Independent of Fund Source

Year 1												
Task No.	Task Description	Direct Labor Hours	Salary (per year)	Benefits (per year)	Travel	Supplies & Expendables	Services or Consultants	Equipment	Other Direct Costs	Total Direct Costs	Indirect Costs	Total Cost
1	Planning	120	4325	1080	2000	1000			1500	9905.0	2400	12305.00
2	Promotion	80	2880	720	100	900			1800	6400.0	3100	9500.00
3	Curriculum Development	120	4325	1080	100	900	1500		900	8805.0	2900	11705.00
4	Course Delivery	120	4325	1080	7600	3300	6500		1200	24005.0	5900	29905.00
		440	15855.00	3960.00	9800.00	6100.00	8000.00	0.00	5400.00	49115.00	14300.00	63415.00

Year 2												
Task No.	Task Description	Direct Labor Hours	Salary (per year)	Benefits (per year)	Travel	Supplies & Expendables	Services or Consultants	Equipment	Other Direct Costs	Total Direct Costs	Indirect Costs	Total Cost
		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Year 3												
Task No.	Task Description	Direct Labor Hours	Salary (per year)	Benefits (per year)	Travel	Supplies & Expendables	Services or Consultants	Equipment	Other Direct Costs	Total Direct Costs	Indirect Costs	Total Cost
		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Grand Total=63415.00

Comments.

Budget Justification

Working at a Watershed Level: A Training Course for Project Partners and Stakeholders

Direct Labor Hours. Provide estimated hours proposed for each individual.

Barry Tanning 250 Kellie DuBay 120 Lisa Knerr 70

Salary. Provide estimated rate of compensation proposed for each individual.

Barry Tanning 40 per hour Kellie DuBay 31 per hour Lisa Knerr 32 per hour

Benefits. Provide the overall benefit rate applicable to each category of employee proposed in the project.

Benefits are calculated at approximately 25 percent of salary.

Travel. Provide purpose and estimate costs for all non-local travel.

Travel for trainers to workshop site to deliver educational presentations; travel to assess/scope field trip locations. Travel will include air fare/per diem for non-local trainers for the entire week-long course, and local travel for field trips (2 buses on each of two separate days). Air Fare & Per Diem = 6700
Local Travel (excl buses) = 1300 Buses (for field trips) = 1800

Supplies & Expendables. Indicate separately the amounts proposed for office, laboratory, computing, and field supplies.

Training Textbooks 3800 Copies of Slides 1900 Handouts, Misc Materials 400

Services or Consultants. Identify the specific tasks for which these services would be used. Estimate amount of time required and the hourly or daily rate.

Geomorphology Instructor (3 sessions + field trip) 3600 Biology Instructor (3 sessions + field trip) 3600 Case Study Presenters (4 x \$200) 800

Equipment. Identify non-expendable personal property having a useful life of more than one (1) year and an acquisition cost of more than \$5,000 per unit. If fabrication of equipment is proposed, list parts and materials required for each, and show costs separately from the other items.

N/A

Project Management. Describe the specific costs associated with insuring accomplishment of a specific project, such as inspection of work in progress, validation of costs, report preparation, giving presentatons, reponse to project specific questions and necessary costs directly associated with specific project oversight.

Barry Tanning, listed above, will serve as project manager. Mr. Tanning has managed three similar training workshops at California State University sites over the past four years. He will work closely with a planning team composed of representatives of the California Department of Water Resources, California Resources Agency, U.S. Fish and Wildlife Service, California State University, and other parties suggested by the planning team. Mr. Tanning will be assisted by the Tetra Tech Finance Department Staff in completing reports, filing required forms, and financial progress reporting. That

assistance is covered by the "Other Direct Costs" line item noted in the budget summary, totalling \$5400. Mr. Tanning will be responsible for preparing any presentations, progress reports, or responding to any inquiries on project progress or activities. His contact information has been submitted as part of this application.

Other Direct Costs. Provide any other direct costs not already covered.

See above.

Indirect Costs. Explain what is encompassed in the overhead rate (indirect costs). Overhead should include costs associated with general office requirements such as rent, phones, furniture, general office staff, etc., generally distributed by a predetermined percentage (or surcharge) of specific costs.

Indirect costs include use of office space, office equipment, computers, network/server/web services, telephones (including long distance charges), and access to appropriate administrative staff.

Executive Summary

Working at a Watershed Level: A Training Course for Project Partners and Stakeholders

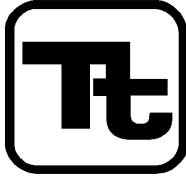
Working at a Watershed Level is an intensive, one-week course that covers the principles of watershed ecology, system dynamics, assessment and analysis, planning methodologies, restoration/management techniques, public involvement strategies and outreach program development. The course, which has been presented in California in cooperation with California State University, provides a basic but very broad foundation for considering both ecological and socioeconomic issues in watershed work across a wide range of public and private organizations. The Interagency Watershed Training Cooperative, composed of representatives from the U.S. Environmental Protection Agency, Natural Resources Conservation Service, U.S. Fish and Wildlife Service, Bureau of Land Management, Bureau of Reclamation, U.S. Forest Service, and U.S. Army Corps of Engineers, provided leadership for developing the course outline. The Council of State Governments, International City/County Management Association, Ecological Society of America and other partners assisted with final curriculum design and content. One of the motivating forces for developing the course was the need for a more cooperative, coordinated approach to watershed management and a common orientation to the science and societal issues involved. Working at a Watershed Level addresses a number of CALFED ERP and CVPIA goals. The curriculum seeks to develop or broaden the understanding of watershed ecology, planning/management approaches, restoration, natural recovery, public outreach/involvement, and the rehabilitation/restoration of salmonid populations throughout their historic range. The course provides both an improved understanding of aquatic systems and system interactions and a venue for cooperative involvement and interaction by attendees, which include representatives from public agencies, the private sector, and environmental organizations. The course has been presented in California, Washington, New Hampshire, Ohio, Kentucky, West Virginia and Georgia and has received excellent reviews. Discussions are underway with interested parties in other states, and arrangements for college accreditation are being explored. This proposed course would be scheduled in 2002 north of San Francisco, probably in Chico or Sacramento. The preferred time/place will be subject to discussions with the course planning team, composed of members of state/federal agencies, environmental groups, and academic institutions.

Proposal

Tetra Tech

Working at a Watershed Level: A Training Course for Project Partners and Stakeholders

Barry Topping, Tetra Tech



Tetra Tech, Inc. - 10306 Eaton Place, Suite 340 - Fairfax, VA 22030
Phone - (703) 385-6000 Fax - (703) 385-6007

To: CALFED Project Review Committee

From: Barry Tanning
Senior Project Manager

Re: Working at a Watershed Level Project Application

Attached is the proposed Workplan for our proposal to conduct a week-long watershed assessment, planning, and management course in Northern California during 2002. The course, entitled "Working at a Watershed Level," has been presented in California previously by Tetra Tech in cooperation with California State University, the California Department of Water Resources, the U.S. Fish and Wildlife Service, and other partners.

The proposal attached is being submitted in response to ongoing interest in the course, which was developed by a consortium of federal agencies associated with the Federal Interagency Watershed Training Cooperative. Prior offerings of the course in California and other states have met with considerable success, with evaluation reports in the "excellent" range for most parameters surveyed. I have been personally involved in these training workshops, and will be managing this offering if our proposal is successful. We intend to work with the state and federal agencies that have partnered with us during past course offerings, and will solicit local sponsorship from both California State University and local watershed organizations.

Tetra Tech has a long record of assisting its clients with issues ranging from river basin and lake modeling to watershed assessment, planning, and management. We have developed a number of training and other products for public agencies and other organizations, and serve in a consulting role to the U.S. Environmental Protection Agency, dozens of states, and many local governments.

Please review the attached Workplan at your convenience and advise us of your decision. We would very much like to assist CALFED in improving aquatic ecosystem and water resource literacy throughout the Bay-Delta region by offering this course to project partners, stakeholders, and other interested parties during 2002.

Thank you for your consideration.

Working at a Watershed Level

A Training Course for the CALFED Region

Submitted by Barry Tinning

Tetra Tech, Inc.



Background

Water resource challenges within the CALFED region are caused by a complex combination of water quality, water quantity, and management practice issues. A considerable amount of study – some of which has been supported by CALFED – has documented a number of problems and recommended management practices that range from increasing riparian vegetative cover and maximizing onsite detention/infiltration of precipitation to restoring targeted aquatic and terrestrial ecosystems.

Part of the challenge in implementing the broad range of practices identified by CALFED and other entities is the low rate of *watershed ecology* and *watershed management* literacy among project partners, stakeholders, and even staff from involved agencies. The “Working at a Watershed Level” course is designed as an intensive, week-long workshop that explores in depth the topics of watershed ecology, assessment, planning, management, and public involvement. The course begins with an in-depth review of basic chemical, physical, and geomorphological considerations associated with water resources. The middle sections of the course cover watershed assessment, targeting/prioritizing problems, and suggested management practices. The final presentations cover watershed management approaches, outreach, stakeholder involvement processes, and funding. Field trips on Wednesday and Thursday afternoon provide hands-on opportunities that familiarize participants with assessment techniques (e.g., channel cross-sectional area calculation, pebble counts, scour/deposition analyses, benthic macro invertebrate surveys, instream habitat assessment) and management practices (e.g., restoration projects, diversion management, bank stabilization, riparian vegetation maintenance).

Working at a Watershed Level has been sponsored three times over the past four years, with excellent results. Each course has trained more than 75 attendees from federal, state, and local agencies and the private sector. The second and third offerings of the course were located in Fresno and Turlock – this proposed offering will be scheduled in either Sacramento or Chico, in cooperation with California State University, Chico and a planning team drawn from the agencies and organizations that supported previous workshops.

Proposed Project

This project addresses the need for education on water quality/quantity issues and the related need for an informed, coordinated, collaborative understanding of and approach to watershed planning and management. The course proposed for presentation under this project application, *Working at a Watershed Level*, was developed by a consortium of federal agencies, state/local groups and private organizations to improve cross-agency and non-governmental watershed training. The course is designed as a basic training program for agency personnel newly assigned to watershed teams, veteran watershed managers in need of a refresher course and members of citizens groups or business organizations interested in a cooperative approach to watershed issues.

While it is recognized that public agencies and non-governmental organizations will continue to have unique needs for and somewhat discrete perspectives of watershed planning, management and restoration, it is hoped that *Working at a Watershed Level* will help to develop a broad, common framework capable of accommodating the disparate interests that may be involved. Public agencies and private interests can only benefit by working together within a watershed, though each may have slightly different approaches and requirements. Ideally, agencies and other stakeholders will be able to use *Working at a Watershed Level* to identify areas where multi-agency interdisciplinary teams can work together on management issues while retaining the ability to satisfy organizational, statutory or regulatory needs.

Working at a Watershed Level is an intensive, one-week course that covers the principles of watershed ecology, system dynamics, assessment and analysis, planning methodologies, restoration/management techniques, public involvement strategies and outreach program development. The course provides a basic but very broad foundation for considering both ecological and socioeconomic issues in watershed work across a wide range of public and private organizations.

One of the motivating forces for developing the course was the need for a more cooperative, coordinated approach to watershed management and a common orientation to the science and societal issues involved. The Interagency Watershed Training Cooperative, composed of representatives from the U.S. Environmental Protection Agency, Natural Resources Conservation Service, U.S. Fish and Wildlife Service, Bureau of Land Management, Bureau of Reclamation, U.S. Forest Service, and U.S. Army Corps of Engineers, provided leadership for developing the course outline. The Council of State Governments, International City/County Management Association, Ecological Society of America and other partners assisted with final curriculum design and content.

The course has been presented in California, New Hampshire, Georgia, Kentucky, West Virginia and the state of Washington and has received excellent reviews. Discussions are underway with interested parties in three other states, and arrangements for college accreditation are being explored. The proposed Northern California course would be held during a week agreed to by the project planning team.

A course evaluation will be conducted for all units throughout the week (see sample evaluation form attached). Written evaluations and verbal feedback will be incorporated into the project final report. In addition, Tetra Tech will request that attendees provide additional feedback on instructors, course content and training notebooks in order to determine relevance to CALFED watershed planning, management, outreach and training objectives.

Public agencies and non-governmental organizations were involved in the development of the *Working at a Watershed Level* curriculum, which is itself designed to promote public participation in understanding watershed issues and developing planning and management solutions. The course will be open to local watershed managers and partnerships involved in local watershed planning, environmental organization members, representatives of environmental consulting groups, staff from public agencies, and elected officials. Planning for the course and its eventual presentation to attendees will be handled by Tetra Tech staff led by Barry Tanning.

Deliverables

The primary product of this project will be the planning and delivery of a Monday – Friday training course to approximately 75 people during 2002. The course will include sections on the principles of watershed ecology, system dynamics, assessment and analysis, planning methodologies, restoration/management techniques, public involvement strategies and outreach program development. A course notebook of about 300 pages will be provided to each attendee.

Course instructors will include Tetra Tech staff and other individuals from academia, government, and the business community. Instructors will conduct their sessions through the use of the course notebook and other materials developed for or acquired by the project. A promotional brochure and informational web site will be produced by Tetra Tech to advertise the course. The brochure will be mailed to addressees provided by project partners and planning team members. In addition, a supply of brochures will be sent to CALFED agencies for hand distribution to agency staff and others who may be interested in the course.

Budget

Task No.	Description of Task	Total Hours	Labor Costs	Travel Costs	Supplies/ Consultant	Direct Costs	Indirect Costs	Total Cost
1	Planning	120	5405	2000	1000	1500	2400	12305
2	Promotion	80	1000	100	900	1800	3100	9500
3	Curriculum Development	120	5405	100	2400	900	2900	11705
4	Course Delivery	120	5405	7600	9800	1200	5900	29905
Total Costs								63415

Working at a Watershed Level

Model Framework for Course Schedule

Five-Day Training Option

Draft Course Schedule

2002



Monday

12:00 – 12:45 pm

Check-In and Registration

1:00 – 2:10 pm

Welcome and Introductions; Course Overview

Overview of watershed protection and management in the new millennium. A watershed approach to assessment, planning and management promotes coordinating the use of resources, cooperative action, holistic planning/management, and synergy through public outreach, education and stakeholder involvement.

2:10 – 2:25 pm

Break

2:35 – 3:50 pm

Group Exercise: Challenges and Opportunities

What are the major water quality and aquatic habitat challenges in the region? What opportunities exist for addressing these challenges? What is the political, economic, and social climate for pursuing these opportunities? Break-out groups will address these questions to prepare for educational sessions, case studies, and field trips scheduled during the training week.

3:50 – 5:00 pm

The Physical Setting: Hydrologic and Geomorphic Processes

Overview of landscape-defining processes – geological, climatological, hydrological; watersheds and their development at various spatial and temporal scales.

5:00 – 6:30 pm

Reception

Sponsor: Local hosts or sponsors

Tuesday

8:00 – 9:10 am

Physical and Chemical Characteristics

A review of the major physical (e.g., flow rates/velocities, sediment, temperature) and chemical (e.g., DO, BOD, nutrients, metals, salinity, etc.) parameters and what they tell us about water quality and habitat conditions.

9:10 – 9:25 am

Break

9:25 – 10:35 am

Biological Components and Interactions

How physical setting (geology, hydrology, climate) defines habitat conditions and influences biotic diversity; general discussion of energy and materials transport, food webs, symbioses, and other ecological concepts

10:35 – 10:50 am

Break

10:50 – 12:00 noon

Land Use Changes and Other Impacts on Watersheds

Discussion of how altered land use/cover, pollutant inputs, flow alterations, introduced (alien or exotic) species, riparian vegetation loss, and other agents of change affect biological communities in the stream corridor and watershed.

12:00 – 1:00 pm

Lunch (on your own)

1:00 – 2:45 pm

Group Exercise: Using Indicators to Evaluate and Communicate

How audience composition informs and defines indicator selection; types of indicators most useful for watershed assessment various spatial scales; secondary and tertiary indicators (e.g., loss of farmland, impervious surfacing). After a brief presentation, participants will form multidisciplinary groups to discuss and select indicators for a watershed under study.

2:45 – 3:00 pm

Break

3:00 – 4:30 pm

GIS and Modeling Tools for Characterizing Watershed Conditions

Review of current GIS mapping tools and common watershed modeling approaches and discussion on how they can be used to assess and communicate current conditions and predict future changes.

6:00 – 7:30 pm

Dinner

Sponsored by local or regional organization(s). Followed by local speaker.

Wednesday

8:00 – 9:10 am

Management Practices for Improving Watershed Conditions

Overview of typical rural and urban BMPs that address altered hydrology, polluted runoff, and protection/restoration of streams and riparian areas. Impacts on physical, chemical, and biological indicators will be discussed.

9:10 – 9:25 am

Break

9:25 – 10:35 am

Case Study: Watershed Assessment Approach

Participants will review a watershed assessment produced by a regional organization and discuss the approach, processes, and tools used. A summary of proposed actions suggested by the assessment will be presented.

10:35 – 10:50 am

Break

10:50 – 12:00 noon

Legal and Regulatory Issues in Watershed Protection

The Clean Water Act, water rights, and state laws governing the use, protection, and restoration of water resources. Brief presentations followed by group discussion.

12:00 – 12:15 pm

Break

12:15 – 1:00 pm

Bag Lunch on the bus. Buses will leave at 12:15 sharp!

1:00 – 5:00 pm

Field Trip: Watershed Assessment

*Biological Component (macro invertebrates, instream habitat, vegetation):
Presenters and Field Demonstrators*

*Geomorphic Component (Channel type, flow, substrate, bank stability):
Presenters and Field Demonstrators*

Thursday

8:00 – 9:10 am

Outreach and Education: Building Awareness and Support

The three phases of outreach (awareness, education, action) and the six steps for effective outreach. Perspectives from a regional watershed organization.

9:10 – 9:25 am

Break

9:25 – 10:35 am

Working with Stakeholders

A discussion of driving forces, internal programmatic/management goals, degree of stakeholder involvement needed, managing meetings, dealing with conflict, and decision-making approaches. Local case study involving stakeholder involvement processes.

10:35 – 10:50 am

Break

10:50 – 12:00 noon

Case Study: Applying BMPs to Protect/Restore Resources

In-depth review of how assessment information is used to determine the type and extent of management practices needed to restore or protect water resources. Overview of a regional case study and discussion of BMP application challenges and performance.

12:00 – 12:15 pm

Break

12:15 – 1:00 pm

Bag Lunch on the bus. Buses will leave at 12:15 sharp!

1:00 – 5:00 pm

Field Trip: Best Management Practices

Attendees will travel to local sites to review application of structural management practices in rural and/or urban settings. BMP selection, performance, and operation/maintenance will be discussed. Multiple sites may be scheduled.

Friday

8:00 – 9:10 am

Watershed Planning: Identifying Problems and Opportunities

*How can we better coordinate watershed planning and management activities?
Do we need to do a full-blown plan every time we address an issue?
How important are individual stakeholders in the process?
An interactive discussion probing these and other questions on planning*

9:10 – 9:25 am

Break

9:25 – 10:35 am

Case Studies: Local Projects

How local watershed projects are conceived and implemented. Discussions will incorporate watershed assessments, identification of problems, selection and funding of BMPs, monitoring, and long-term operation/maintenance issues.

10:35 – 10:50 am

Break

10:50 – 12:00 noon

Funding Strategies

What do funding organizations look for? How important is it to secure support from local government and citizens? Just what is a funding proposal, anyhow? This session will provide an overview of funding sources and how to tap into the resources and expertise they offer

12:00 noon

Evaluation forms completed and collected; course adjourns

Drive safely, and don't forget to work on your watershed!