

Table B8. *Conservation Professionals: Symposium Recommended Best Education Practices*

Audience Description	Professionals who apply natural resources training and skills to water management, including: county conservationists, soil and water conservation professionals, watershed coordinators, and other natural resource professionals who interface with the public
Sources	Findings for this audience are based on the results of two research papers, one poster, and two panel presentations. *Indicates findings from a research-based paper. Other findings are derived from case studies.
Outreach Themes	Recommendations
Audience information	No examples available
Message content	No examples available
Message delivery vehicle	No examples available
Outreach strategy	<ul style="list-style-type: none"> • Provide face-to-face meeting opportunities: to allow for learning from others and to provide camaraderie (networking and moral support).* • Provide course activities with direct application to work responsibilities (appropriate to local context)* • Provide instructor feedback* • Enable students to personalize their education objectives (through pre-course interviews)* • Provide students with autonomy in determining content and timing of learning activities.* • Follow classroom exercises and visual examples by field application. • For conservation professionals: <ul style="list-style-type: none"> ○ Provide area workshops ○ Apply environmental education principles in training events ○ Provide follow-up ○ Encourage peer teaching; ongoing professional development • Follow these basic outreach practices:* <ul style="list-style-type: none"> ○ Program planning ○ Program development and implementation ○ Professional development ○ Evaluation ○ Research
Supporting and motivating professionals	<ul style="list-style-type: none"> • Train water education professionals to apply these steps when designing an outreach program: <ul style="list-style-type: none"> ○ Define driving forces ○ Define goals, and objectives ○ Identify and analyze the target audience ○ Create the message ○ Package the message ○ Distribute the message ○ Evaluate the outreach campaign
Evaluation	<ul style="list-style-type: none"> • Evaluate conservation professionals' effectiveness in using models and demonstration tools and in their use of skills taught in the workshops • Use activities and evaluation to help identify barriers and verify success • Adapt course design over time using multiple feedback methods.*

Table B9. *Decision-makers, leaders, and community groups*: Symposium Recommended Best Education Practices

Audience Description	People who provide recognized leadership in the community whether in elected, appointed, salaried, or volunteer positions
Sources	Findings for these audiences are based on the results of two research papers, four posters, and three panel presentations. *Indicates findings from a research-based paper. Other findings are derived from case studies.
Outreach Themes	Recommendations
Audience information	<ul style="list-style-type: none"> • Before designing training, survey local officials to learn if they: <ul style="list-style-type: none"> ○ Have a good understanding of their communities' storm water management plan.* ○ Feel they have sufficient information to make informed decisions about storm water management.* ○ See a role for local watershed groups in water quality monitoring, stormwater management planning, plan implementation, and compliance monitoring or environmental stewardship.*
Message content	No examples available
Message delivery vehicle	<ul style="list-style-type: none"> • Work with a collaborative to provide consistent storm water message across neighborhoods in a large city
Outreach strategy	<ul style="list-style-type: none"> • To teach recognition of key aquatic insects use narrated slide discussion and provide a live insect for reference* • Use website resources: <ul style="list-style-type: none"> ○ To provide web-based delivery of real-time automated stormwater and water quality data ○ To link data about observed phenomenon with photos and simple explanations ○ For outreach with schools and municipal officials • Encourage community groups <ul style="list-style-type: none"> ○ To assess source water in order to prioritize threats, and to develop and implement action strategies ○ To develop outreach strategies such as: public awareness campaigns, water conservation campaigns, pollution prevention activities (such as household hazardous waste collection), application of BMPs on farms, public policy protection strategies • In water-related organizations, include stakeholders as Board members • Involve citizens in a watershed planning group by facilitating their understanding of the problem/situation. • Support watershed planning groups with assistance from agencies. • Build water leadership capacity among young professionals, especially: <ul style="list-style-type: none"> ○ Members of minority and ethnic communities ○ Engineers ○ Law professionals ○ Environmental planners ○ Public interest advocates.
Supporting and motivating professionals	<ul style="list-style-type: none"> • Build skills to ask the right questions about land use • Build land use training program acceptability by: <ul style="list-style-type: none"> ○ Demonstrating impacts ○ Making staff and funding resources availability ○ Provide repeated education for new decision makers ○ Keep the science current
Evaluation	No examples available

Table B10. *Ethnic groups*: Symposium Recommended Best Education Practices

Audience Description	A population from a specific ethnic or cultural group
Sources	Findings for these audiences are based on the results of two research papers and one poster. *Indicates findings from a research-based paper. Other findings are derived from case studies.
Outreach Themes	Recommendations
Audience information	<ul style="list-style-type: none"> Identify specific education needs, for example the percent of households with drinking water that does not meet public health standards.* Tailor drinking water education materials to the learning style, educational level and potential vision problems of a relatively uneducated, elderly audience.*
Message content	No examples available
Message delivery vehicle	No examples available
Outreach strategy	<ul style="list-style-type: none"> To build capacity among urban schools to deliver water education effectively and with a community-based focus, provide: <ul style="list-style-type: none"> A nationally tested curriculum linked to national and state academic standards Training workshops for local partner, volunteer, and expert networks Training and support for teachers, volunteers and community leaders Service learning opportunities Program evaluation procedures. Encourage student-led projects With Latino youth programs, use place-based pedagogies so that the education of citizens might have direct bearing on the well-being of the social and ecological places people actually inhabit.* <ul style="list-style-type: none"> Allow participants to apply their learning to a wide variety of home, neighborhood and community situations.* Carry out education outreach initiatives through community-based organizations that already have a relationship with the target audience.* Field test new education materials with a lead community-based organization.* Generate local information and use it as the basis for local public education programs.*
Supporting and motivating professionals	No examples available
Evaluation	<ul style="list-style-type: none"> Evaluate program success by following up with household to check if problems have been corrected.*

Table B11. *Farmers*: Symposium Recommended Best Education Practices

Audience Description	People who work on the land to grow and produce food, animal feed, or other consumer products; and business professionals who support agricultural production
Sources	Findings for these audiences are based on the results of four research papers, three posters, one poster paper, and one panel presentation. *Indicates findings from a research-based paper. Other findings are derived from case studies.
Outreach Themes	Recommendations
Audience information	<ul style="list-style-type: none"> • Check with stakeholders concerning which approach to environmental assessment on the ranch they perceive as most effective. • Identify key target audiences and acknowledge individual grower characteristics, perceptions of problems, current use of practices, and preferences for educational formats.* • Use in-depth discussion and interviews to provide a useful finding about target audience interests and preferences about farm management topics.* • Use a comprehensive pre-survey; conservation plans, soil tests, workshops, and farm visits during the growing seasons as a basis for developing relevant land and water education programs.
Message content	<ul style="list-style-type: none"> • Link economic risk to over-application of nutrients, a common practice for ensuring maximum yield.
Message delivery vehicle	<ul style="list-style-type: none"> • Time education with heightened audience awareness created by press coverage of rules release, public hearings and a compliance deadline.
Outreach strategy	<ul style="list-style-type: none"> • Provide on-farm visits, small group demonstrations, and workshops emphasizing local, direct farmer contact.* • Tailor materials to details of the farm operation.* • Provide farmers with real life examples for new ideas.* • Conduct voluntary and confidential assessments on individual farms, in cooperation with groundwater technicians.* • Work with farmers to compare farm records related to environmental management over time.* • Facilitate farmers developing their own water quality management plans. • Emphasize, peer information exchange in farm quality planning. • Develop an "Improvement Action Plan" for individual farms.*
Supporting and motivating professionals Evaluation	<p>No examples available</p> <ul style="list-style-type: none"> • Use a comparison strip to provide the farmer with opportunity to make their own evaluation of pros and cons of a new procedure • Track program changes through a comprehensive pre-treatment survey and follow up surveys.* • Assure that program resources actually reached targeted audiences.*

Table B12. *Households and Neighborhoods*: Symposium Recommended Best Education Practices

Audience Description	Personal space of individuals and families
Sources	Findings for these audiences are based on the results of four research papers, five posters, three poster papers, and one panel presentation. *Indicates findings from a research-based paper. Other findings are derived from case studies.
Outreach Categories	Recommendations
Audience information	<ul style="list-style-type: none"> • Specify audiences by need.* • Implement a program design survey to <ul style="list-style-type: none"> ○ Assess public attitudes and interests about water.* ○ Determine citizen perceptions and knowledge about water quality • Tailor materials and programs to the learning style, educational level and potential vision problems of the audience.* • Identify specific education needs, for example, identify the percent of households with drinking water that does not meet public health standards.* • To encourage sustainable practices in application of fertilizers and pesticides on lawns <ul style="list-style-type: none"> ○ Use a social marketing approach to understand and redesign educational outreach strategies. ○ Identify barriers and benefits to the use of IPM by paid landscape managers.
Message content	<ul style="list-style-type: none"> • Provide clear information • Accompany findings or data with information <ul style="list-style-type: none"> ○ Which emphasizes the meaning of the results ○ About the pros and cons of control methods and which are most effective. • Assure that different agencies provide consistent messages • Design and deliver information based on communication and health behavior theories • Provide information that has immediate utility to the program.*
Message delivery vehicle	<ul style="list-style-type: none"> • Make information publicly available from a variety of sources. • Use a website to provide group connections and watershed resources • Provide awards for youth water projects • In video and audio communication materials, <ul style="list-style-type: none"> ○ Use entertaining approaches to communicate simple messages. ○ Partner with a state broadcast association to assure dissemination. • Communicate information about a watershed initiative by: <ul style="list-style-type: none"> ○ Distributing native plants ○ Providing non-chemical landscape design advice and rain barrels ○ Bus tours ○ Disseminating information.
Outreach strategy	<ul style="list-style-type: none"> • Form a regional team to determine water education needs and coordinate team outreach efforts through a variety of techniques: <ul style="list-style-type: none"> ○ An annual satellite conference ○ A domestic water handbook ○ A “riparian” concept campaign ○ A water quality monitoring workshop ○ A semi-monthly theme based fact sheet or report for stakeholders and policy makers.

- Support stakeholder groups:
 - Rely on stakeholder involvement in program development
 - Rely on landscape and watershed organizations help to set project goals.
 - Support groups, especially those with similar missions and those that already have a relationship with the target audience.*
- Generate local information:
 - Use a regional survey to establish priorities and to set baseline information about regional water education needs
 - Use local information as the basis for local public education programs.*
- Test new educational materials:
 - Target educational resources to meet specific needs.*
 - Field test new education materials with a lead community-based organization.*
- Rely on these outreach components for a conservation initiative:
 - Workshops and seminars on key topics and for key audiences such as: rainwater harvesting, riparian management, rangeland “rescue”, golf course management, and youth education
 - Demonstration sites featuring practical techniques for conserving water and energy in rangeland situations
 - Individual homeowners make site assessments with help from trained volunteers who make specific recommendations for reducing bacteria and nitrogen runoff.*
 - Awards for youth water projects
 - Well water testing information locally on an ongoing basis.

Supporting and
motivating professionals
Evaluation

No examples available

- Evaluate program success by following up with household to check if problems have been corrected.*
- Provide property owners with do-it-yourself kits and coupons for environmentally friendly products

Table B13. *Landowners: Symposium Recommended Best Education Practices*

Audience Description	People who own property and use it for residential, recreational, forestry, or agricultural purposes. People who work the land, such as farmers or loggers, are described as separate target audiences
Sources	Findings for this audience are based on the results of one research paper, one poster, and one poster paper. *Indicates findings from a research-based paper. Other findings are derived from case studies.
Outreach Themes	Recommendations
Audience information	No examples available
Message content	No examples available
Message delivery vehicle	<ul style="list-style-type: none"> • Provide landowners with information using a handbook and a calendar, making good use of photographs
Outreach strategy	<ul style="list-style-type: none"> • Provide landowners with hands-on, practical training about individual property management choices set in the context of information about broader ecosystem science and impacts.* • Provide training for real estate professionals in a supportive atmosphere accompanied by a field trip
Supporting and motivating professionals	No examples available
Evaluation	No examples available

Table B14. *Recreational water users: Symposium Recommended Best Education Practices*

Audience Description	Adults and youth who engage in fishing, boating, and other recreational activities on or near bodies of water
Sources	Findings for this target audience are based on the results of one poster paper. *Indicates findings from a research-based paper. Other findings are derived from case studies.
Outreach Themes	Recommendations
Audience information	No examples available
Message content	No examples available
Message delivery vehicle	<ul style="list-style-type: none"> • Work in collaboration with the professional association to publicize a course for golf course managers
Outreach strategy	<ul style="list-style-type: none"> • Engage golf course conservation superintendents in developing a course on turf grass management • Make turf grass management courses readily accessible to golf course managers and provide instructor support for completing assignments and application to their own golf course
Supporting and motivating professionals	No examples available
Evaluation	No examples available

Table B15. *Volunteers*: Symposium Recommended Best Education Practices

Audience Description	Citizens who voluntarily gather and organize data about a local watershed
Sources	Findings for this audience are based on the results of two panel presentations. *Indicates findings from a research-based paper. Other findings are derived from case studies.
Outreach Themes	Recommendations
Audience information	No examples available
Message content	No examples available
Message delivery vehicle	<ul style="list-style-type: none"> Facilitate volunteer water quality monitoring efforts through sharing success stories and communication among groups using an interactive website and listserve
Outreach strategy	No examples available
Supporting and motivating professionals	No examples available
Evaluation	<ul style="list-style-type: none"> Tell the story of the program and publicize impacts Encourage county commissioners, stakeholders, and partners in reporting outcomes

Table B16. *Youth*: Symposium Recommended Best Education Practices

Audience Description	Young people engaged in informal, nonformal, or formal, elementary and secondary education programs
Sources	Findings for these audiences are based on the results of two research papers, four posters and two poster papers. *Indicates findings from a research-based paper. Other findings are derived from case studies.
Outreach Themes	Recommendations
Audience information	No examples available
Message content	No examples available
Message delivery vehicle	<ul style="list-style-type: none"> • Facilitate school-based watershed education programs through interactive resources and communication among groups using an interactive website • Prepare youth to inform and engage communities about watershed information as a mechanism for reaching audiences who are geographically scattered when resources are limited
Outreach strategy	<ul style="list-style-type: none"> • When developing watershed education <i>teacher manuals</i>, identify barriers to implementation and adapt materials to respond to identified needs • When developing watershed <i>education materials</i>: <ul style="list-style-type: none"> ○ Adapt watershed education teaching materials to align with grade-appropriate science curriculum standards. ○ Involve the state office of education and other education stakeholders in the revision process. • Use best education practices in organizing environmental field days for youth • Use water education activities to provide “situated problem-solving” practice that can translate to workforce skills.* • Teach water science and build environmentally responsible behavior among students through “service-learning” experiences that apply principles of interaction and continuity: both significant features of education that leads to learning.* For example, <ul style="list-style-type: none"> ○ Provide educators, students and District staff with opportunities to participate in public lands activities. This experience has been shown to increase student performance and interest in school, student concern for protecting and conserving the environment, and educator motivation. ○ Focus on the characteristics of environmentally responsible behavior – knowledge of issues, skill in actions, knowledge of ecology and actions, group locus of control, intention to act, environmental sensitivity, personal responsibility, and individual locus of control – to build student environmental stewardship motivation and competencies.*
Supporting and motivating professionals	<ul style="list-style-type: none"> • Provide teachers with an opportunity to experience activities first-hand; interact with other educators; and learn about the materials • Provide teachers with activities that meet one or more curriculum goals
Evaluation	No examples available