



8. Outreach and Education Strategy

INITIAL OUTREACH AND EDUCATION EFFORTS

To engage stakeholders and to support development of the watershed protection plan, a suite of outreach strategies was used to inform participants in early stages of the Plum Creek Watershed Partnership. Ongoing outreach and education efforts have maintained public involvement in the process and continue to increase awareness of the program and its goals throughout the watershed. Resources and activities that have and will be utilized in this effort include the following:

Project Website

The Plum Creek Watershed Partnership website (<http://pcwp.tamu.edu>) is maintained by Extension and hosted by the Texas Water Resources Institute. The site includes information on the watershed and Partnership, a regional watershed coordination newsletter, press releases, an online discussion forum, links to project partners, access to the Watershed Protection Plan, water quality data, a meeting schedule, and information presented at previous meetings.

Fact Sheet

The Plum Creek Watershed Partnership fact sheet was developed as a 2-page information marketing tool to support and facilitate participation in the planning process (Figure 8.1). It has been distributed in the watershed via direct and electronic mail, at stakeholder meetings, and at other area events. The fact sheet also is available at the Hays County and Caldwell County Extension offices, the Plum Creek Conservation District office, and on the Partnership website. Updated versions have been and will continue to be created as needed to provide new information about programs and accomplishments resulting from project implementation.

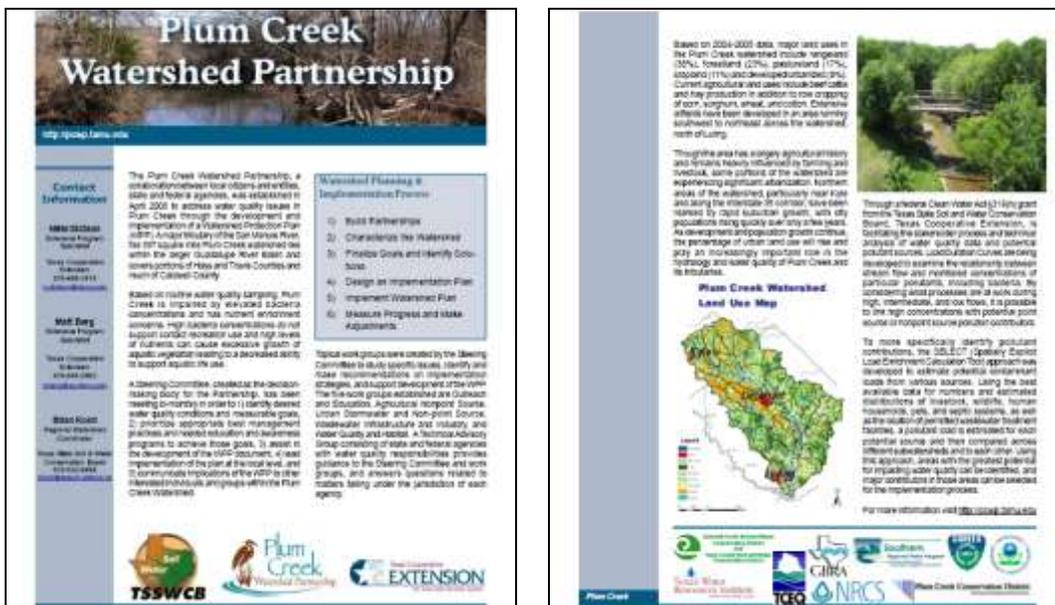


Figure 8.1. Plum Creek Watershed Partnership fact sheet.

News Releases

The Texas AgriLife Extension Service worked with Texas A&M University (TAMU) AgriLife Communications and Marketing to create and submit news releases to numerous media outlets through AgNews, including 5 local newspapers and approximately 100 additional local and regional newspapers and magazines. Additional public information articles will be developed and submitted to key outlets to announce completion of the watershed plan and to encourage stakeholder involvement in the implementation process.

- January 2006: “Texas Cooperative Extension Partnering in Plum Creek Watershed Pilot Program” via AgNews and an additional 5 local newspaper outlets.
- March 2006: “Public Invited to Join Plum Creek Watershed Project” via AgNews and an additional 5 local newspaper outlets.
- April 2006: “Plum Creek Watershed Partnership Under Way; Meetings Set for Kyle and Luling” via AgNews and an additional 5 local newspaper outlets.
- April 2006: “Media Advisory: Watershed Meetings Set for Kyle, Luling” via AgNews and an additional 5 local newspaper outlets.
- June 2006: “Public Invited to Plum Creek Watershed Project Meeting” via AgNews and an additional 5 local newspaper outlets.
- June 2006: “Preventive Measures Can Help Protect Plum Creek Watershed” via AgNews and an additional 5 local newspaper outlets.
- November 2006: “The Wave of the Future: Plans use local involvement to enhance water quality” in tx H₂O
- January 2007: “Group wants to keep creek beautiful and safe”, in Hays Free Press.
- January 2007: “Elementary Students Join Plum Creek Water Monitoring Effort” via GBRA to local newspaper outlets.
- December 2007: “Public Invited to Comment on Draft Plum Creek Watershed Protection Plan,” via 4 local newspaper outlets and Partnership email.

Newsletter Articles

Plum Creek Watershed updates have been written for the “Coordinated Watershed Protection in Southeast and South Central Texas” newsletter which is prepared and disseminated by the TSSWCB. The newsletter is distributed bimonthly by email and is available on the TSSWCB, Texas Watershed Steward, and Plum Creek Watershed Partnership websites. These updates also provide information to a broader regional audience about activities, approaches, and progress in the Plum Creek Watershed and serve as an important component of partnerships with similar groups in the state.

Newsletter articles about the watershed and project also have been disseminated through County Extension, Master Naturalist, Master Gardener, and local homeowners’ associations. Below are specific examples. Additional information/education pieces announcing plan completion and project activities and successes, and encouraging public involvement will be developed by the Partnership for distribution utilizing these established outlets.

- August 2007: “Update on the Plum Creek Watershed Protection Plan and the Texas Watershed Steward Program” in Alliance of Natural Resource Outreach & Service Programs bi-monthly newsletter.
- September 2007: “Make a Splash with Texas Watershed Steward Program” in Hays, Caldwell, Blanco, and Bastrop County Agriculture newsletters.
- September 2007: “Make a Splash with Texas Watershed Steward Program” in Preserve Our Water newsletter, a local non-profit organization in Blanco, Texas.
- September 2007: Plum Creek article in Texas Master Naturalist website and county newsletters.
- September 2007: Plum Creek article on Texas Master Gardeners website and in county newsletters.
- September 2007: Plum Creek article on Texas Education Agency website and teacher course catalog.
- October 2007: “The Plum Creek Watershed Needs You!” in Plum Creek Community Homeowner’s Association newsletter.
- October 2007: “The Plum Creek Watershed Needs You!” in Hays, Caldwell, Blanco, and Bastrop County Agriculture newsletters.
- October 2007: “The Plum Creek Watershed Needs You!” in Hometown Kyle Homeowner’s Association newsletter.
- October 2007: “The Plum Creek Watershed Needs You!” in Onion Creek Homeowner’s Association newsletter.

Watershed Tour

A watershed tour was organized upon request of the Plum Creek Watershed Partnership Steering Committee to provide an overview of the current characteristics and conditions across the watershed. The full-day tour was conducted on July 27, 2006 and attended by 64 participants. Presentations and information were provided on urban, agricultural, and industrial activities and issues and water quality monitoring efforts in the watershed.

Outreach and Education Work Group

The Outreach and Education work group was charged with the task of defining methods to 1) increase public awareness about water quality issues and planning and implementation efforts in the watershed, and 2) motivate individual actions to improve water quality in Plum Creek. Key audiences identified by the work group include rural and urban residents including youth; homebuilders and developers; septic system owners, installers, and inspectors; agricultural producers; elected officials; business and community leaders; news media; and community service organizations. To achieve these goals, the work group developed a strategy that includes both broad-based programs directed at the general public and targeted programs intended to reach specific audiences within the watershed.

As an initial step, the work group developed and used a stakeholder survey to obtain public feedback in creating a logo and branding campaign. The logo is intended to increase public awareness about the watershed and to stimulate a sense of organization, purpose and ownership. The logo is used by the Partnership and its partners on all project-related materials to enhance name and program recognition (Figure 8.2).



Figure 8.2. Plum Creek Watershed Partnership logo.

A major success for the Outreach and Education work group, working closely with Partnership partners at the TCEQ, has been the acquisition of a Taking Charge of Water Quality project funded through Section 106 of the Clean Water Act. The grant funds a significant portion of the educational activities that have been planned for Plum Creek. In addition, many of the resources developed through this project may be adapted and utilized in other watersheds across the state.

BROAD-BASED PROGRAMS AND TRAINING RESOURCES

Texas Watershed Stewards

Texas Watershed Stewards is a science-based watershed education program designed to help citizens identify and take action to address local water quality impairments. The Partnership Steering Committee is the inaugural Texas Watershed Steward group, having received training through presentations and discussions at work group and steering committee meetings. To support the implementation process, 3 additional public training events have been and will be conducted in the watershed. The first event was held on December 4, 2007 in Kyle with 42 participants, and further trainings will be scheduled in Lockhart and Luling in 2008. The goal will be to engage as many citizens as possible in the implementation process.

Advertisements for Plum Creek and Texas Watershed Stewards

- July 2007, Bluebonnet Electrical Coop “Market Square” in Texas Coop Magazine.
- July 2007: “Make a Splash with the Texas Watershed Steward Program” in Hays, Caldwell, Guadalupe, Gonzales, Comal, Blanco, and Bastrop Counties weekly Extension news columns.
- August 2007: Bluebonnet Electrical Coop “Market Square” in Texas Coop Magazine.
- September 2007: Bluebonnet Electrical Coop “Market Square” in Texas Coop Magazine.
- October 2007: Bluebonnet Electrical Coop “Market Square” in Texas Coop Magazine.
- October 2007: “The Plum Creek Watershed Needs You!” in Hays, Caldwell, Guadalupe, Gonzales, Comal, Blanco, and Bastrop Counties weekly Extension news columns.
- October 2007: “The Plum Creek Watershed Needs You!” on City of Kyle website and calendar.

Elementary School Water Quality Project

To promote youth education and involvement in the Plum Creek Watershed Partnership, a water quality monitoring program is being continued during the 2007-2008 school year. The program was initiated and is led by the GBRA. In October 2006, meetings were held with curriculum directors and principals from local elementary schools to obtain approval for the program. Current partner schools include Negley Elementary, Tobias Elementary, Hemphill Elementary, Science Hall Elementary, Plum Creek Elementary, Clear Fork Elementary, and Luling Shanklin Elementary. Science teachers at each school are trained in basic water quality monitoring techniques. In addition, classroom instruction is delivered to students covering watersheds, nonpoint source pollution, and the Plum Creek project. Water monitoring test kits, supplies, poster-sized watershed maps, and student workbooks are donated to the schools by the GBRA.

During the 2006-2007 school year, a total of 760 fourth and fifth grade students and 18 teachers have completed 3 rounds of water quality testing in their classrooms (November 2006, February and May 2007). Students use the Texas Watch model to test and monitor water from Plum Creek for temperature, dissolved oxygen, pH, turbidity, nitrates, and phosphates. In addition, packets of educational information about the watershed and water quality issues were sent home with the students to be shared with their parents. This project will be repeated in the 2008-2009 school year and subsequent years, if possible.

Watershed Protection Campaign Brochure

A watershed protection brochure titled “Don’t Be Clueless About Water” was developed by the GBRA to educate individuals about the impacts of individual activities on water quality and how to reduce those impacts (Figure 8.3). The brochure, which was originally created for the entire Guadalupe-Blanco River Basin, has been adapted specifically for the Plum Creek Watershed. The brochure was initially distributed to students involved in the Plum Creek water quality project in the 2006-2007 school year. Additional copies will be distributed in information packets for future participating students as well as at educational meetings, training programs, public events, and in selected mailouts from the Partnership and the GBRA.

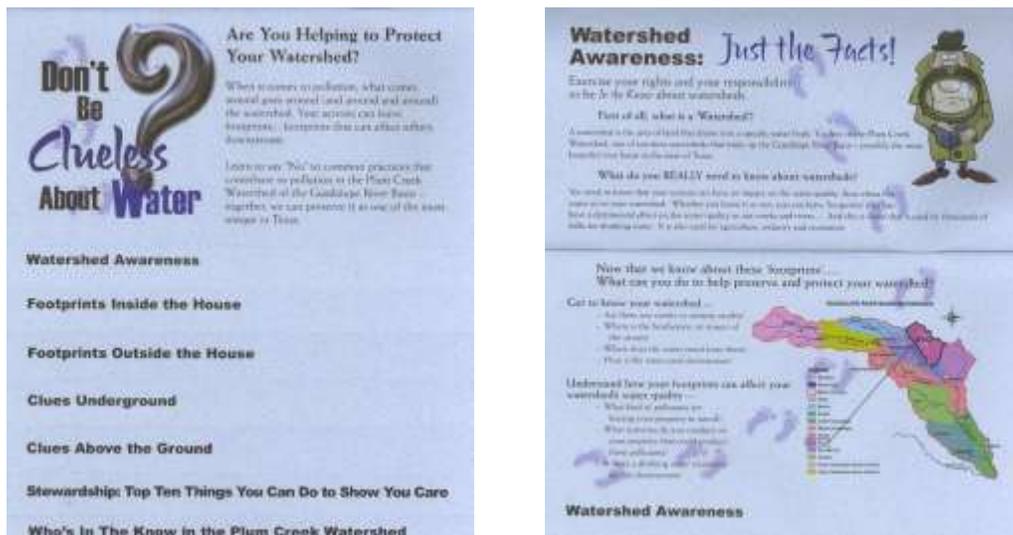


Figure 8.3. GBRA Don’t Be Clueless About Water brochure adapted for use in Plum Creek.

Tributary and Watershed Roadway Signage

Contingent upon funding, signs will be developed and posted along major roads notifying travelers that they are entering the watershed or when they are crossing Plum Creek or a significant tributary. In addition, ad space will be purchased for existing large billboards at key locations in the watershed encouraging residents and travelers to take positive action to protect water quality in their area.

Outreach at Local Events

Local public events such as the Luling Foundation Field Day, Luling Watermelon Thump, Lockhart Chisholm Trail Days, Kyle Stream Cleanup, and Lockhart Rites of Spring will be used as venues for presentations and/or distribution of education and information resources. Plum Creek Watershed posters, map displays, fact sheets, and handouts addressing plan implementation will be disseminated. The TSSWCB and Extension already have participated in the 2006 and 2007 Luling Foundation Field Days to promote the Plum Creek Watershed Partnership.

Rainwater Harvesting Education

Extension personnel will organize and conduct a rainwater harvesting educational program to provide information on the benefits, methods and costs of installation. To supplement an existing demonstration at the Luling Foundation and contingent upon funding, home and/or business rainfall harvesting demonstrations will be established in Kyle and Lockhart.

TARGETED POLLUTANT SOURCE OUTREACH EFFORTS

Urban Runoff

NEMO workshops

Two Nonpoint Education for Municipal Officials (NEMO) workshops for city and county employees and elected officials will be conducted in the watershed by Extension, Texas Sea Grant, and the GBRA. NEMO is a national program that is a confederation of 32 educational programs in 31 states dedicated to protecting natural resources through better land use planning. To maximize participation, one workshop will be held in the Kyle/Buda area and the other in the Lockhart/Luling area. Workshops will include topics such as smart growth, low impact design, stormwater management, and reducing impervious surfaces. Following the training, participants will be surveyed to evaluate changes in knowledge and intentions to implement recommended practices. Follow-up trainings will be conducted as necessary and appropriate.

Online Stormwater Management Training

The GBRA will develop an online stormwater training tool for municipal operations employees that will be made available on the Plum Creek and GBRA websites. Key personnel from each city will be invited to the training, which will address management practices for the control of stormwater and include information on the requirements for entities that must satisfy MS4 regulations.

Stormwater BMP Demonstrations

In areas where preferred urban stormwater BMPs are to be implemented, cities in cooperation with Extension and the TCEQ have and will sponsor field demonstrations. Invitations will be sent to builders and developers, city staff, and engineers, and notices will be placed in local newspapers. Two mulch tube stormwater BMP field demonstrations already have been conducted in Kyle and Lockhart (June and July 2007, respectively). Additional events will be held as appropriate.

Site Assessment Visits

The TCEQ will conduct at least 4 site assessment visits to municipal operations in the Plum Creek Watershed. Assessments will focus on enhancing stormwater and wastewater infrastructure and operation efficiency.

Urban Nutrient Management Education

Programs such as Grow Green and Yard Wise will be engaged to provide workshops and materials to educate the general public regarding proper rates and timing of fertilizer and pesticide application for lawns and landscapes. City, county, and private landscape maintenance providers will be solicited to participate in these training workshops. In addition, similar trainings will be provided through Master Gardener programs and by working with local homeowners' associations.

Golf Courses, Sports Athletic Fields, and Schools

The Partnership will work with Extension's Sports and Athletic Field Education (SAFE) program to educate golf course and other sports and athletic field managers and personnel on nutrient and pesticide management practices. The SAFE program is a multidisciplinary approach for turfgrass management based on comprehensive evaluation and monitoring of individual fields. This program addresses fertilizer and pesticide selection and use, irrigation management, aerification, and cultural practices such as mowing height and frequency.

Household Hazardous Waste Collection Days

The Partnership will provide publicity support to cities in the watershed conducting annual or biennial hazardous waste collection events to increase public participation in these activities. The Partnership will send out email notification of events in the watershed, print and distribute fliers, and post information on the project website.

Pet Waste Programs

A public information and outreach program will be used to educate pet owners about the importance of properly disposing of pet waste, both at home and in public areas. Contingent upon funding, signs will be placed in city parks and other areas frequented by pets. Mass mailings will be sent in conjunction with utility billing, public service announcements will be made on local radio stations, and brochures will be placed at veterinary clinics, County Extension offices, county courthouses, and other suitable locations.

Septic Systems

Online Training for Septic System Owners

An online training program will be developed by the GBRA to illustrate proper septic system function and maintenance to ensure efficiency and to extend the life of the system. The training will be made available on both the Partnership and GBRA websites.

Septic System Workshops

Extension personnel will conduct 2 workshops for homeowners and 2 workshops for inspectors, installers, and maintenance providers of septic systems in 2008. These trainings will target subwatersheds identified by SELECT and will focus on key aspects of operation, maintenance, and repair that are important for each audience. Future training events will be conducted in other areas as needed and where additional funding is available.

Wastewater

Online Wastewater Treatment Facility Training

An informational wastewater treatment module will be developed by the GBRA and made available online to watershed residents. The module will address treatment methods and processes and will explain the importance of proper wastewater management within the home to protect the quality of receiving waters.

Online Fats, Oils, and Grease Training

Online training addressing management practices for handling fats, oils, grease, and household chemical use and disposal will be developed by the GBRA. The training will be geared toward both businesses and homeowners and will be available through GBRA, Partnership, and city web linkages.

Fats, Oils, and Grease Workshops

The TCEQ will conduct at least 2 workshops for restaurants in the watershed on fats, oils and grease in 2008. The Partnership will support these trainings through direct and web-based marketing.

Agriculture

Soil and Water Testing Campaigns

Soil and water testing campaigns will be conducted annually or biennially by County Extension personnel to encourage proper nutrient management in both agricultural and urban areas. Funding will be sought to provide free or reduced-rate testing when possible.

Nutrient Management Education

Training events will be organized and conducted by County Extension personnel to educate agricultural producers regarding sound nutrient management practices in row and forage crop production systems. These events will be held annually in conjunction with soil testing campaigns in the fall or spring.

Crop Management Seminars

Annual or biennial crop management and production seminars will be organized and conducted by County Extension personnel and will include training to promote the use of recommended management practices for reducing pesticide and sediment loss.

Livestock Grazing Management Education

Livestock grazing workshops and training events will be organized and conducted by County Extension personnel annually or biennially to educate producers on proper grazing management techniques.

Agricultural Waste Pesticide Collection Days

Contingent upon funding, agricultural waste pesticide collection days will be conducted annually or biennially and will be rotated between Caldwell, Hays, and surrounding Counties. The Partnership will support these efforts through web-based and direct marketing programs. In coordination with the TCEQ and the Caldwell County AgriLife Extension Service, one collection event was held in Luling on June 5, 2007. Over 31,400 pounds of waste were collected. This included approximately 8,800 pounds of solid and liquid organic pesticides and 10,365 pounds of lead-acid batteries. Other wastes collected included solvent-based and latex paints, petroleum products, mercury bulbs, a variety of chemicals, and empty containers.

Wildlife and Non-Domestic Animals

Feral Hog Management Workshops

Feral hog management workshops will be conducted to educate landowners regarding the negative impacts of feral hogs and the most effective methods for their control. In response to immediate needs, County Extension personnel conducted the first such workshop in February 2007 in Luling with an attendance of over 180. Additional area events will be conducted annually or biennially, as appropriate.

Stream and Riparian Workshops

County Extension personnel, in cooperation with local NRCS and SWCD personnel, will coordinate annual workshops to educate the public on stream and riparian area management. Trainings will focus on the importance of these areas as wildlife habitat and their effects on water quality and overall watershed health.

Abandoned Oil and Gas Wells

The large number of abandoned wells in the Plum Creek Watershed demonstrates the need for continued monitoring of all oil and gas wells, both those currently in production as well as those that are no longer in use. The Partnership will continue to work with the RRC to maintain inspection programs and to identify and plug abandoned wells.

Illegal Dumping/Litter Campaign

Identification of Priority Clean-up Sites

Over 35 road crossings and accessible areas were identified while planning the targeted water quality monitoring project. These sites will be assessed and prioritized for cleanup by GBRA contractors based on the extent of the problem and the potential for environmental impacts (Figure 8.4). Site descriptions, photographs, and indications of challenges (traffic, slope, brush and fencing hazards) that could affect cleanup efforts will be obtained. Private landowners associated with priority sites will be identified to obtain permission for access. Based on site prioritization, the following activities will be developed:

- **Site Cleanup Projects:** Cleanups will be conducted at the most critical sites utilizing a contractor with heavy equipment to remove large debris and trash. Proper disposal of debris, post-cleanup photographs, and a report on each event, including the amount and type of debris removed, will be developed.
- **Signs:** The GBRA will coordinate with Caldwell and Hays Counties to post signs at cleanup sites and at other identified watershed dumping sites to discourage future activity.
- **Community Cleanup Events:** At least 2 community cleanup events sponsored by the GBRA will be conducted in cooperation with Keep Texas Beautiful to remove smaller debris from watershed streams and also capitalize on public involvement to improve awareness of the overall Plum Creek project. Educational materials will be distributed at these events and provided to cities and counties for other community-sponsored events in the watershed.



Figure 8.4. Dumping site adjacent to Plum Creek. A special project will clean up key dumping sites and discourage future activity at such areas.