

Plum Creek Watershed Protection Plan

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Introduction

- Plum Creek was placed on the State of Texas 2004 303(d) List of Impaired Waters for exceeding the water quality standard for bacteria (e.coli) and does not support its designated use for contact recreation.
- Plum Creek is also listed for elevated nutrient concerns for nitrates and nitrites, ammonia, total phosphorous and orthophosphorus.
- Concerns for nutrients date back to the State of Texas 1998 305(b) report, which is a summary of all surface waters in Texas, and concerns for bacteria date back to the 2002 305(b) report.

Plum Creek Watershed Partnership

- December 15, 2005 - Plum Creek was selected by the Wharton Regional WCSC as the pilot watershed
- January 6, 2006 - Meeting with Local County Agents, GBRA, and PCCD
- Watershed Tour with County Agents, GBRA, PCCD, Texas Parks and Wildlife and Tom Bonn, County Commissioner.
- January thru March – Meetings and Media Promoting Project including the website: <http://pcwp.tamu.edu>
- Mailed out 700 brochures & invitations to public meetings



Meetings Promoting Plum Creek Watershed Partnership

- Caldwell-Travis County SWCD and Hays SWCD Board Meetings on January 11, 2006 and February 1, 2006
- Plum Creek Conservation District Board Meeting on Jan. 17
- Guadalupe Blanco River Authority Board Meeting on Feb. 15
- Guadalupe Blanco River Authority Clean Rivers Steering Committee Meeting March 23, 2006
- Hays County Wildlife Management Training on April 29, 2006
- Luling Kiwanis Club Meeting on May 10, 2006
- Luling Foundation Farm Field Day on May 8, 2006
- Kyle's Citizens Water Advisory Group Meeting on May 25, 2006
- TXDOT SH-130 Project Team



Media Promotion

- TCE News Releases since January
 - Jan. 27, 2006, Texas Cooperative Extension Partnering in Plum Creek Watershed Pilot Program
 - March 30, 2006, Public Invited to Join Plum Creek Watershed Project
 - April 13, 2006, Plum Creek Watershed Partnership Under Way; Meetings Set for Kyle and Luling
 - April 19, 2006, Media Advisory: Watershed Meetings Set for Kyle, Luling
 - June 5, 2006, Public Invited to Plum Creek Watershed Project Meeting
 - June 8, 2006, Preventive Measures Can Help Protect Plum Creek Watershed
- TSSWCB News Release in January 6, 2006 – Plum Creek Selected for Watershed Protection Plan





plum creek watershed partnership

HOME

PROJECT OVERVIEW

MEETINGS

WATER QUALITY

NEWSLETTER

LINKS

PARTNERS

plum creek watershed partnership

The Plum Creek Watershed Partnership supports the development of a Watershed Protection Plan (WPP) and promotes a sustainable, proactive approach to improving water quality at the local level. A steering committee made up of local stakeholders will assess the water quality issues and develop the WPP. The WPP will determine necessary education and awareness campaigns, best management practices, and other measures to be implemented to improve and protect the water quality in Plum Creek. Texas State Soil and Water Conservation Board (TSSWCB) and Texas Cooperative Extension have partnered to facilitate plan development and education and awareness, along with the TSSWCB Wharton Regional Office- Watershed Coordination Steering Committee.

Plum Creek rises in Hays County north of Kyle and runs south through Caldwell County, passing Lockhart and Luling, and eventually joins the San Marcos River at their confluence in north Gonzales County. Plum Creek is 52 miles in length and has a drainage area of 397 square miles. According to the draft 2004 Texas Water Quality Inventory and 303(d) List, Plum Creek (Segment 1810) exhibits elevated nutrient levels and is impaired by elevated bacteria concentrations. These water quality issues, in conjunction with land use across the watershed, increasing urban development, oil and gas production and potential for agricultural nonpoint source pollution, were considered when Plum Creek was selected for the WPP process.



Plum Creek Watershed Partnership Meetings

- April 2006 – Three Public Meetings in Watershed (116)
 - May 9, 2006 – First Steering Committee Meeting (49)
 - June 20, 2006 – Steering Committee Meeting/Work Groups (42)
 - July 2006 – Five Work Group Meetings
 - July 27, 2006 – Watershed Tour (62)
 - August 2006 – Selected as Pilot Watershed for Tri-Agency Water Quality Team (EPA, TCEQ, & TSSWCB)
 - August 10, 2006 – Second Steering Committee Meeting
- Steering Committee or Work Group Meetings Monthly

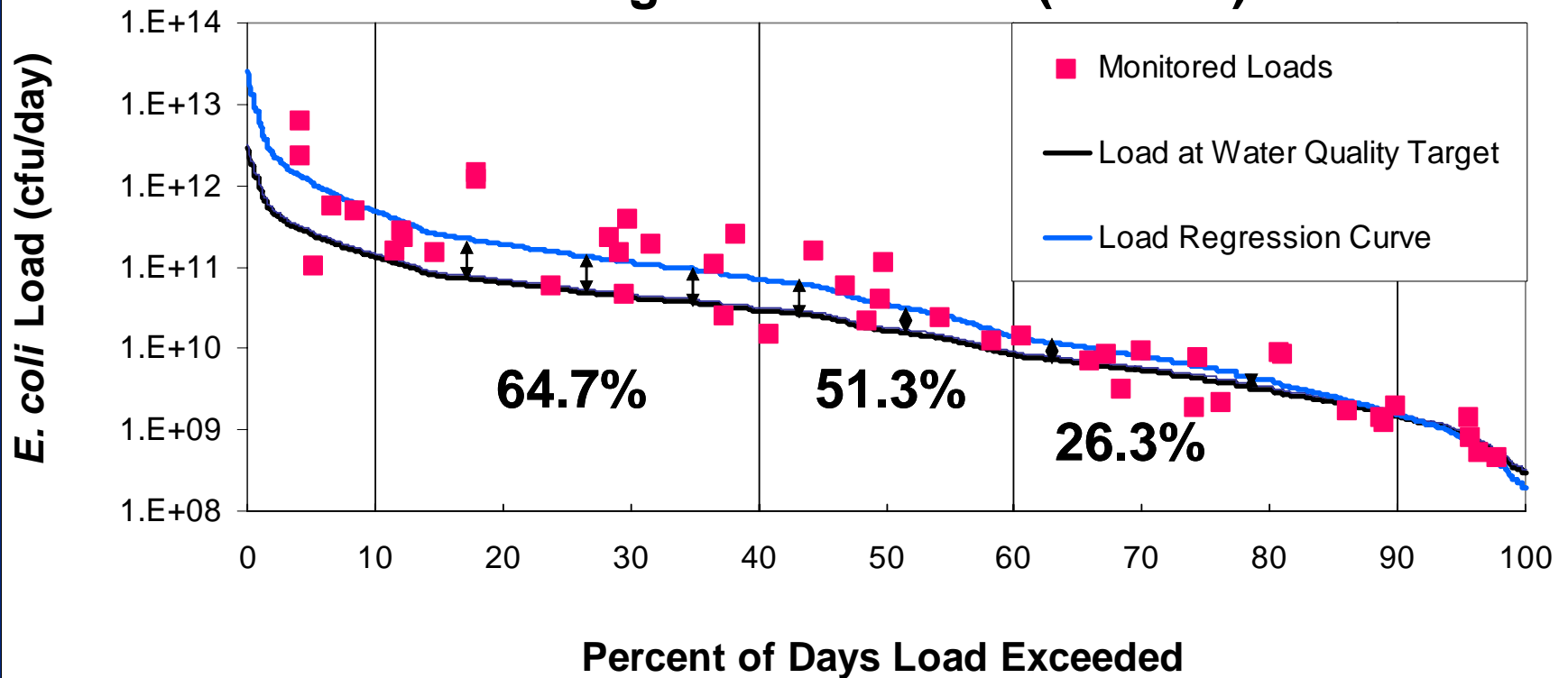
Assessment Tools

- TAMU team from Spatial Sciences Lab and Biological and Agricultural Engineering Dept.
- Load Duration Curves
- Spatially-explicit Geographic Information System (GIS) methodology - SELECT
- Soil and Water Assessment Tool - SWAT



Bacteria LDC - Uhland

E. coli Load and Reductions Monitoring Station 17406 (Uhland)

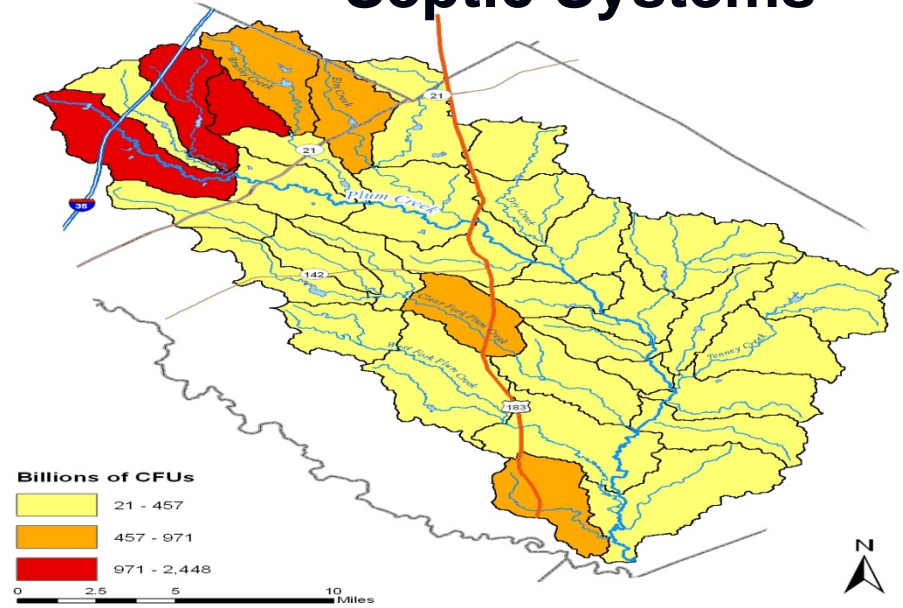


Potential Sources

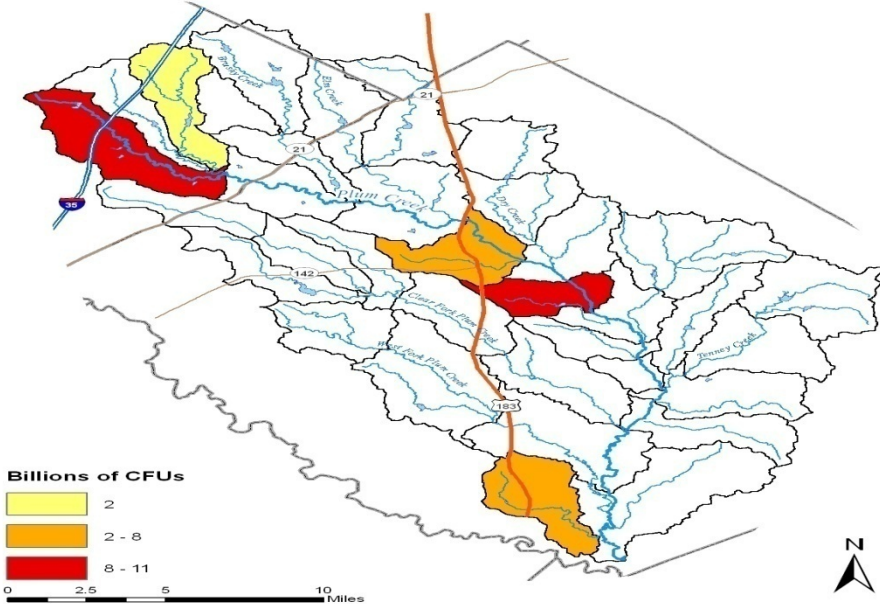
Potential Sources	Bacteria	Nutrients	Other
Septic Systems	X	X	X
<u>Wildlife</u>			
Deer	X	X	
Feral Hogs	X	X	
Cropland		X	
<u>Livestock</u>			
Sheep and Goats	X	X	
Horses	X	X	
Cattle	X	X	
Oil and Gas Production			X
Urban Runoff	X	X	X
Wastewater Treatment Plant	X	X	

Average Daily Potential *E. coli* Load Examples from SELECT

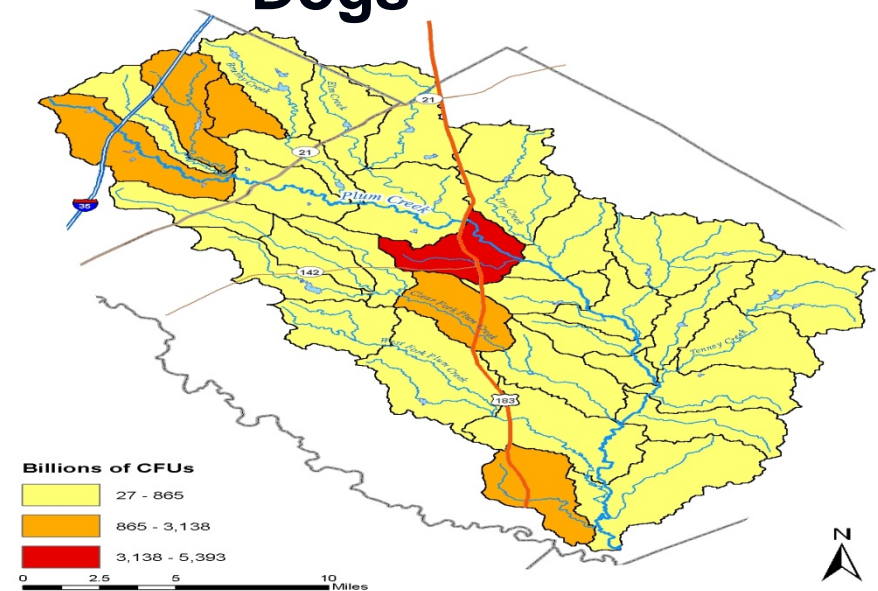
Septic Systems



WWTPs



Dogs



Restoration Measures

- Examples were provided to partnership including other WPP and IP plans
- Best management practices (BMPs) and implementation measures were discussed and determined by stakeholders at meetings
- Prioritize by subwatersheds with SELECT highest potential contributions and proximity to creeks
- We are currently writing these sections

Challenges

- Data Gaps or lack of updated information
 - Population data
 - Land Use data
 - Wildlife data
 - Livestock data
 - Septic System information
 - Lack of electronic tracking data or historical data
 - BMP Efficiencies

Challenges

- Current challenge is determining how specific the implementation of BMPs can and should be
- Can easily determine an appropriate list of BMPs for Agriculture and Urban areas but
 - It is difficult to determine numbers and locations of specific practices without extensive survey or engineering effort
 - Time and effort is required to get commitments

Watershed Course

- Resources out there and other WPP examples
- Sources of needed data
- Options for assessment and modeling
- Stakeholder facilitation and conflict resolution

Exciting Watershed Highlights

- Initially a pilot project for TSSWCB and the Wharton Regional WCSC.
- Additionally selected by the Texas Tri-Agency Water Quality Team (EPA, TSSWCB, and TCEQ) as a WPP pilot project.
- Receiving in June \$150,000 for water quality outreach and education from TCEQ Clean Water Act 106 funding for “Taking Charge of Water Quality” – Implementation \$
- Receiving additional funding from TSSWCB for one year of targeted monitoring of bacteria and nutrients.
- Received 2 Stormwater BMP Demonstrations by TCEQ



Thanks!

Questions?

