

9.4 Nonpoint Source Assessment

The Chico Creek Watershed covers about 736 square miles and about 37 square miles are in crop production. Most of the land that is owned by the State is used for livestock rangeland. The primary nonpoint source issue of concern in this region is from the increasing threat of urbanization in El Paso County.

The four biggest nonpoint source issues are:

- Livestock and grazing;
- Agriculture
- Individual Sewage Disposal Systems (ISDS)
- Urban and Construction Activities

9.4.1 Livestock and Grazing

Most of the livestock and grazing is currently within the Chico Creek Basin and is limited to the two main ranches: Bohart and Chico Basin Ranch.

The Chico Basin Ranch is a working cattle ranch on the high prairie and is owned by the State of Colorado. It is leased by Duke and Janet Phillips and their family for a 25-year term that began November 1, 1999. Its sprawling ranges of shortgrass and sandsage prairie, spring-fed lakes, meandering creeks, and hidden pools are home to a diverse wildlife population of birds, pronghorn, deer, fish, prairie dogs, coyote, badgers, and more. The Chico Basin Ranch is dedicated to the enhancement and preservation of the natural world and western heritage. The mission of the Ranch is to create a working model that views the ranch as an ecological resource base. This base supports a complementary mix of enterprises that emphasize sustainability, innovative management, and diversification as the keys to economic and ecological viability.

9.4.2 Agriculture

There currently appears to be limited agriculture activities, and potential sources of agriculture contamination include:

- Pesticides and fertilizer storage and mixing and loading
- Back siphoned agriculture chemicals
- Animal waste stockpiles or lagoons
- Daily barn wastes

9.4.3 Septic Systems

Septic tank effluent is the most common water quality problem in rural areas that do not rely on central wastewater services. This is largely a result of septic systems that are improperly installed or poorly maintained and causes bacteria contamination. Groundwater contamination is especially important because of the number of groundwater monitoring wells in the area that are utilized for drinking water.

Improved maintenance of septic systems begins with education of homeowners concerning the limitations and weaknesses of their systems. Homeowners need to be advised of the limited hydraulic capacity of an OWS and of their inability to deal effectively with certain substances such as caustic solutions and heavy loads of grease. Instruction in using proper techniques for monitoring system performance is required, as well as instruction in recognizing the early warning signs of system failure. The importance of knowing the locations of septic tanks, leach fields, vents and piping must be stressed and accurate records of system maintenance must be maintained. Regular inspection of a septic system is necessary, and having the ability to require system inspection, repair, or replacement may be needed by local governments in order to insure the success of a program of BMPs. Within El Paso County, the number of septic systems has increased from about 300 in 1990 to about 2000 in 2000. El Paso County issues more septic system permits than any other County in the state.

The smaller communities do not have the organizational capacity to carry out a full-fledged program of education, inspection and enforcement. The PPACG is capable of providing direction for the educational elements of such a program, but lacks the authority and capability to perform inspections or to undertake enforcement actions. It is the opinion of the El Paso County Department of Health and Environment that a mandatory participation program of septic system inspection, repair and replacement should be undertaken because of the reluctance shown by homeowners who know of deficiencies in their systems to willingly participate in voluntary programs. Renewable OWS permits are being considered as a method of overseeing that routine system maintenance has been completed.

Several alternatives have been discussed regarding the best institutional form for implementing a program of BMPs for OWS. The only general-purpose government having jurisdiction in the area and the authority to implement a mandatory septic tank maintenance program is, the El Paso County Board of Commissioners. Prior to considering a regulatory approach, the Board of Commissioners has requested that

PPACG pursue all other possibilities. There is a move within the Colorado Department of Public Health and Environment (CDPHE) encouraging local health departments to consider developing performance based OWS regulations in order to better protect water quality.

The El Paso County Department of Health and Environment has been in contact with the El Paso County Planning Department and is encouraged by talks of “cluster-type” residential development. This type of development could potentially have covenants that would require periodic OWS maintenance by residents. Possible programs that would be effective include a pilot program for licensing private firms to perform septic system inspection, repair, and certification in lieu of the County Health Department; educational programs aimed at advising residents of water conservation and septic system maintenance techniques; and the temporary funding of an additional Health Department Environmental Health Specialist to initiate an inspection program. Maintenance information for ISDSs has been included as Appendix 13 in the most recent revision of the El Paso County ISDS regulations.

The El Paso County Department of Health and Environment has recently hired 2 full-time environmental technicians. Part of the position is nitrate sampling from wells within the County, with a long-term goal of using the data to aid the Planning Department with subdivision water source impact, and to educate the public about health effects of water high in nitrates.

9.4.4 Urban and Construction

Urban and Construction activities that are planned in the watershed, especially in the Upper Black Squirrel Creek Drainage, could have the following effects if not closely monitored:

- New development can decrease the recharge rates of the aquifers by replacing pervious surfaces with impervious surfaces.
- Impervious surfaces can lead to increased stormwater runoff and increased velocity.
- Impacts to riparian and wetland areas.