

The Gritty Interface of Science and Policy – Nonpoint Source Pollution in New Mexico

Abe Franklin, New Mexico Environment Department

Abe Franklin works for the Surface Water Quality Bureau of the New Mexico Environment Department, where he manages the Watershed Protection Section, a technical team with offices in Santa Fe, Las Cruces, and Silver City. He and his section implement parts of New Mexico's Nonpoint Source Management Program and Wetlands Program, working towards the protection and improvement of New Mexico's aquatic resources using the framework of the Clean Water Act and state initiatives such as the River Stewardship Program.

Abe's previous work experiences include project development and management within the Watershed Protection Section, remote sensing research and development for a small engineering company, marine fisheries observation on Alaskan factory trawlers, bicycle mechanics, and lab assistance in environmental microbiology and forestry. His degrees are in environmental biology from New Mexico Tech (B.S.) and natural resources management from the University of Nevada in Reno (M.S.), where he developed riparian vegetation mapping methods using high-resolution remote sensing.



The Gritty Interface of Science and Policy – Nonpoint Source Pollution in New Mexico

New Mexico Environment Department
Surface Water Quality Bureau
Abe Franklin, Program Manager



Figure 1. Introduction.

- Clean Water Act (CWA) Sec. 303(d) - “Each State shall identify those waters within its boundaries for which the effluent limitations ... are not stringent enough to implement any water quality standard applicable to such waters.”
- CWA Sec. 319(b) – “The Governor of each State ... shall ... prepare and submit ... a management program ... for controlling pollution added from nonpoint sources.”
- NM Water Quality Act 74-6-4 NMSA – The Water Quality Control Commission shall:
 - “Adopt water quality standards for surface and ground waters...based on credible scientific data”
 - “Adopt a comprehensive water quality management program”
 - “Assign responsibility for administering its regulations to constituent agencies”

Figure 2. Legal authority.

- Clean Water Act (CWA) Sec. 303(d) – NMED collects water quality data and assesses standards attainment, on a statewide basis. 8-year rotating surveys. NMED develops total maximum daily loads (TMDLs) to characterize and allocate loading. WQCC and EPA review and approve TMDLs.
- A stream’s impairment status may change without demonstrating that water quality changed.
- CWA Sec. 319(b) and 319(h) – NMED targets streams that don’t meet standards (and have TMDLs developed) for further planning and implementation to meet standards.
- EPA asks states to report nonpoint source “Success Stories” tied to EPA strategic planning and performance measures.

Figure 3. In practice.

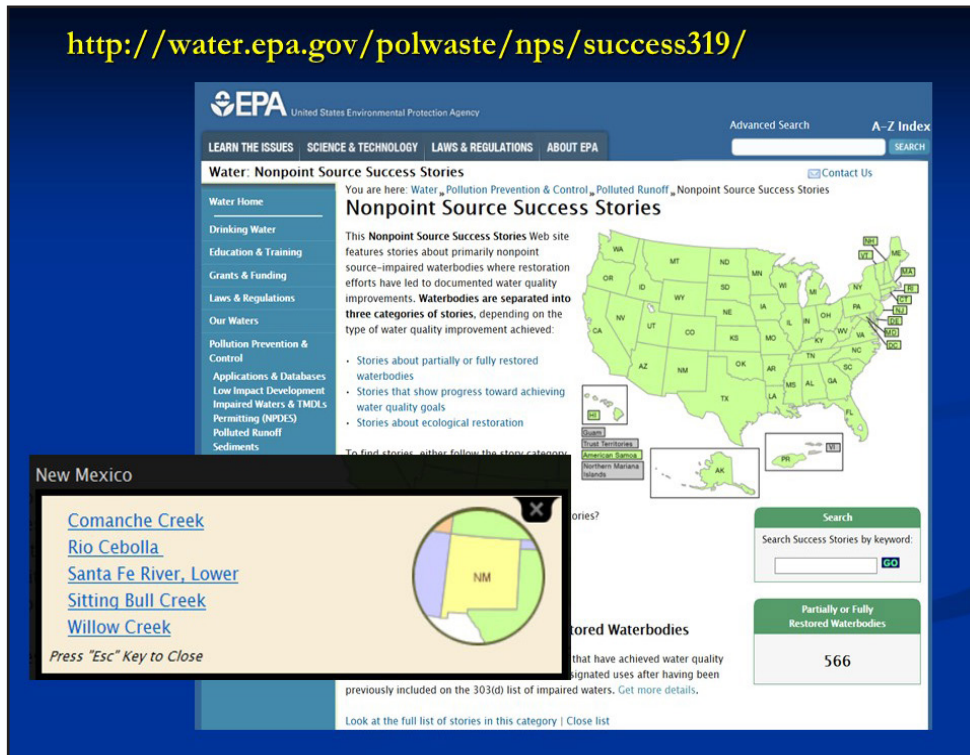


Figure 4. Nonpoint source success stories on EPA's website.

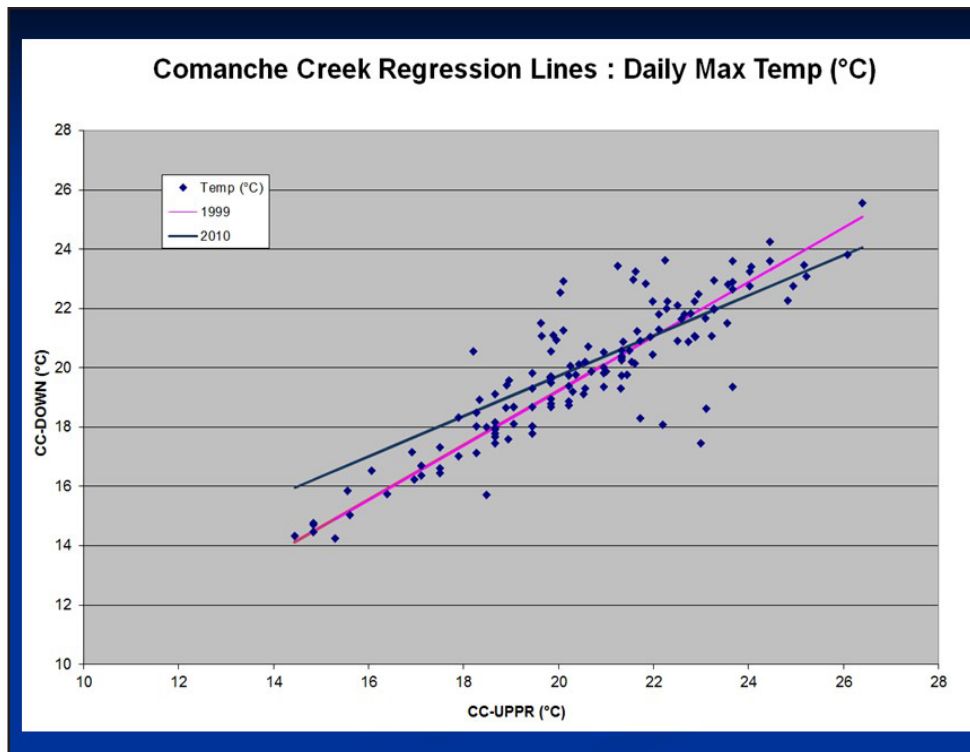


Figure 5. Graph showing Comanche Creek regression lines: daily max temp (°C).

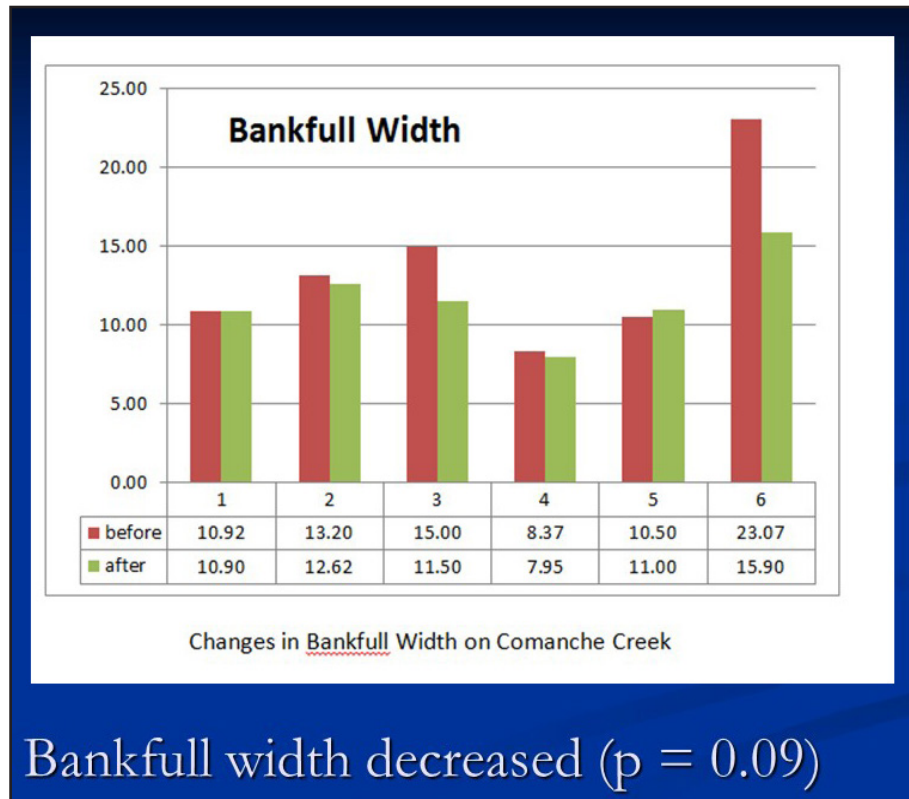


Figure 6. Graph showing bankfull width on Comanche Creek.

From the 2008-2010 303(d)/305(b) Integrated Report Record of Decision:

2008 Action: This AU was surveyed during 2006 to establish baseline conditions as soon as possible after ONRW status was established for surface waters in the Valle Vidal. 2006 thermograph data confirmed the existing [temperature] listing. There were only 3% fines measured at station Comanche Creek above Costilla Creek, and the M-SCI score for benthic macroinvertebrates was 59. Therefore, according to the 2008 assessment protocol for sedimentation, this AU was determined to be full support for sedimentation/siltation.

Figure 7. Comanche Creek Delisting.