

**SAPILLO CREEK SUBWATERSHED BELOW LAKE ROBERTS**

**TMDL reach length:** 11.9 mi; **Subwatershed area:** 87 sq. mi. (to Lake Roberts); 174 sq. mi. total

**Elevation range:** 5200–6600 ft.

**Watershed cover:** 80% forested; 15% rangeland; 3% agriculture; 2% water

**Watershed management:** 98% USFS (Wilderness and Silver City RDs) ; < 2% private

**Wilderness:** ~65 sq. mi. (37%)

**Counties [SWCDs]:** Grant [Grant]

**TMDL:** [http://www.nmenv.state.nm.us/swqb/Turbidity\\_TMDL\\_for\\_Sapillo\\_Creek\\_12-14-2001.pdf](http://www.nmenv.state.nm.us/swqb/Turbidity_TMDL_for_Sapillo_Creek_12-14-2001.pdf)

**Record of Decision:** <http://www.nmenv.state.nm.us/wqcc/303d-305b/2004/AppendixB/2004-2006ROD.pdf>

**WQS reference:** <http://www.nmcpr.state.nm.us/nmac/parts/title20/20.006.0004.pdf> (Section **20.6.4.503**)

**TMDL parameter exceeded:** Turbidity

**Current exceedance:** Turbidity (as total suspended solids) exceeds standard by 625 lbs/day (31%)

**Unsupported use:** high-quality coldwater aquatic life

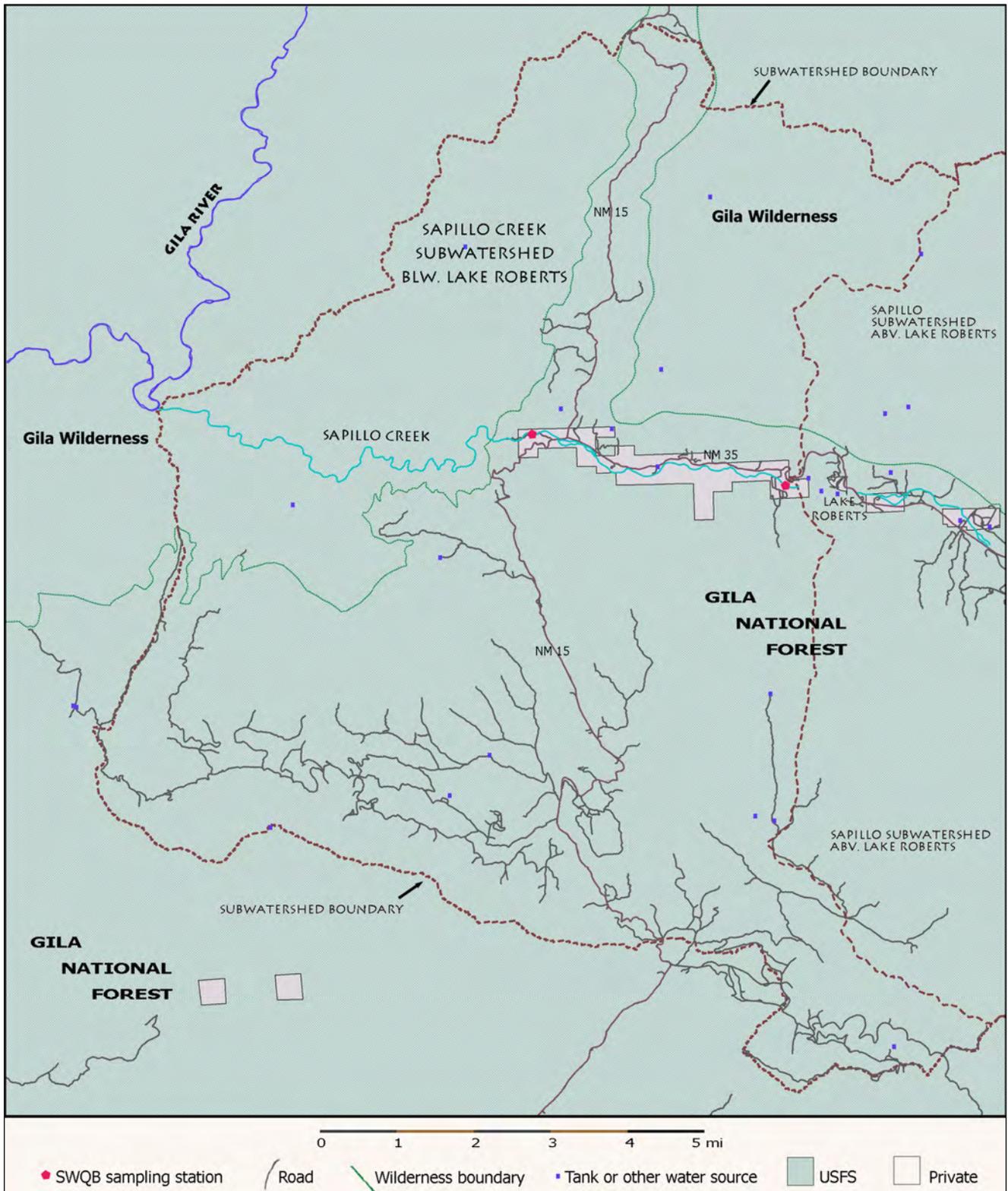
Possible mechanisms	Action (identification of MPs)	Possible MPs
Septic leach or runoff from developed lands downstream of Lake Roberts Sediment transport through Lake Roberts during runoff events Road or gully runoff Loss of native ground cover by grazing impacts, historic agriculture, or clearing for construction Historic fire suppression and subsequent decline in upland herbaceous cover Conversion of meadow areas; loss of wetlands: decreased filtration capacity Channel earth-moving work (property protection)	Evaluate potential for wetland reclamation or construction Evaluate sediment reduction potential in Lake Roberts Evaluate stream bank vegetative cover density Evaluate road and recreation impacts (GNF& partners travel planning underway) Evaluate historic forest encroachment and potential for thinning treatments in conjunction with GNF planning efforts Evaluate grazing plans (underway on Sapillo allotment by The Nature Conservancy) Evaluate tributary drainages for gullying or other erosion effects	Constructed wetlands (filtration) Filter strips, brush mats, herbaceous or pole/post plantings on streambanks Silt fencing or other protection on construction sites Meadow reclamation Road and/or culvert realignment; closures Lake Roberts sediment reduction structures Prescribed burning/thinning of woody species (current 319/CFRP projects ongoing) Improved grazing management Gully or other treatments to reduce sedimentation from tributary channels

**SAPILLO CREEK SUBWATERSHED (LAKE ROBERTS TO GILA RIVER)—continued**

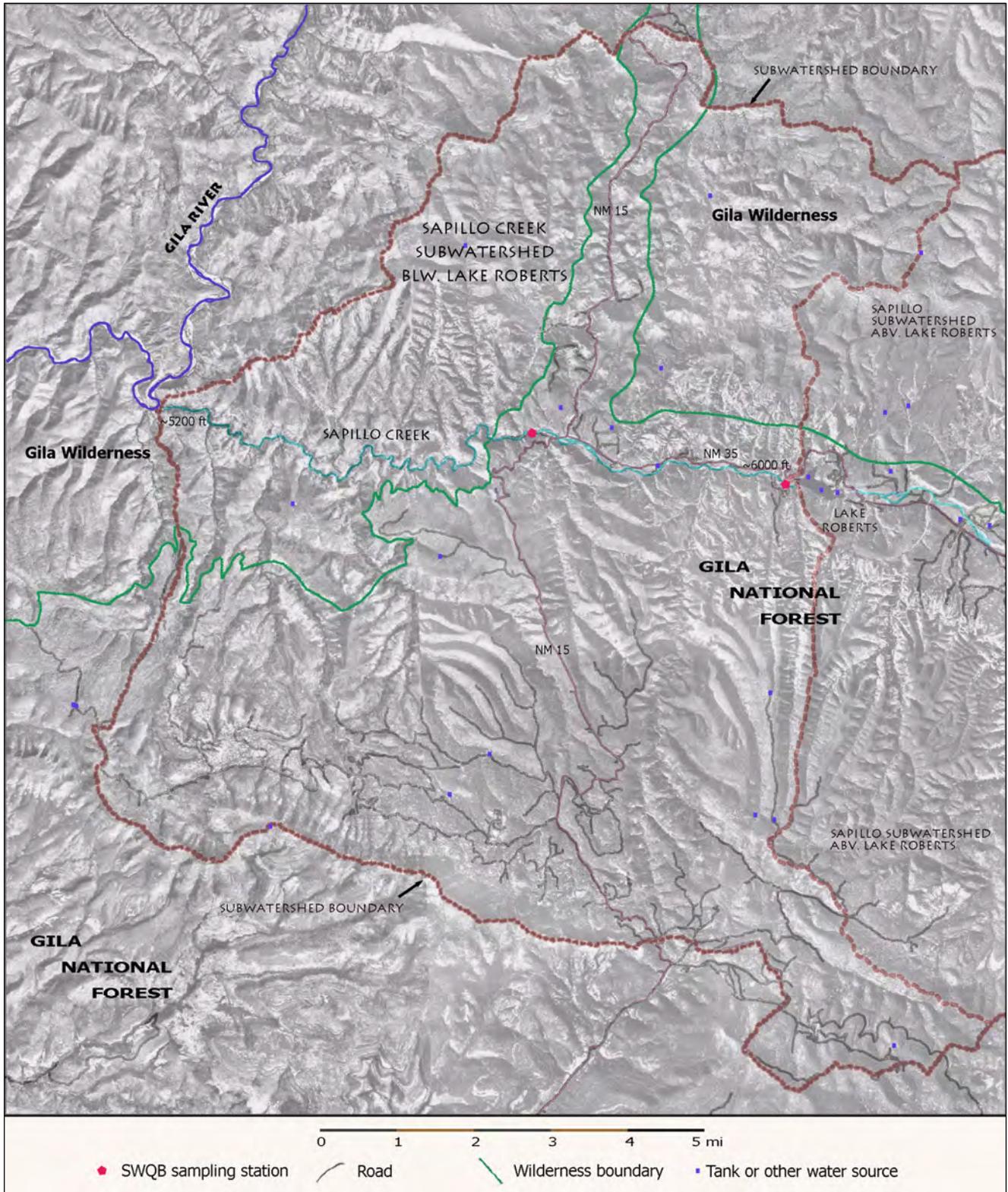
Milestones	Schedule	Target criteria
Initial contacts with landowners; development of remediation strategies Potential wetland sites identified Travel management planning complete Liaison established with pertinent Lake Roberts stakeholders to develop remediation strategies Coordination with GNF on remediation plans Most effective management measures identified; work plan established with GNF and other partners Identify costs and funding sources Develop proposals First-round implementation of management measures Initial monitoring	2006  2007-2008 2008? 2007-2008  2007-2008  2008-2009  Dependent on GNF scheduling	Proposal developed for abatement of sediment contributions from tributary drainage (GWP) Wetland reclamation: 5 acres Road improvement or closure reduces road sediment runoff by 10% on targeted sites Remediation of Lake Roberts sediment issues Native ground cover restored on 10% of currently bare ground or duff Thinning/prescribed burning plan in place for upper watershed Cessation of in-channel earth-moving projects Turbidity (as TSS) reduced 20%
<p><b>Monitoring: Monitoring (suggested monitoring protocols are described in Section 6):</b></p> <ul style="list-style-type: none"> <li>▪ Regular NMED/SWQB monitoring and sampling at established stations</li> <li>▪ GNF monitors RASES site within impaired reach; data collection on Skates fire effects to be incorporated</li> <li>▪ Current data collection underway on 319 thinning project</li> <li>▪ Tree cover/herbaceous cover; HEM, RUSLE to monitor road improvement or closure effects; results of upland thinning projects</li> <li>▪ Long-term volunteer monitoring programs under development to document riparian condition, water quality, nonpoint source contributions</li> </ul>		



Map TMDL-17. Topographic map of the Sapillo Creek subwatershed downstream of Lake Roberts. Base image: USGS 1:24000 quads. All data from NMED, USGS, and USFS Gila National Forest.

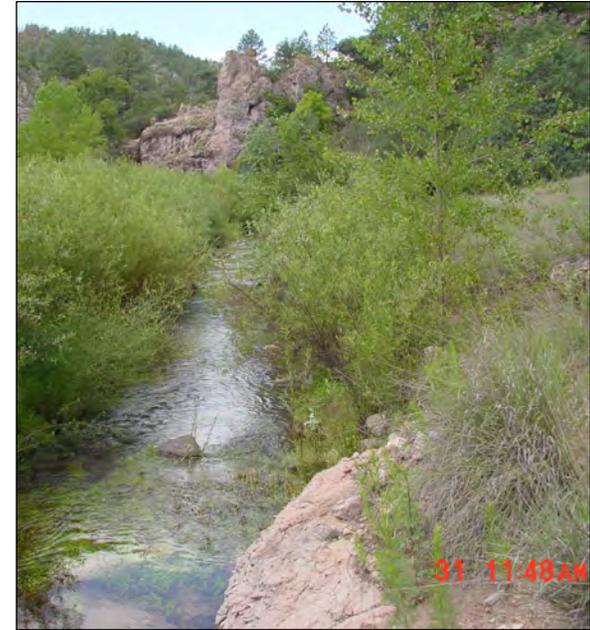


Map TMDL-18. Land management status map, Sapillo Creek subwatershed downstream of Lake Roberts. All data from NMED, USGS and USFS Gila National Forest.



Map TMDL-19. Aerial photography relief map, Sapillo Creek subwatershed downstream of Lake Roberts. Base image: 1996-2002 USGS digital orthophotoquads. All data from USGS, NMED, and USFS Gila National Forest.

*SAPILLO CREEK—continued*



**Sapillo Creek photos. Clockwise from upper left: ash from the June 2006 Skates fire transported downstream and deposited on banks below FR 15, July 2006; SWQB sampling site just upstream of Wilderness boundary, July 2001; Lake Roberts community ~1/2 mile downstream of Lake Roberts (Sapillo Creek flows across the center of the photograph), July 2001. Photos from 2001 courtesy NMED, Silver City.**