EAST FORK GILA RIVER SUBWATERSHED

TMDL reach length: 26.2 mi; **Subwatershed area:** 798 sq. mi. (excluding Taylor and Black Canyon Creek watersheds); 1013 sq. mi. total
Elevation range: 5700–9000 ft.
Watershed cover: 70% forested; 29% rangeland; 1% agriculture. Most rangeland is in the northern half of watershed.
Watershed management: 64% USFS (Reserve, Black Range, and Wilderness RDs); 14% BLM; 10% private; 12% state
Wilderness: ~290 sq. mi. (29%)
Counties [SWCDs]: Catron [San Francisco], Grant [Grant], Sierra [Sierra]
TMDL: http://www.nmenv.state.nm.us/swqb/Chronic_Aluminum_TMDL_in_East_Fork_of_Gila_River_and_Taylor_Creek_11-05-01.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: Chronic aluminum

Current exceedance: Aluminum standard exceeded by 551 lbs/day (371%)

Unsupported use: high-quality coldwater aquatic life

Possible mechanisms	Action (identification of MPs)	Possible MPs
Natural sources (basalts) Inhibited riparian regeneration; reduced streambank filtration Loss of high-elevation meadows and wetlands; reduced filtration capacity Poorly drained or damaged roads; road crossings; culverts Sediment runoff from trails (recreational or livestock) Grazing and silviculture (historic fire suppression) management; consequent reduction in herbaceous cover and increased sediment runoff Gullying and loss of tributary channel vegetation; increased sediment input during runoff events	Evaluate streambank vegetative cover, particularly in historically farmed areas Evaluate grazing impacts, particularly in upper elevation areas of watershed on non-USFS lands (modification of grazing plans by GNF has already occurred) Evaluate road and recreation impacts, including in-stream vehicular traffic & campground (GNF& partners in travel planning) Identify gully sites and evaluate for remediation Evaluate historic meadow, wetland sites and springs for remediation potential	Gully remediation Grazing management Prescribed burning/thinning Road realignments; culvert and trail improvements; OHV closures Brush layer, filter strip; other floodplain remediation including re-seeding or re-planting Near-channel pole/post/herbaceous plantings; exclosures from grazing by livestock or elk Meadow and/or wetland reclamation In-channel structures to improve channel morphological resistance to erosion during moderate flow events

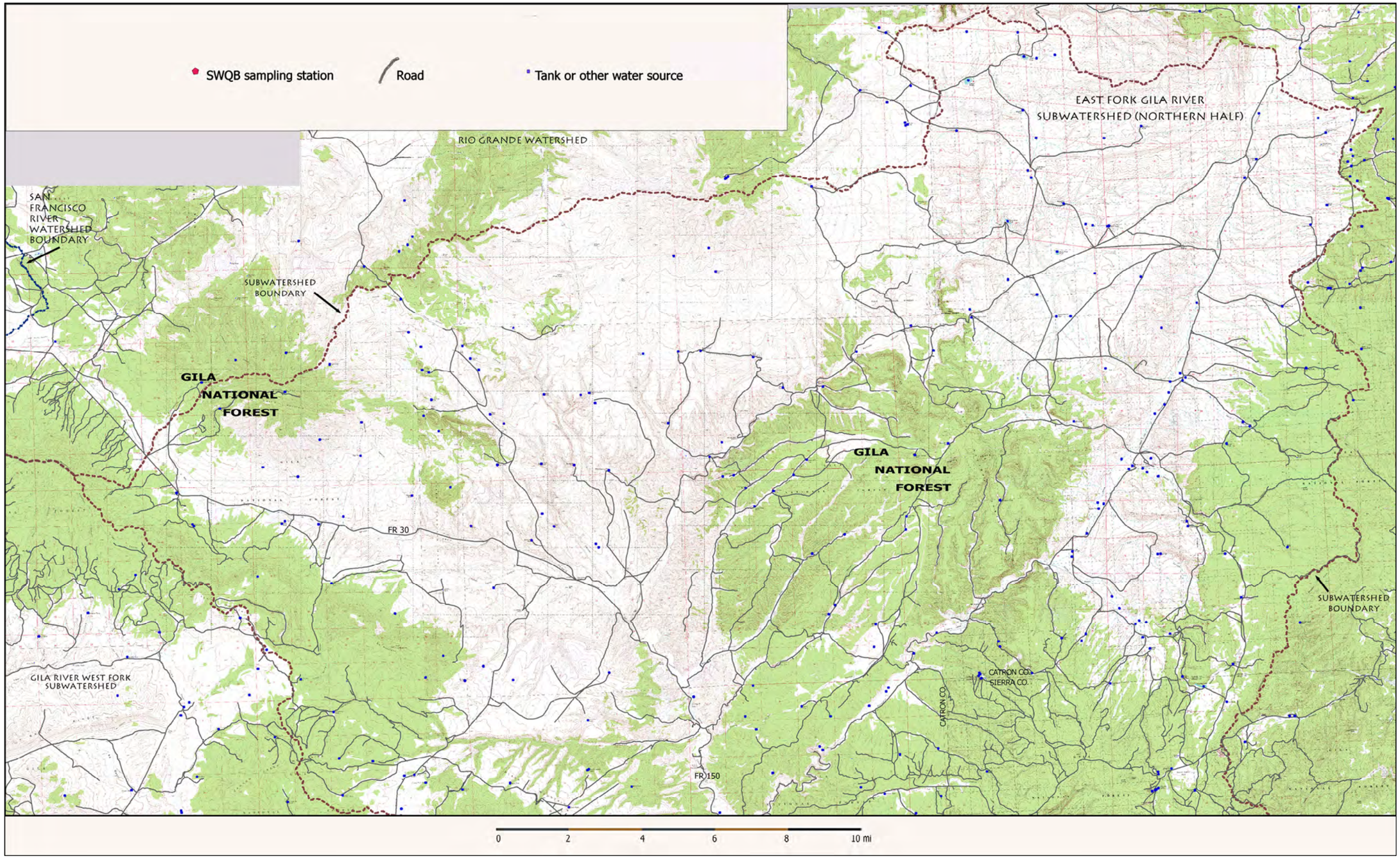
EAST FORK GILA RIVER SUBWATERSHED—continued

Milestones	Schedule	Target criteria
Establish/improve liaisons with private landowners, all management agencies to identify and document existing vegetative cover; road/vehicle, historic agricultural impacts and gullying sites	2007-2009	Increase vegetative cover on targeted streambank reaches by 20%
Identify potential meadow/wetland remediation sites	2007-2008	Implement remediation practices on 100 acres of meadow or wetland
Travel planning complete	2008?	Thinning/burning of 10% of uplands
Target subwatersheds and develop management strategies in conjunction with existing management plans	As scheduled with GNF, other stakeholders	Reduce sediment runoff inputs on targeted subwatersheds by 5%
Identify costs and leveraged funding sources		Reduce aluminum concentration by 50%, to 350 lbs/day
Develop proposals	Based on above	
First-round implementation of management measures	Based on above	
Initial monitoring	Based on above	

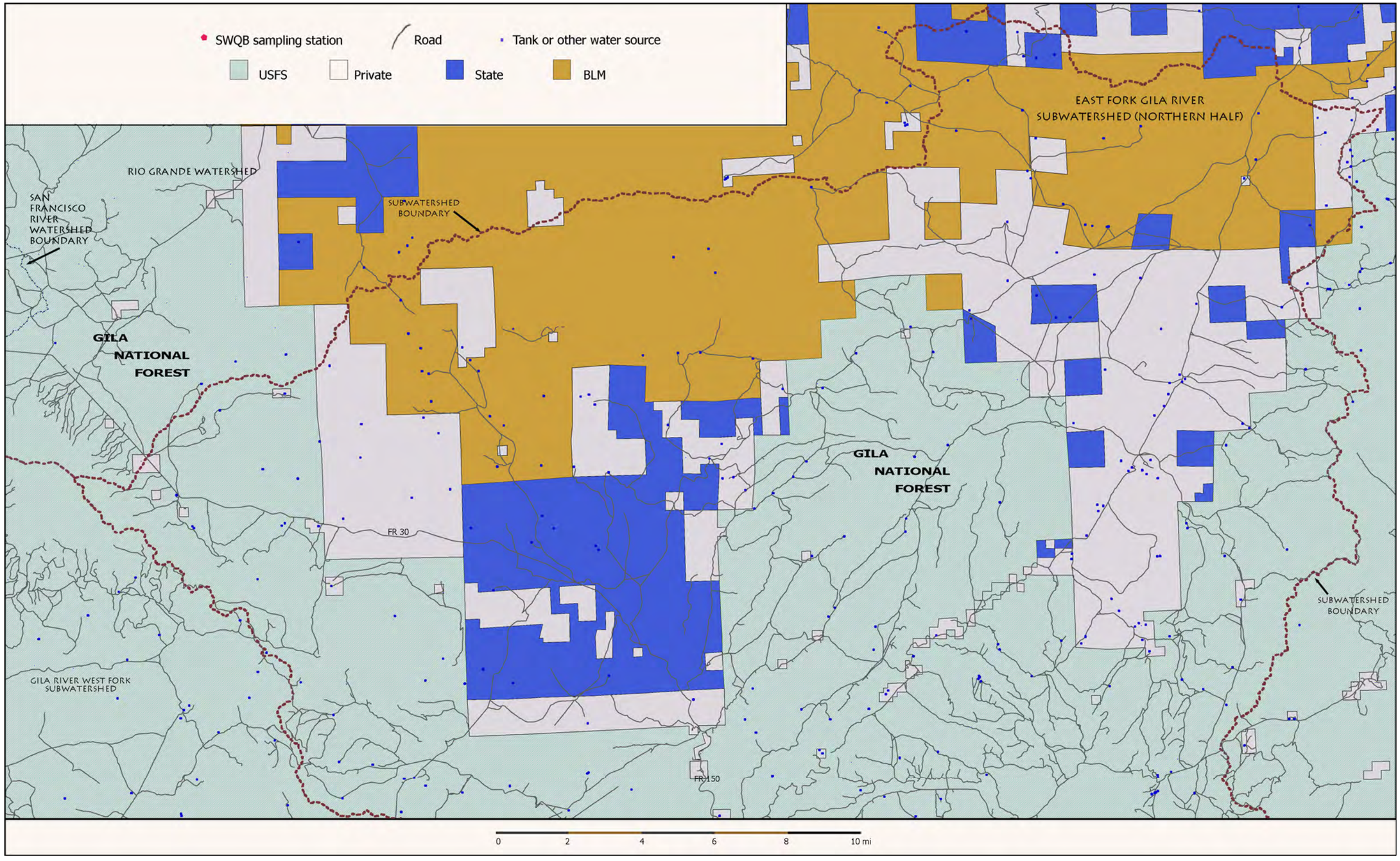
Monitoring (suggested monitoring protocols are described in Section 6):

- Appropriate monitoring protocols will depend on implemented MPs
- Regular NMED/SWQB monitoring and sampling at established stations
- Long-term volunteer monitoring programs, ideally involving watershed landowners, are under development to document riparian condition, water quality, nonpoint source contributions

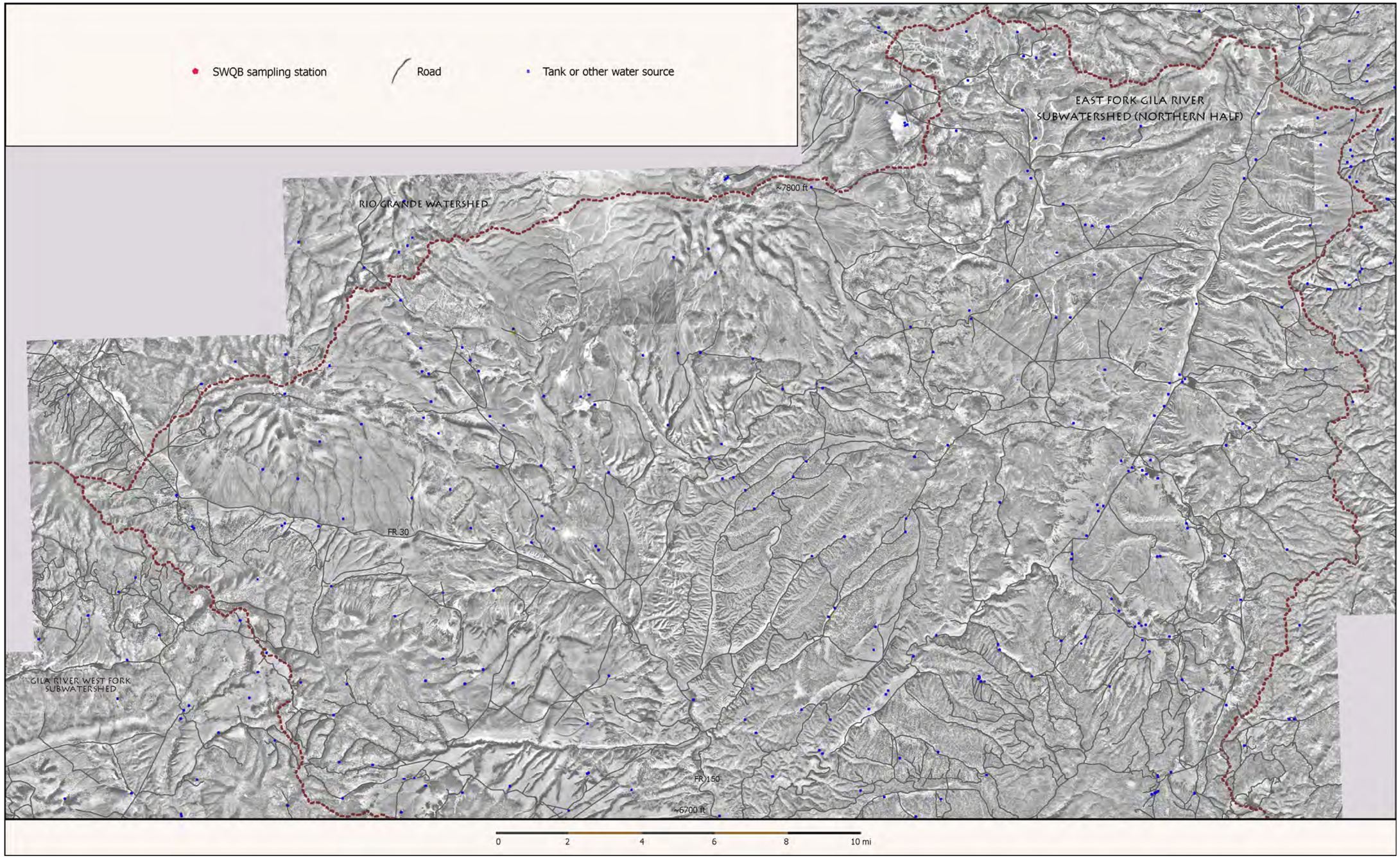
Note. The 2001 TMDL was established only for a 7.5 mile reach, from the mainstem confluence upstream to Taylor Creek, but a later revision in the *ROD* is for the 26.2-mile reach extending from the confluence upstream through Beaver Creek. This table and accompanying maps therefore reference the entire East Fork watershed. The Taylor Creek and Black Canyon subwatersheds are described in more detail in separate TMDL sections.



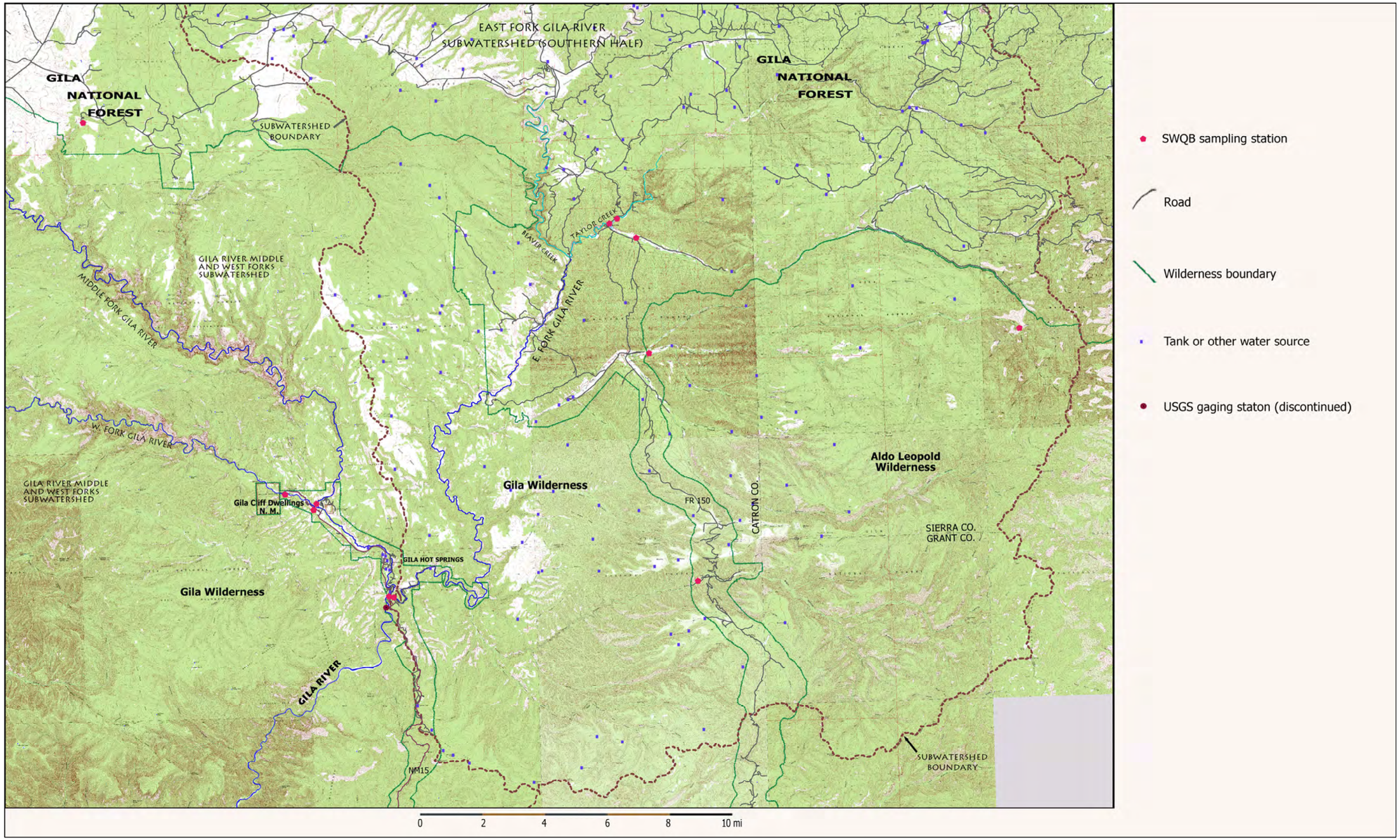
Map TMDL-08. Topographic map, Gila River East Fork subwatershed (northern half). There are no SWQB sampling stations on this portion of the watershed. Base image: USGS 1:24000 quads. All data from USGS, NMED, and USDA Gila National Forest. Refer to separate TMDL sections for more detail on the Taylor Creek and Black Canyon Creek subwatersheds, both tributary to the East Fork.



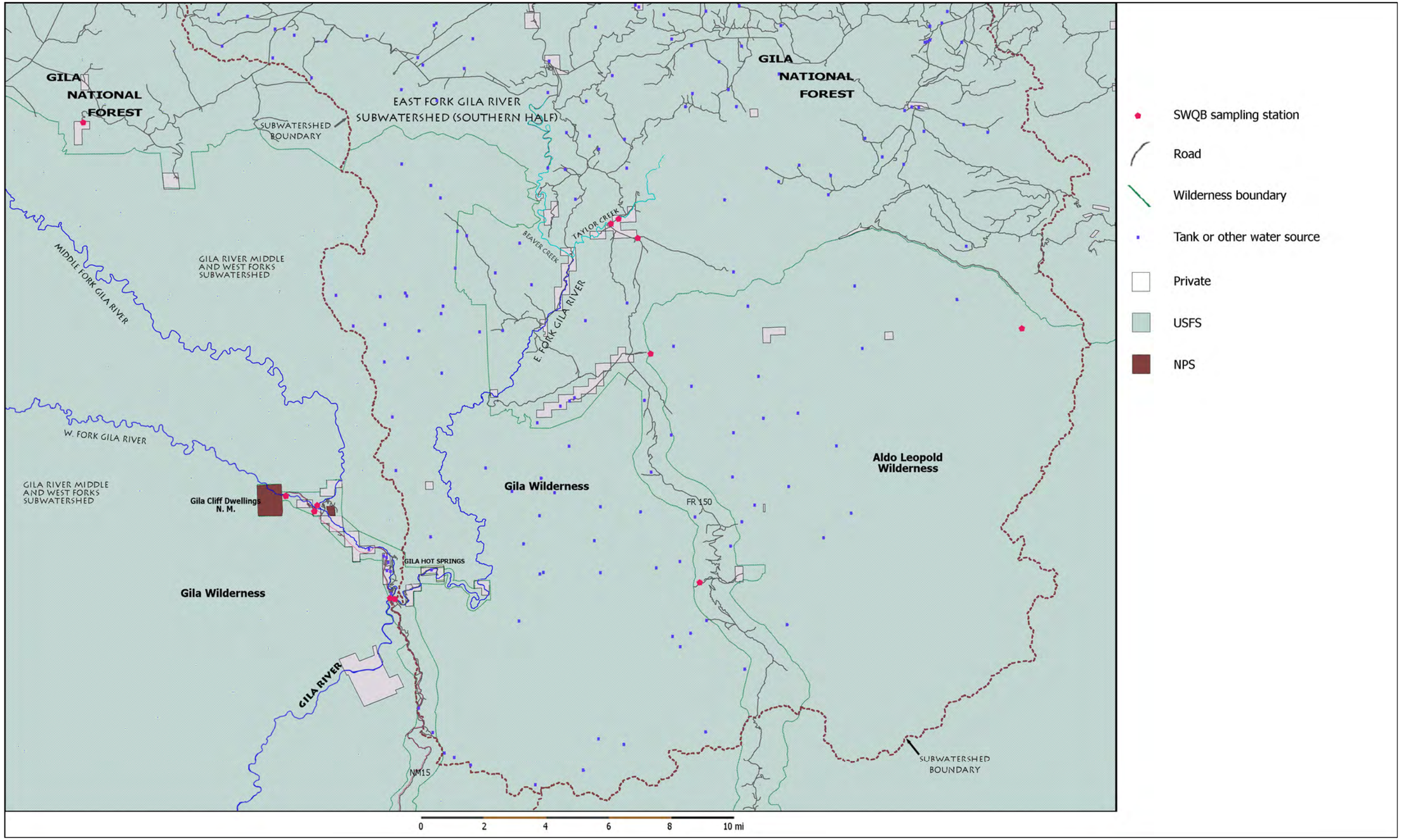
Map TMDL-09. Land management status map, Gila River East Fork subwatershed (northern half). All data from USGS, NMED, and USDA Gila National Forest.



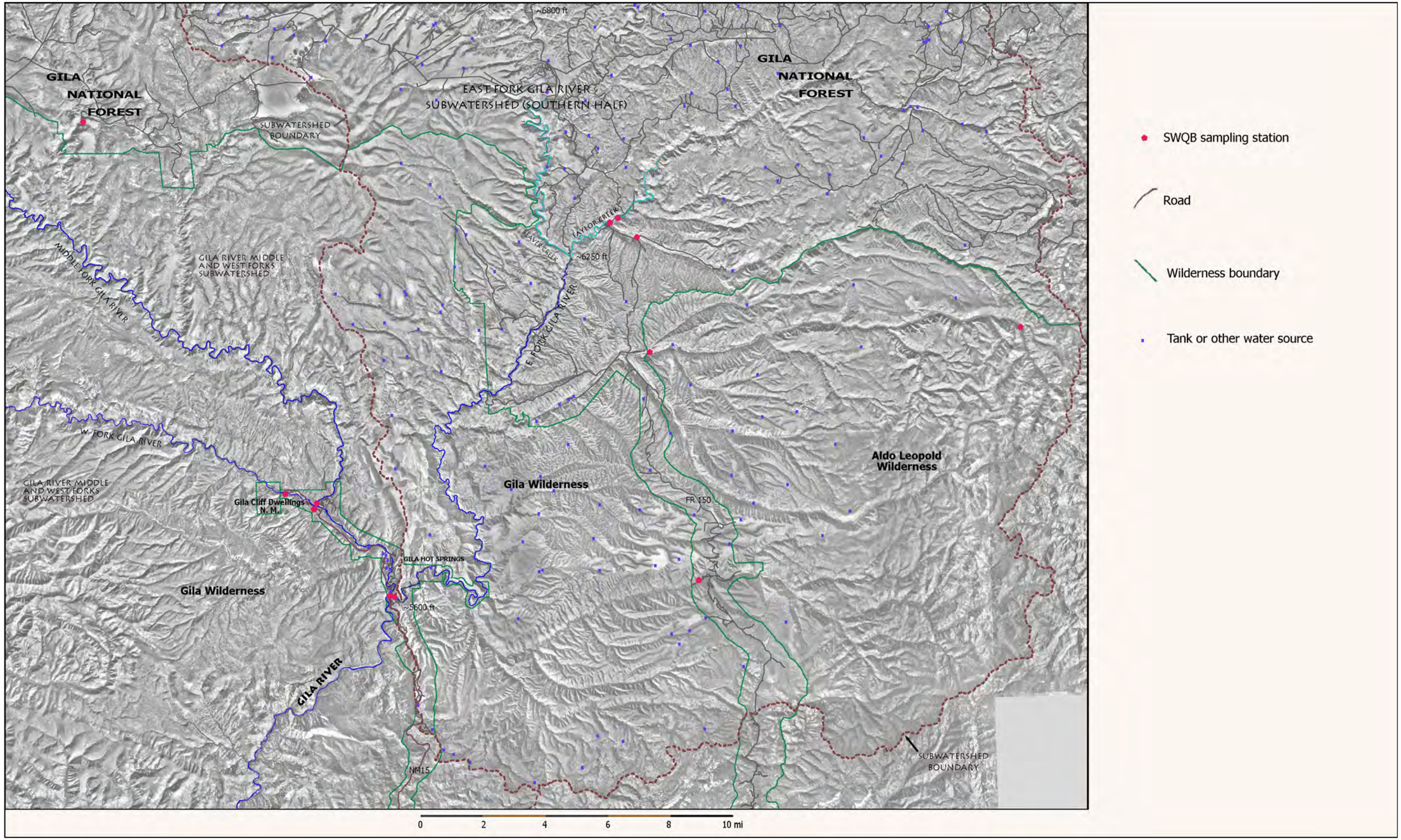
Map TMDL-10. Aerial photography relief map, Gila River East Fork subwatershed (northern half). Base image: 1996–2002 USGS orthophotoquads. All data from USGS, NMED, and USDA Gila National Forest.



Map TMDL-11. Topographic map, Gila River East Fork subwatershed (southern half). Base image: USGS 1:24000 quads. All data from USGS, NMED, and USDA Gila National Forest.



Map TMDL-12. Land management status map, Gila River East Fork subwatershed (southern half). All data from USGS, NMED, and USDA Gila National Forest.



Map TMDL-13. Aerial photography relief map, Gila River East Fork subwatershed (southern half). Base image: 1996–2002 USGS digital orthophotoquads. All data from USGS, NMED, and USDA Gila National Forest.

EAST FORK GILA RIVER—continued

East Fork Gila River photos. Clockwise from top left: Road crossing on Diamond Creek, a tributary to the East Fork, April 2001; East Fork at NMED/SWQB sampling station near mainstem confluence, April 2003; Hoyt Creek, a tributary of Taylor Creek and the East Fork, April 2001; NRCS remediation work site on the East Fork just downstream of confluence of Beaver and Taylor Creeks, June 2006. All 2001 and 2003 photos courtesy NMED, Silver City.