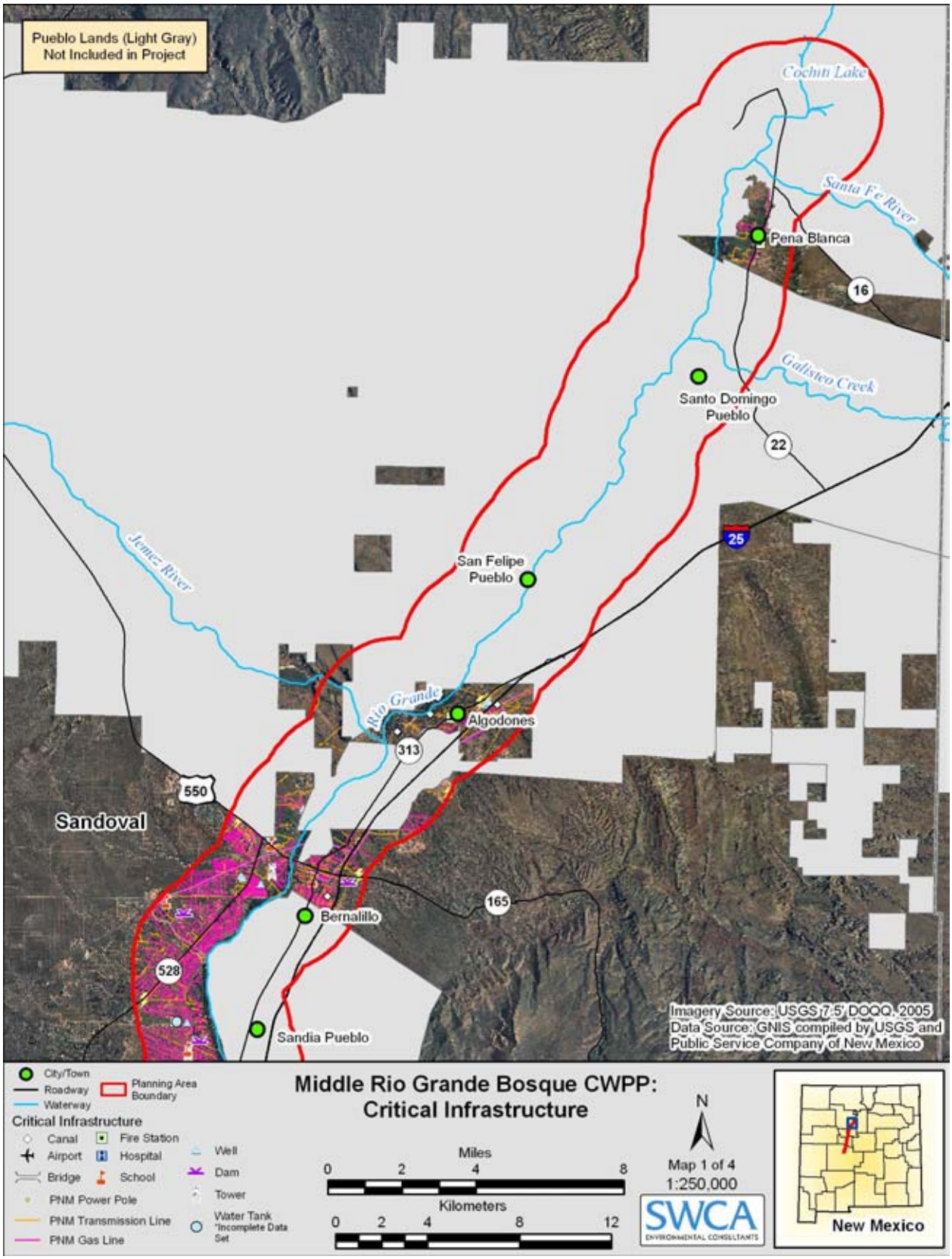
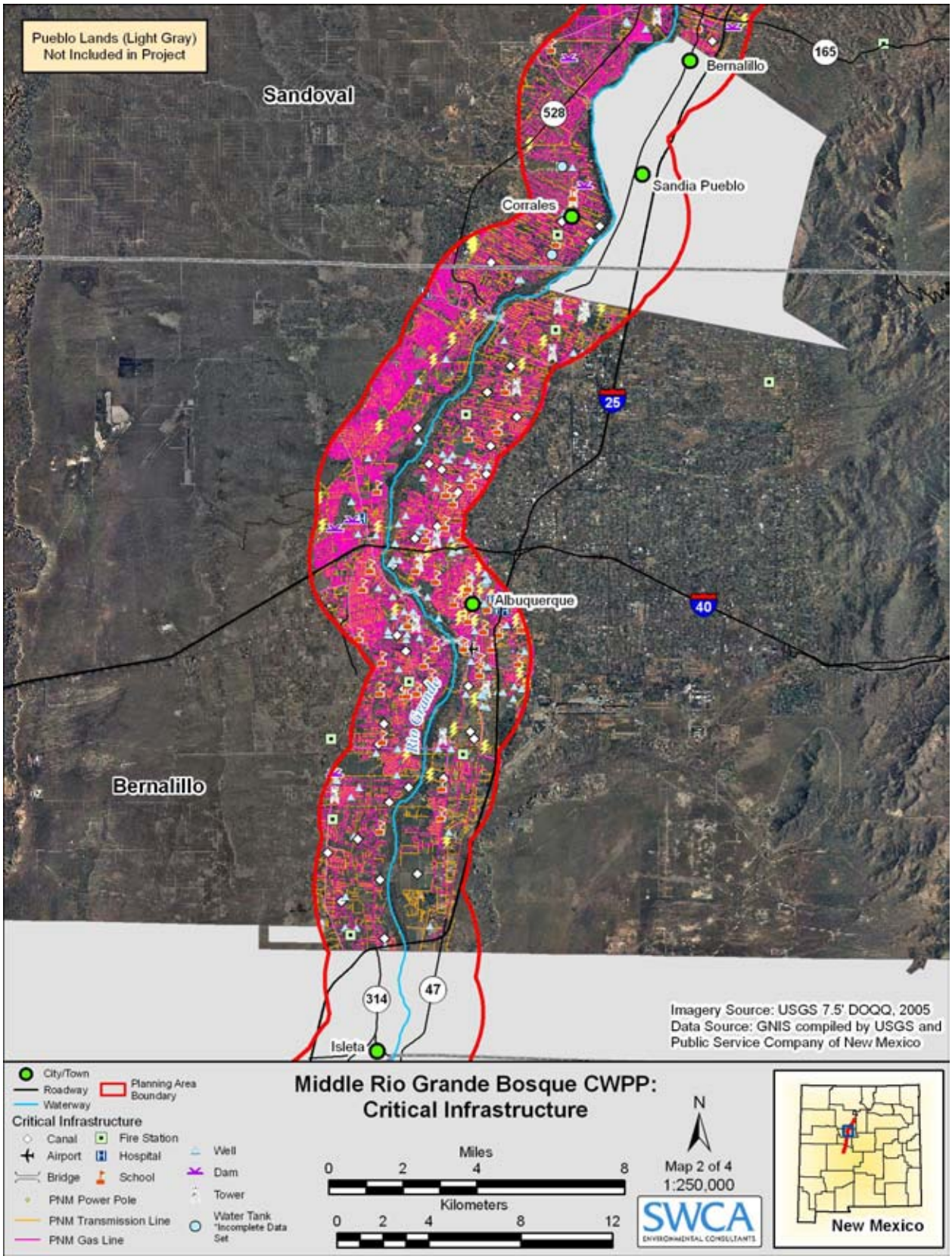
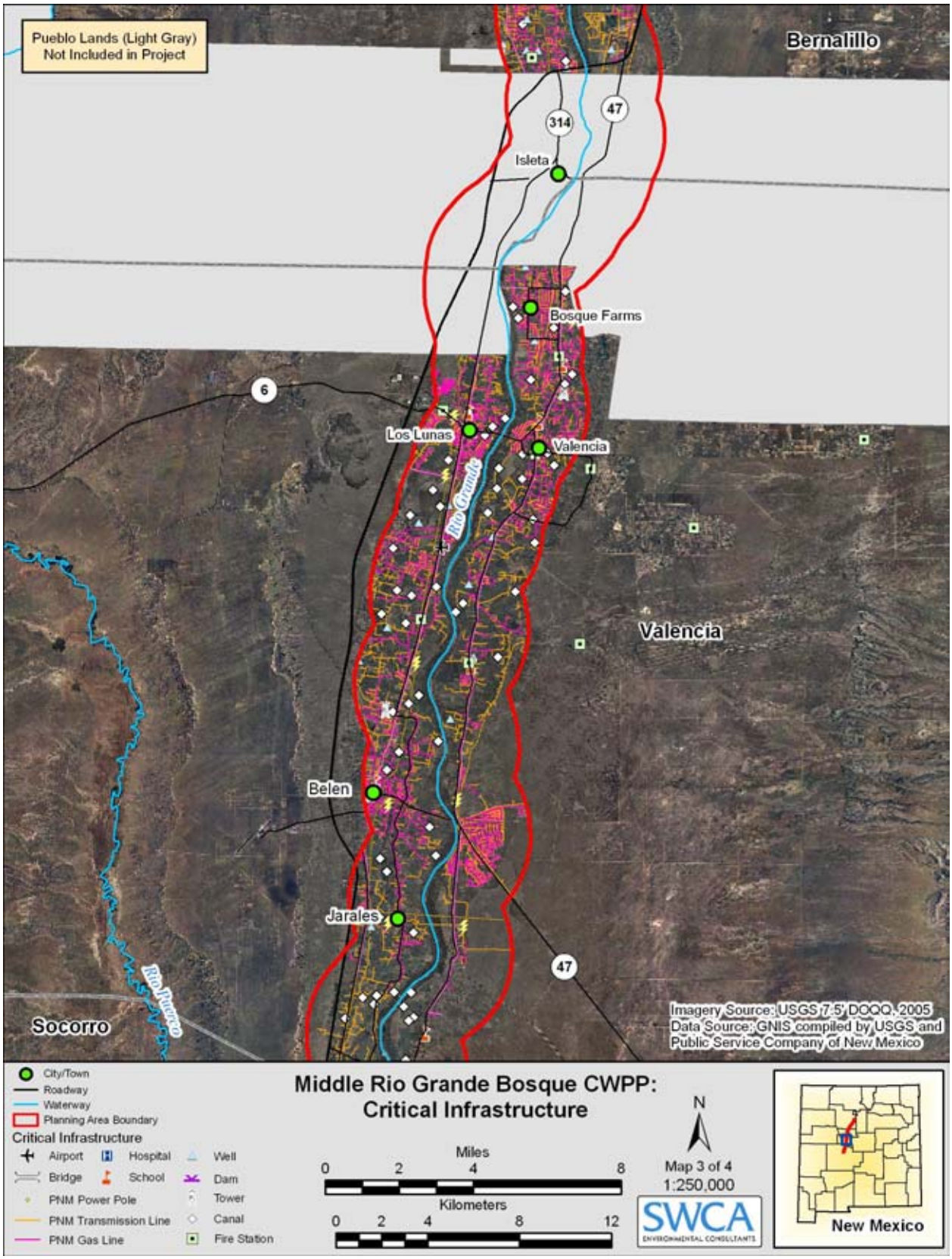
Appendix A
Base Maps



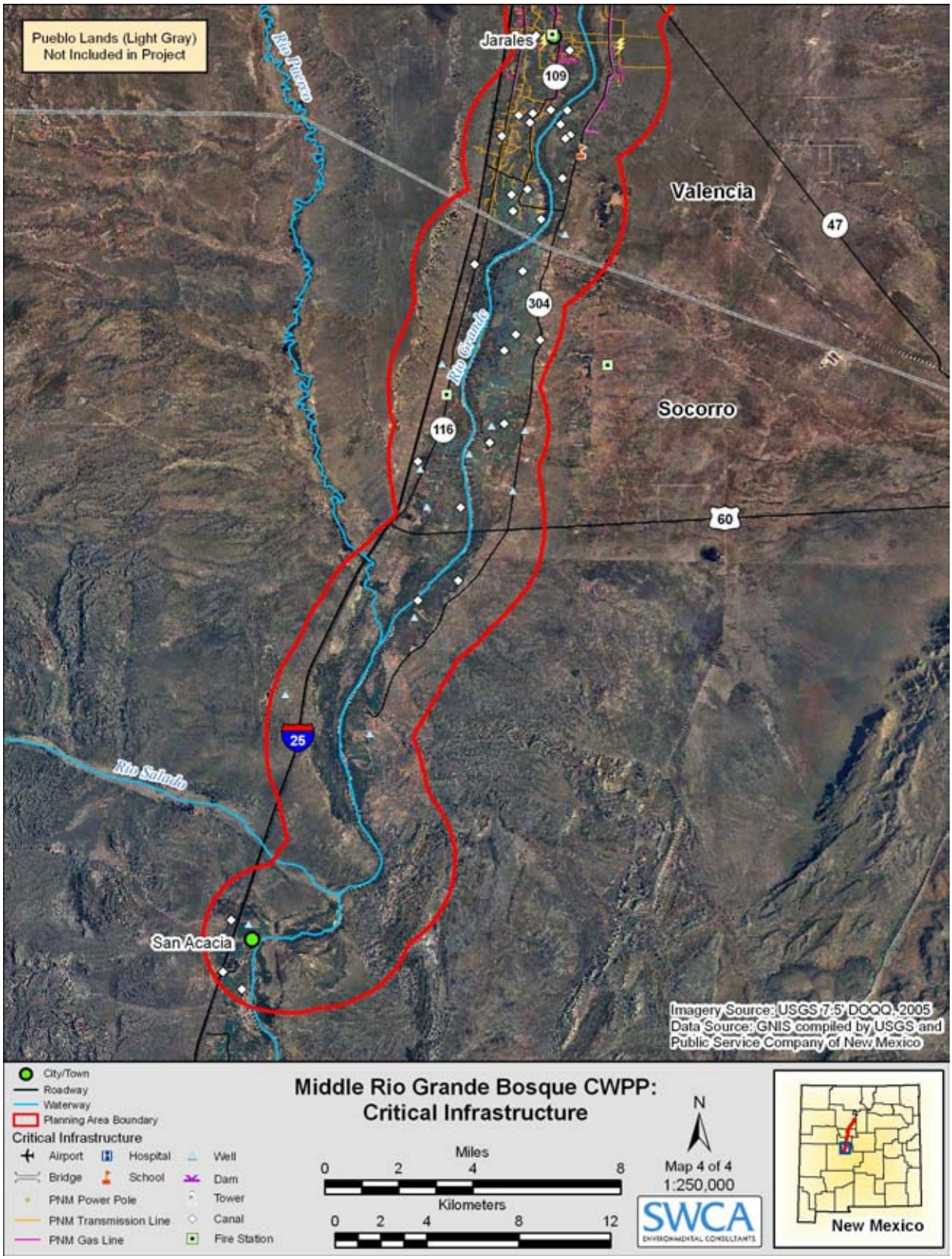
Map 1. Critical infrastructure for Sandoval County section.



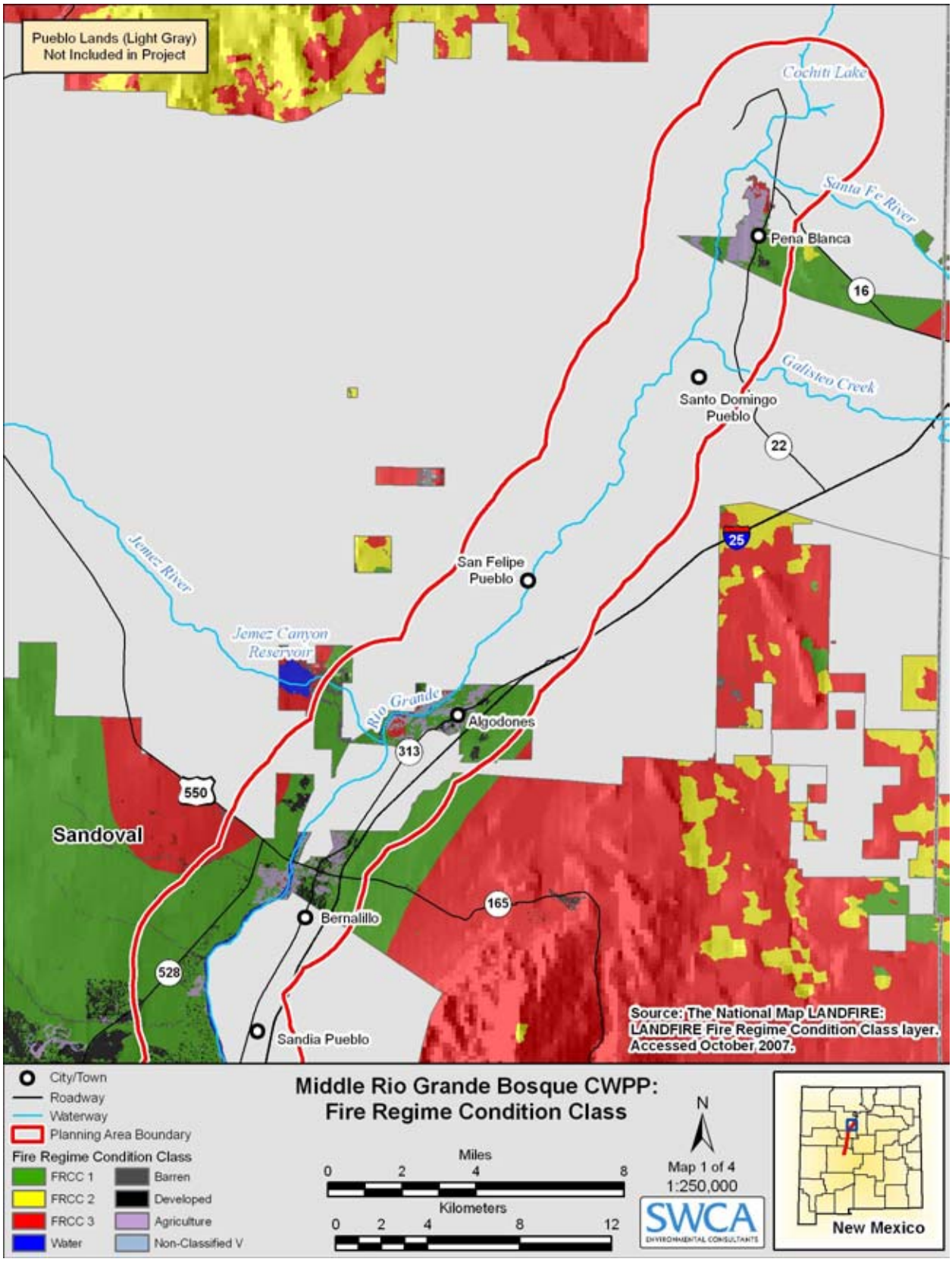
Map 2. Critical infrastructure for Bernalillo County section.



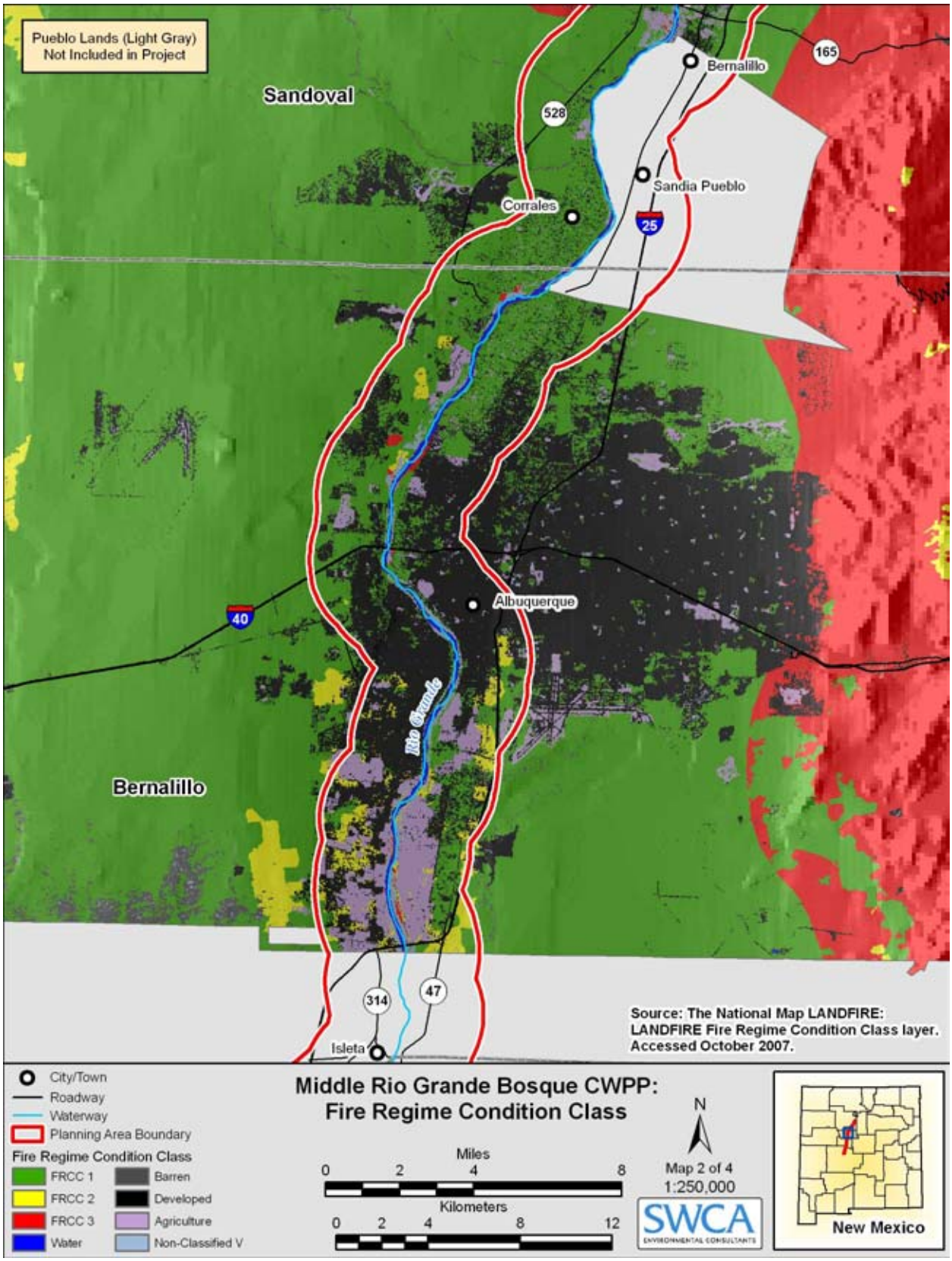
Map 3. Critical infrastructure for Valencia County section.



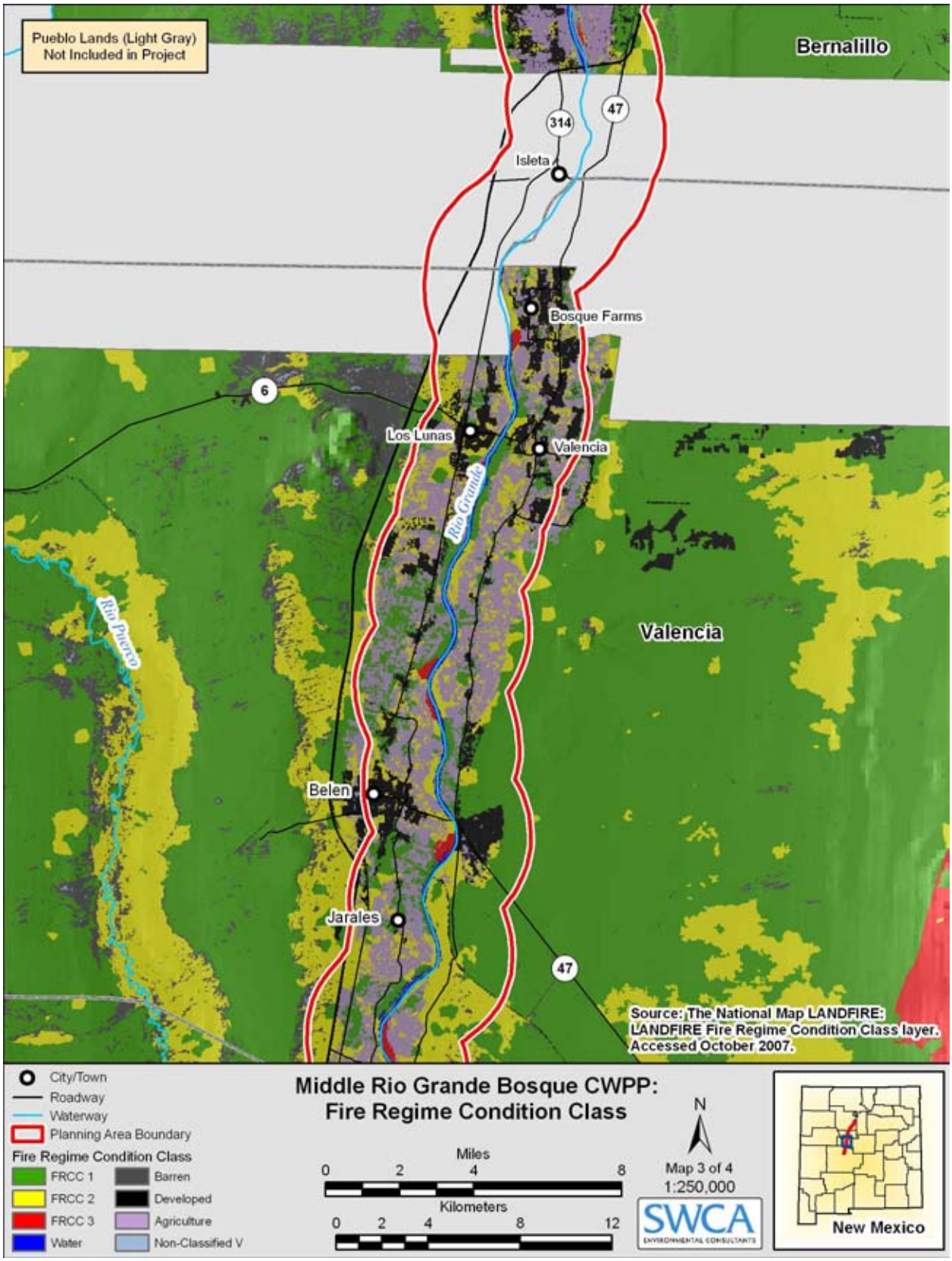
Map 4. Critical infrastructure for Socorro County section.



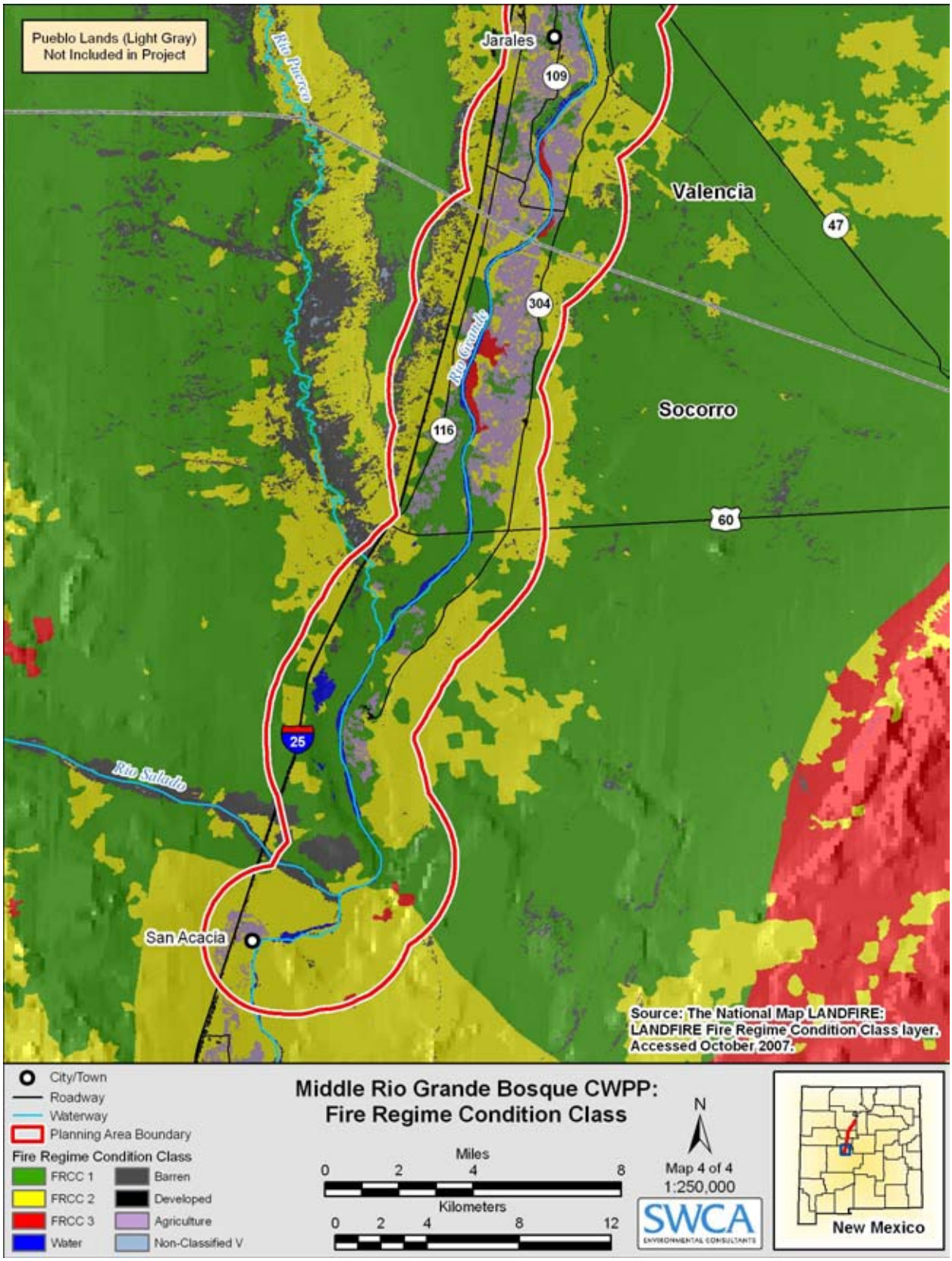
Map 5. Fire Regime Condition Class for Sandoval County section.



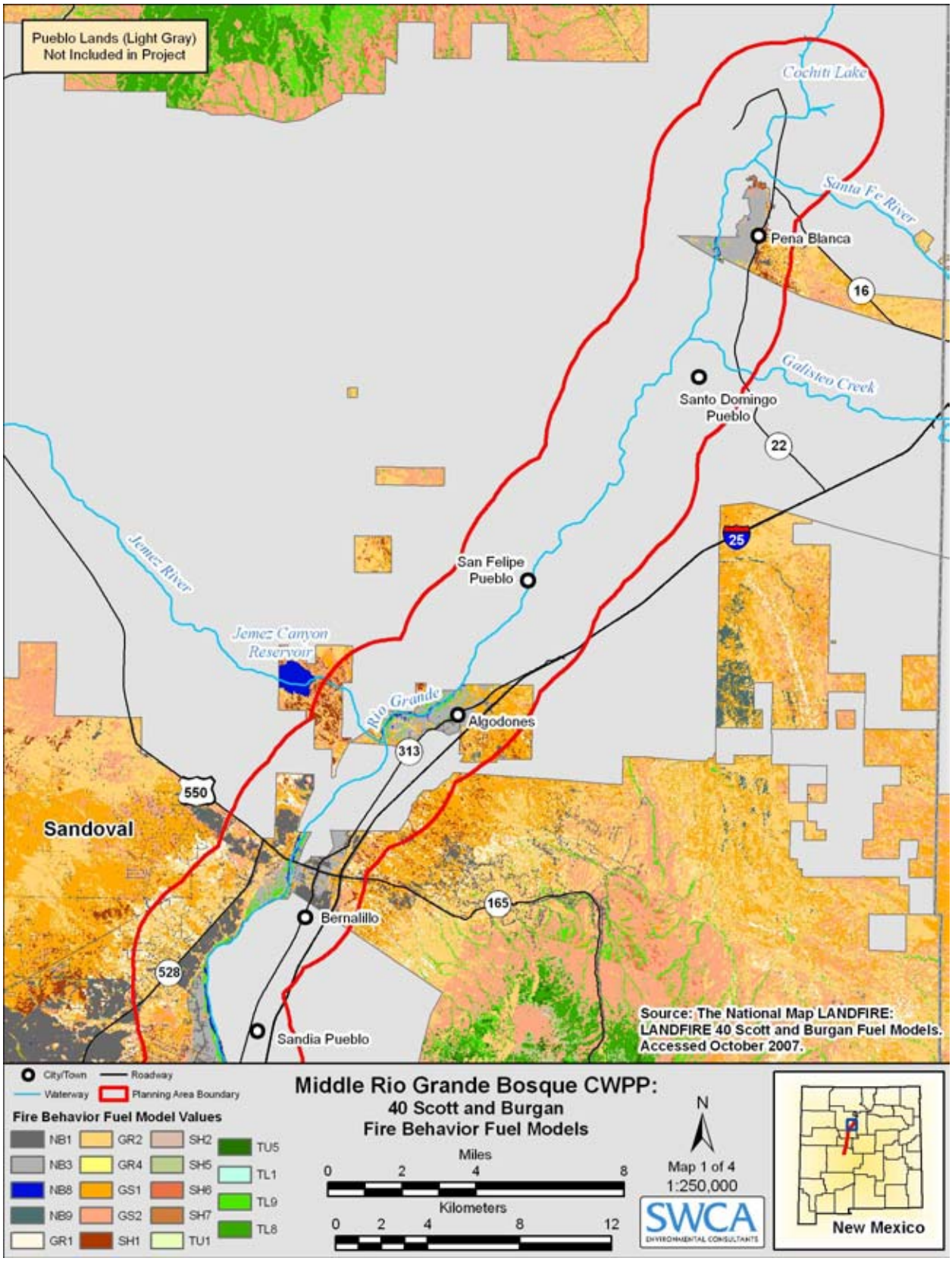
Map 6. Fire Regime Condition Class for Bernalillo County section.



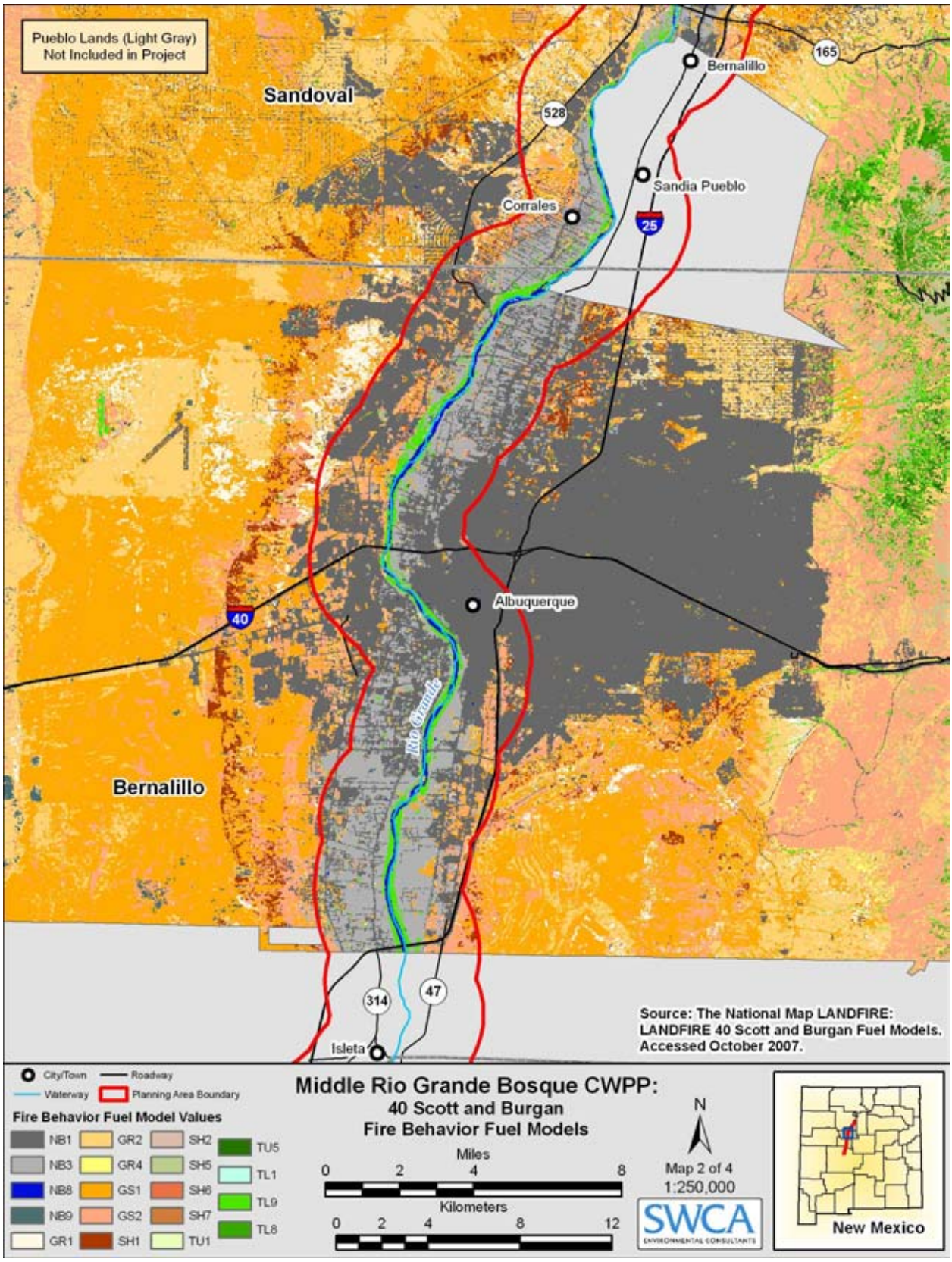
Map 7. Fire Regime Condition Class for Valencia County section.



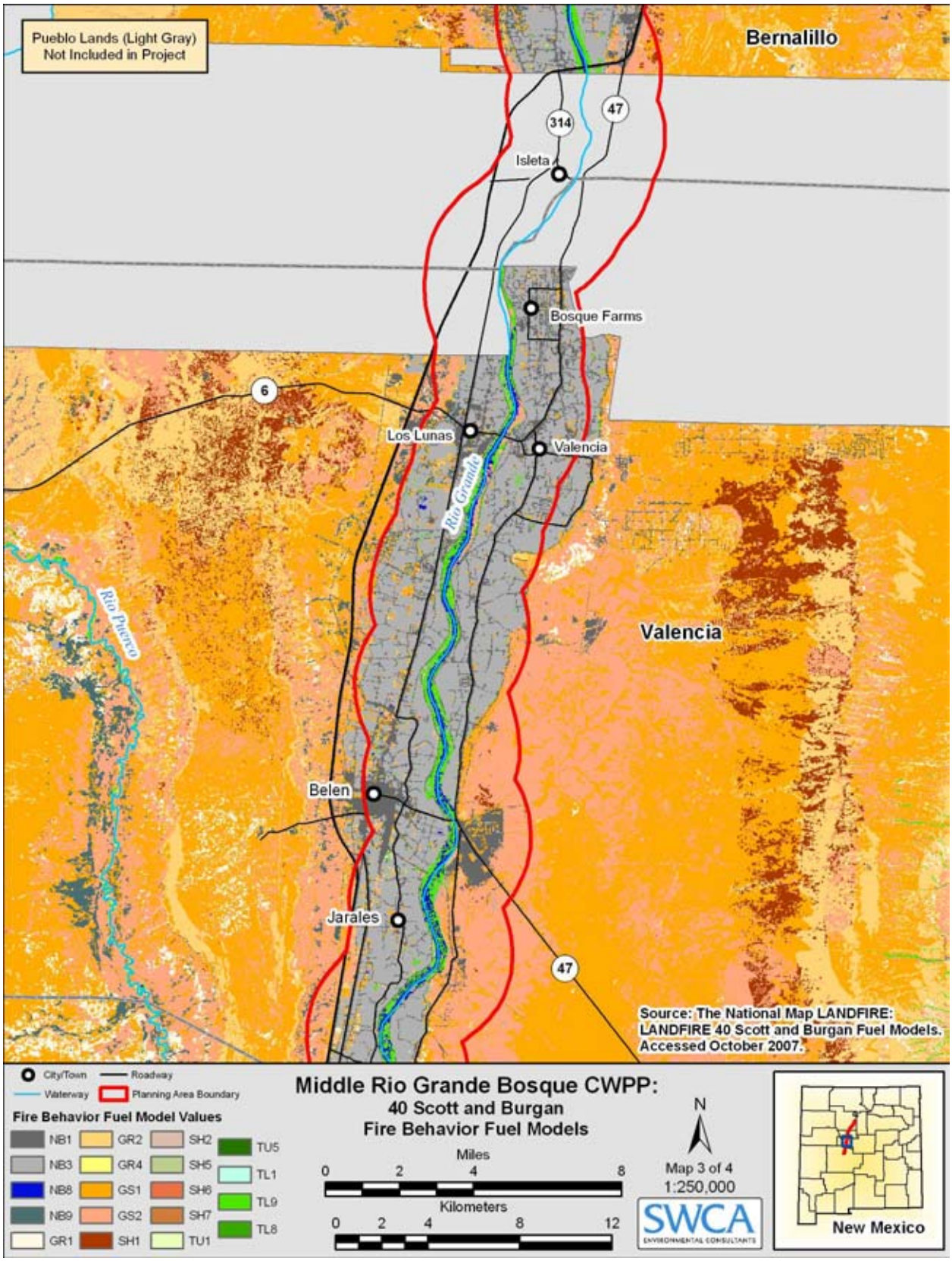
Map 8. Fire Regime Condition Class for Socorro County section.



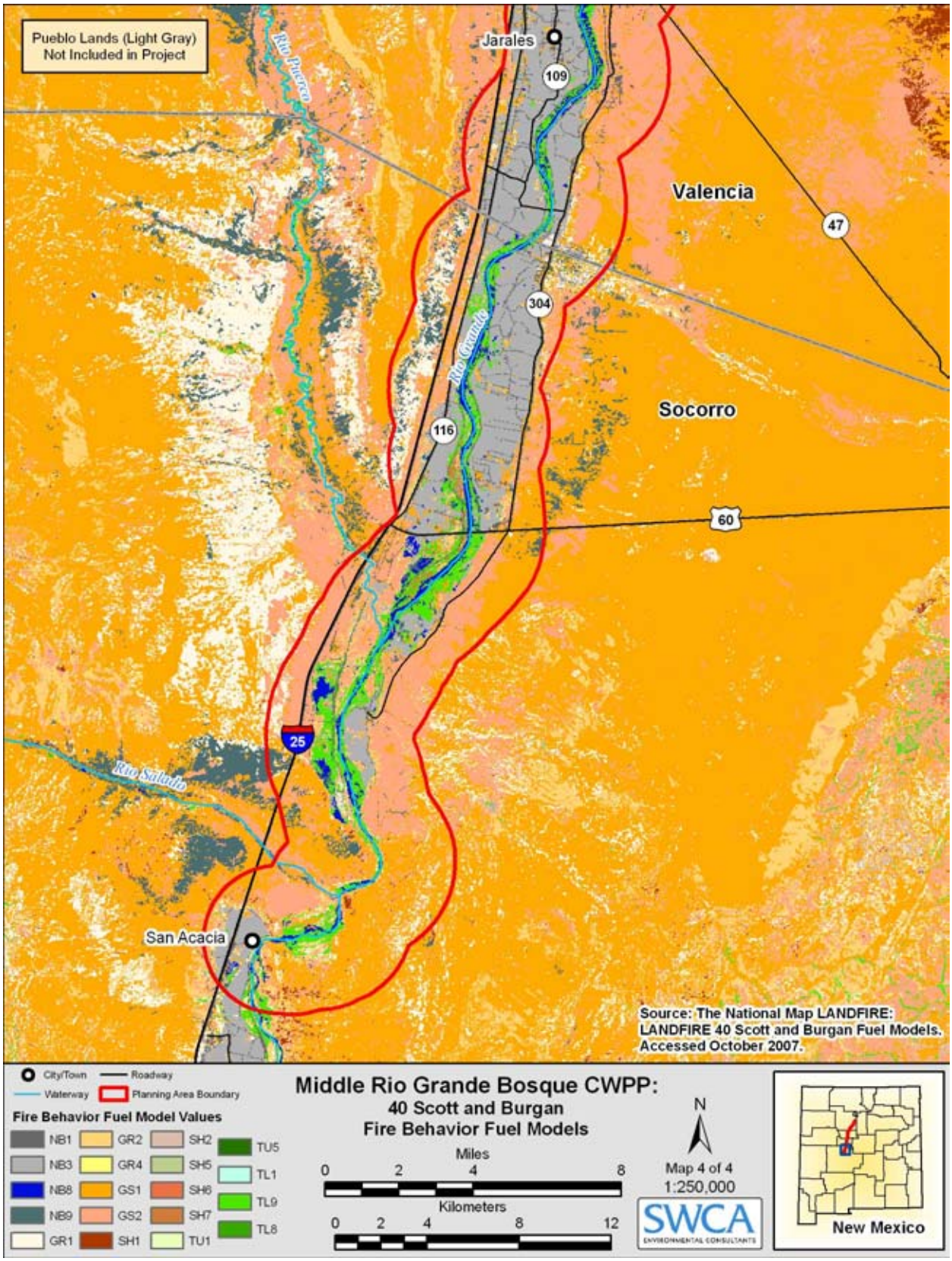
Map 9. Fuels for Sandoval County section.



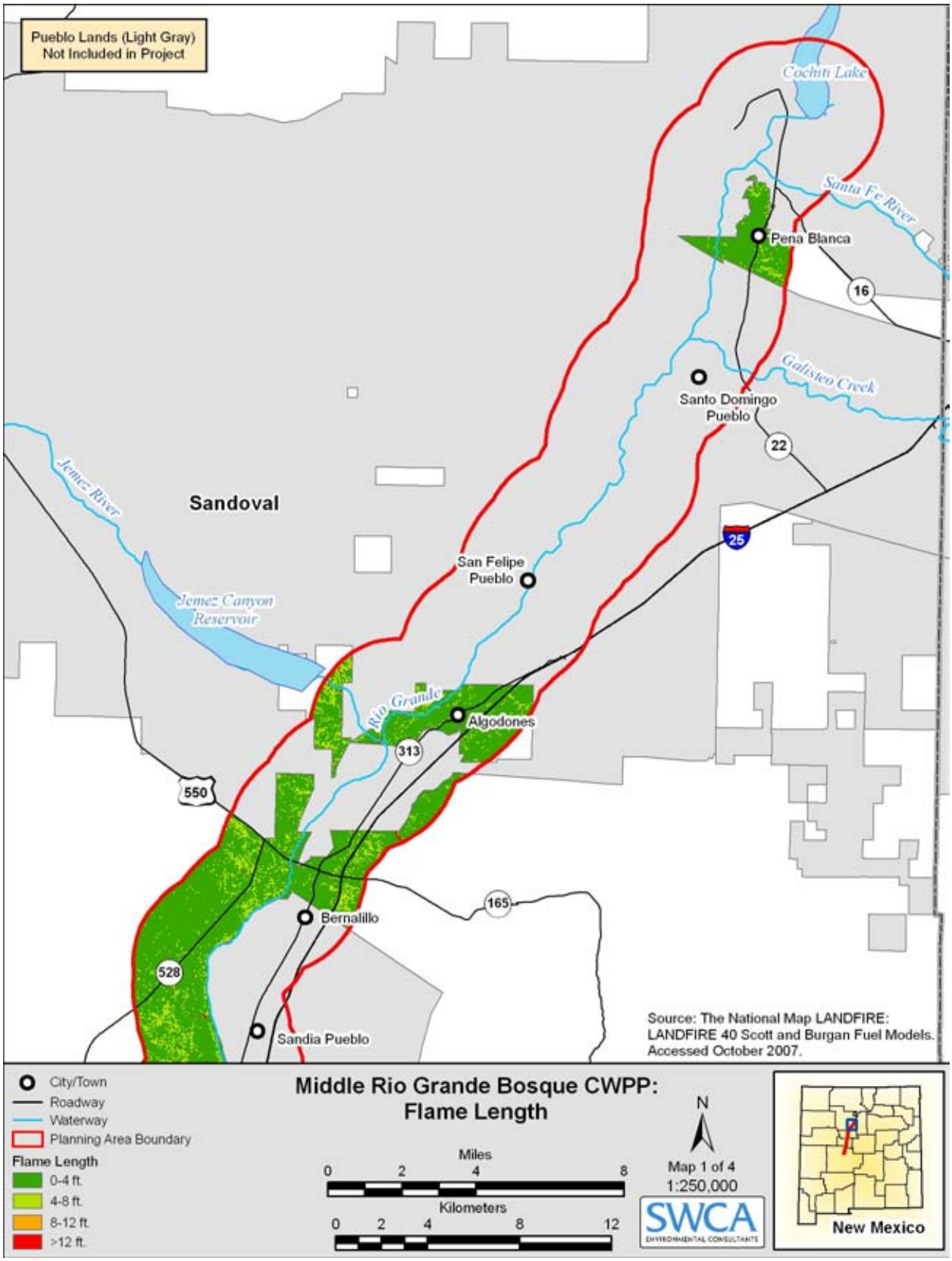
Map 10. Fuels for Bernalillo County section.



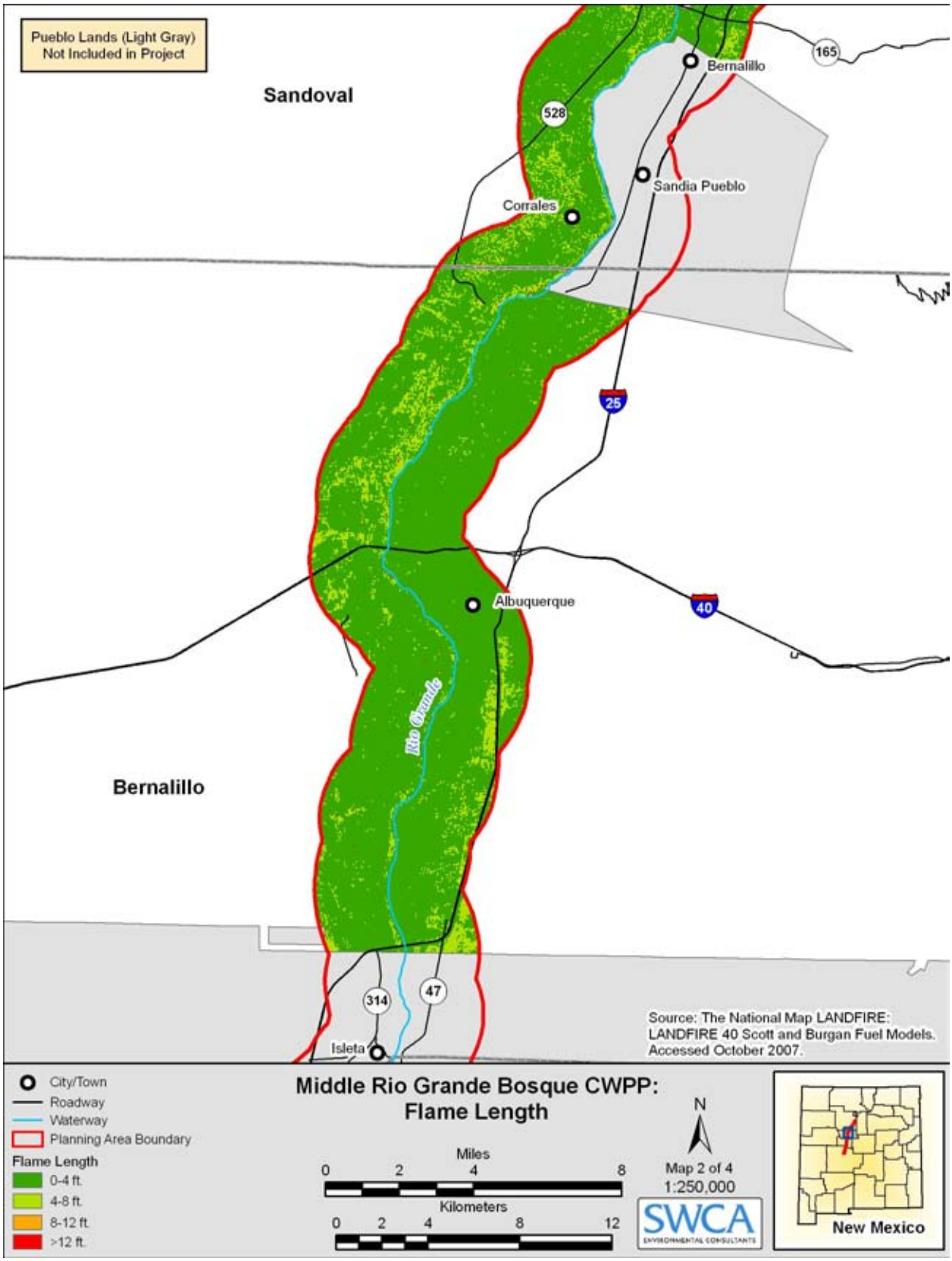
Map 11. Fuels for Valencia County section.



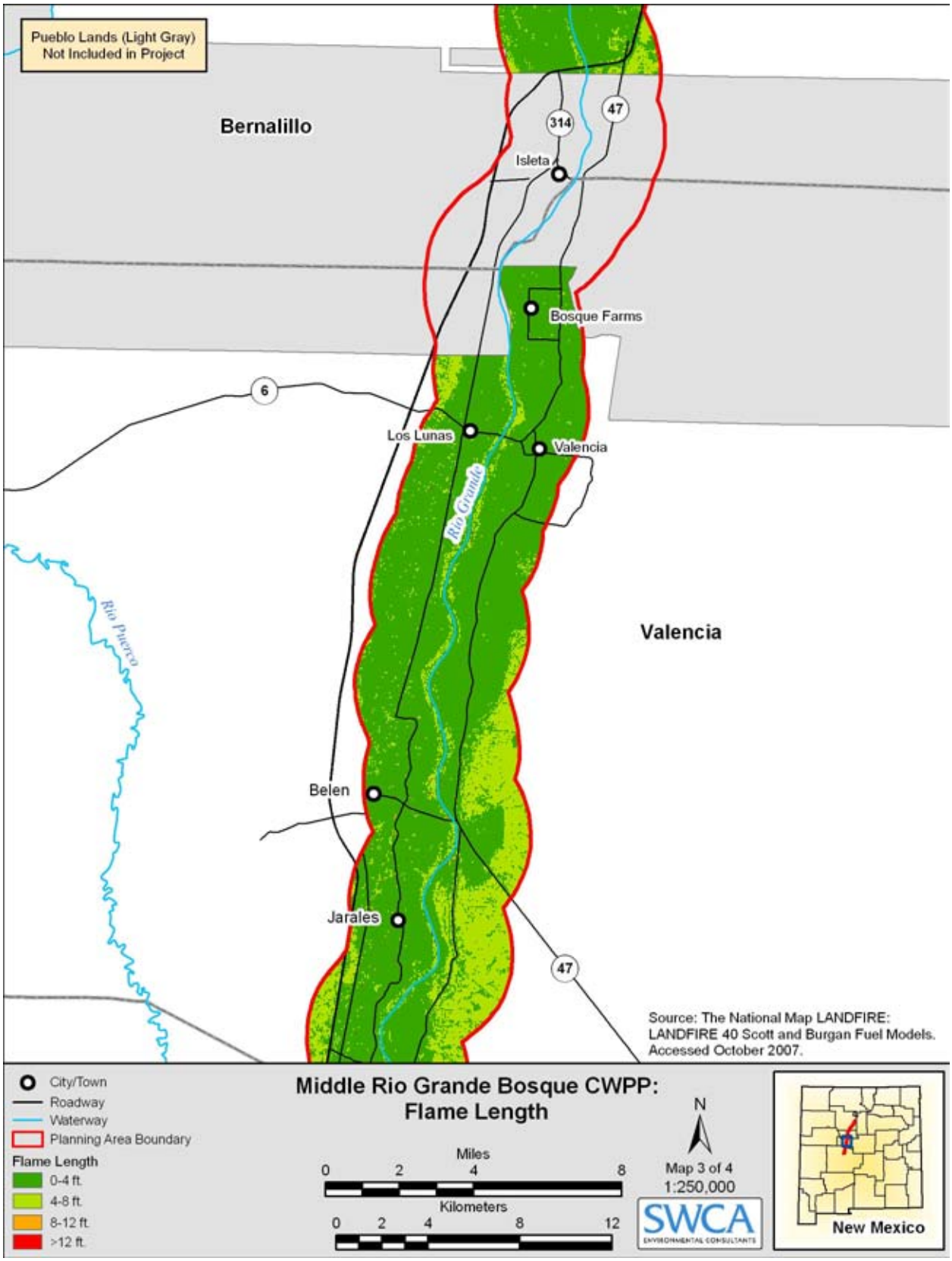
Map 12. Fuels for Socorro County section.



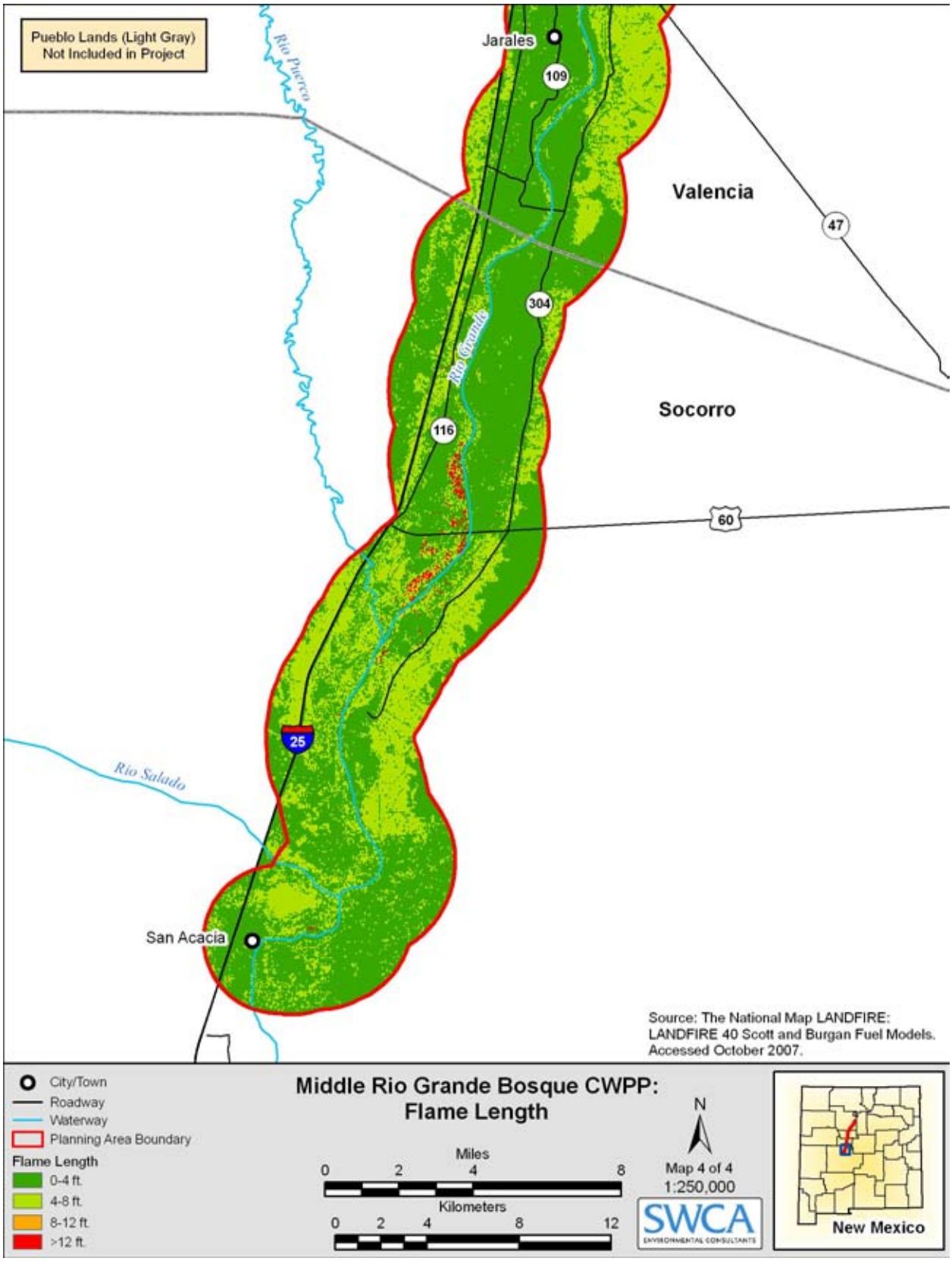
Map 13. Flame lengths for Sandoval County section.



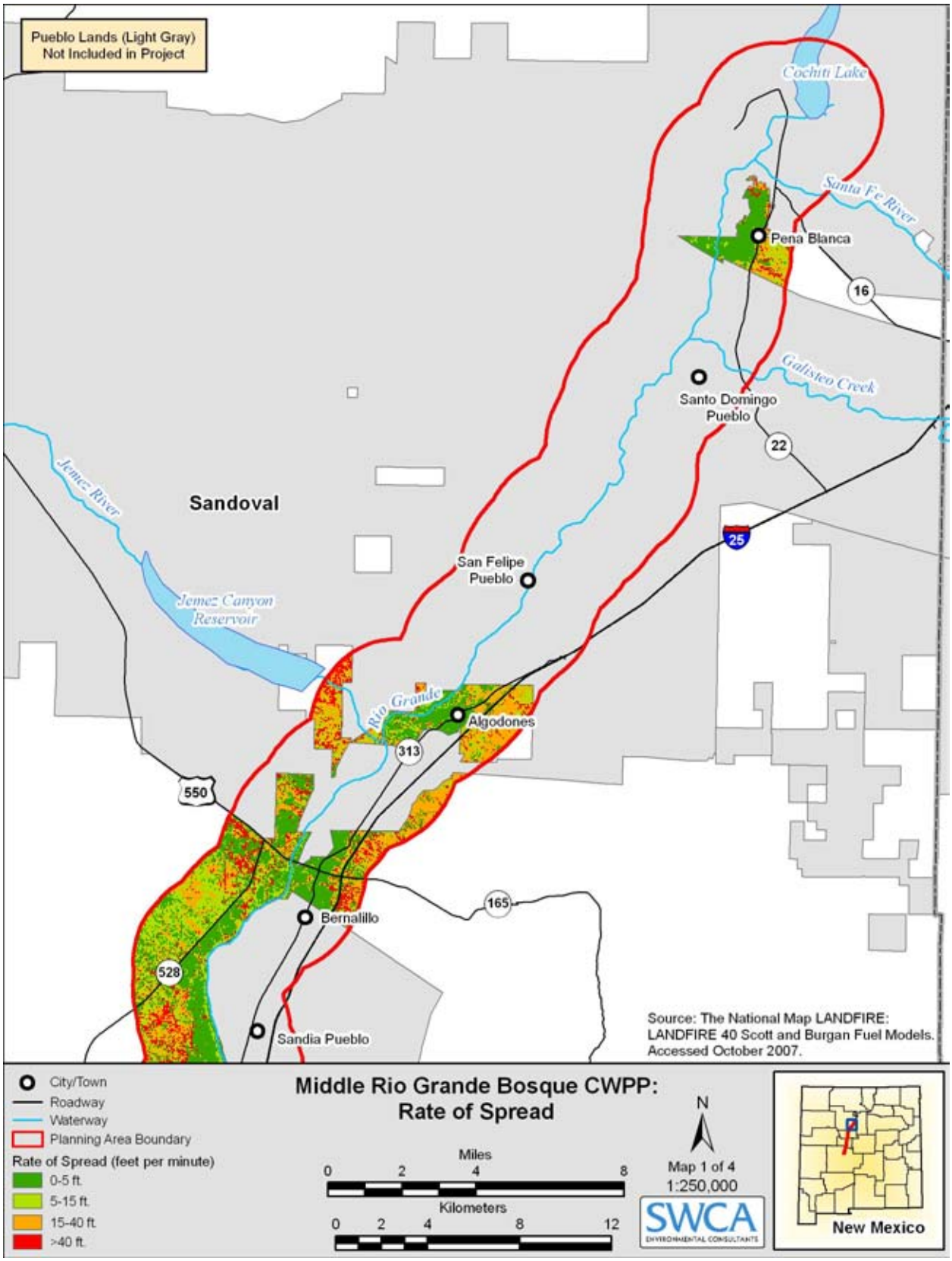
Map 14. Flame lengths for Bernalillo County section.



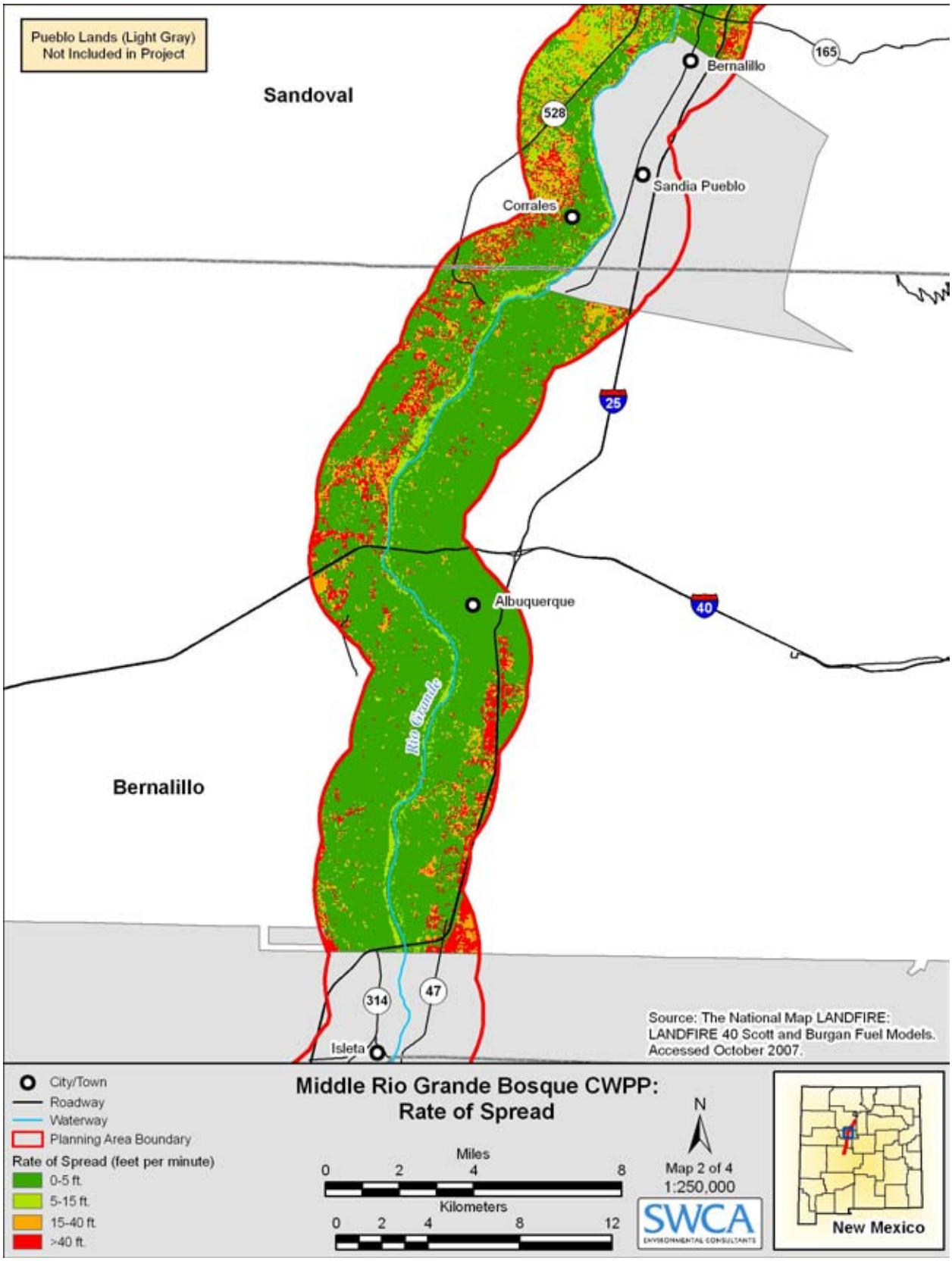
Map15. Flame lengths for Valencia County section.



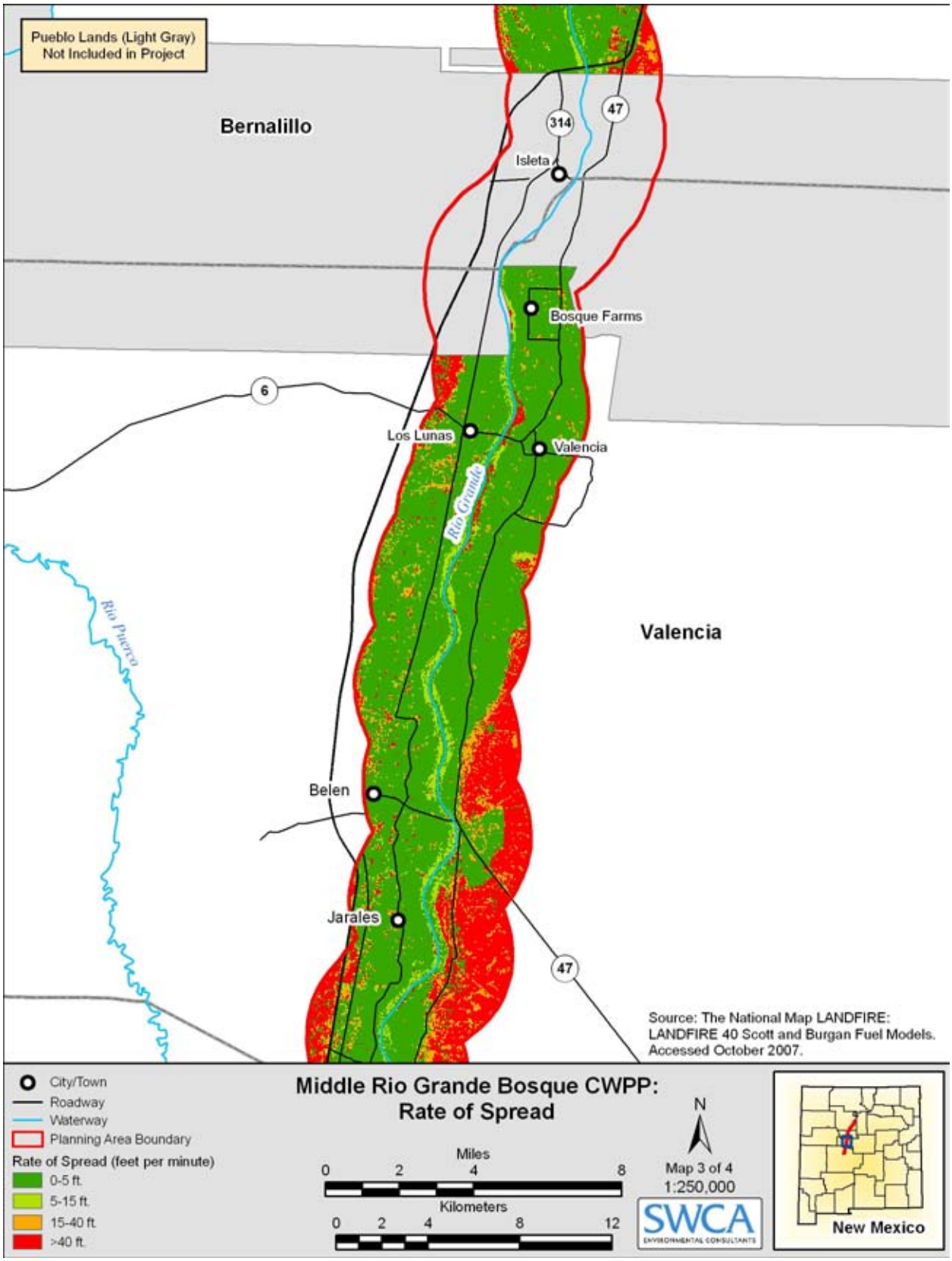
Map 16. Flame lengths for Socorro County section.



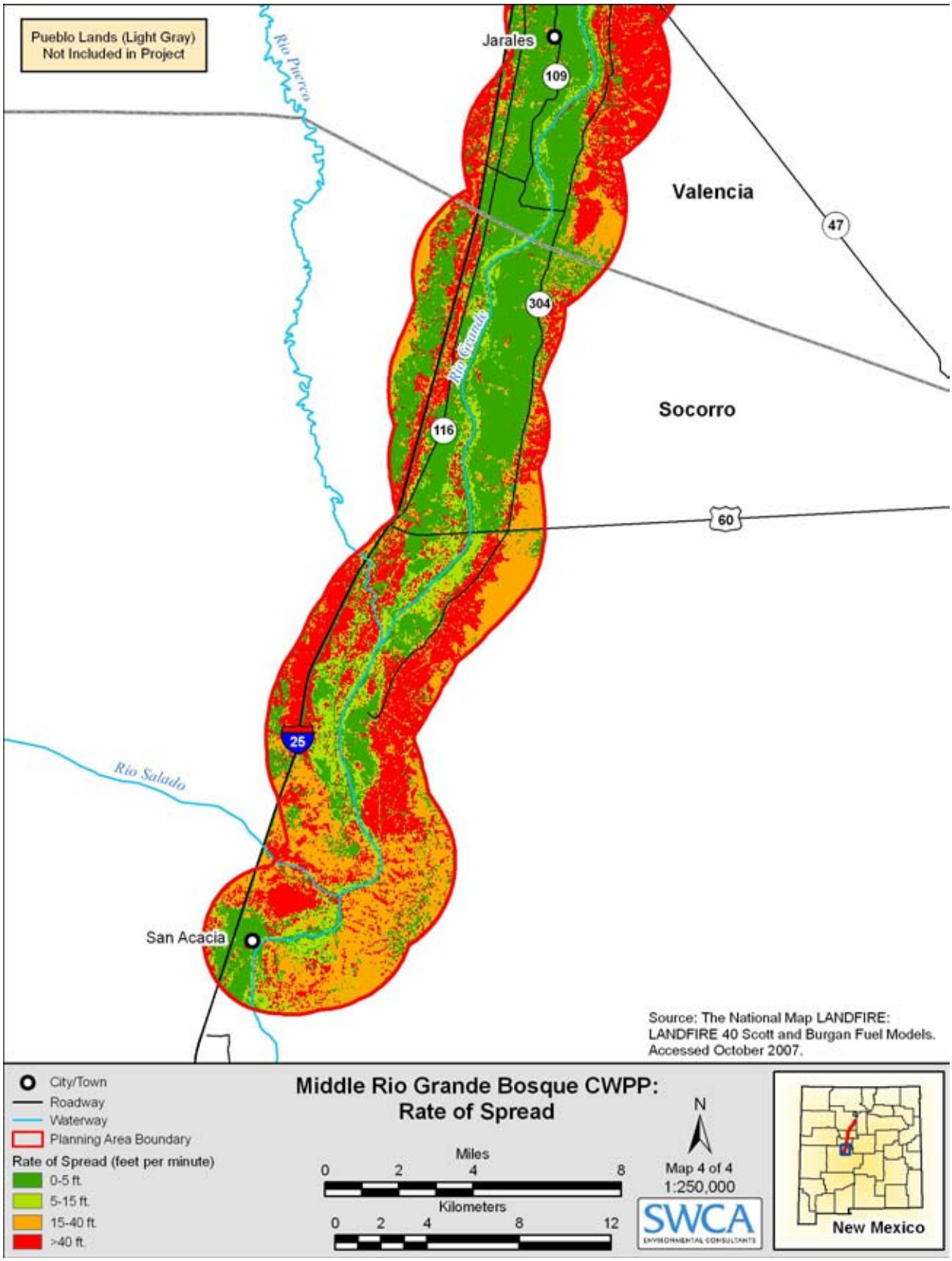
Map 17. Rate of spread for Sandoval County section.



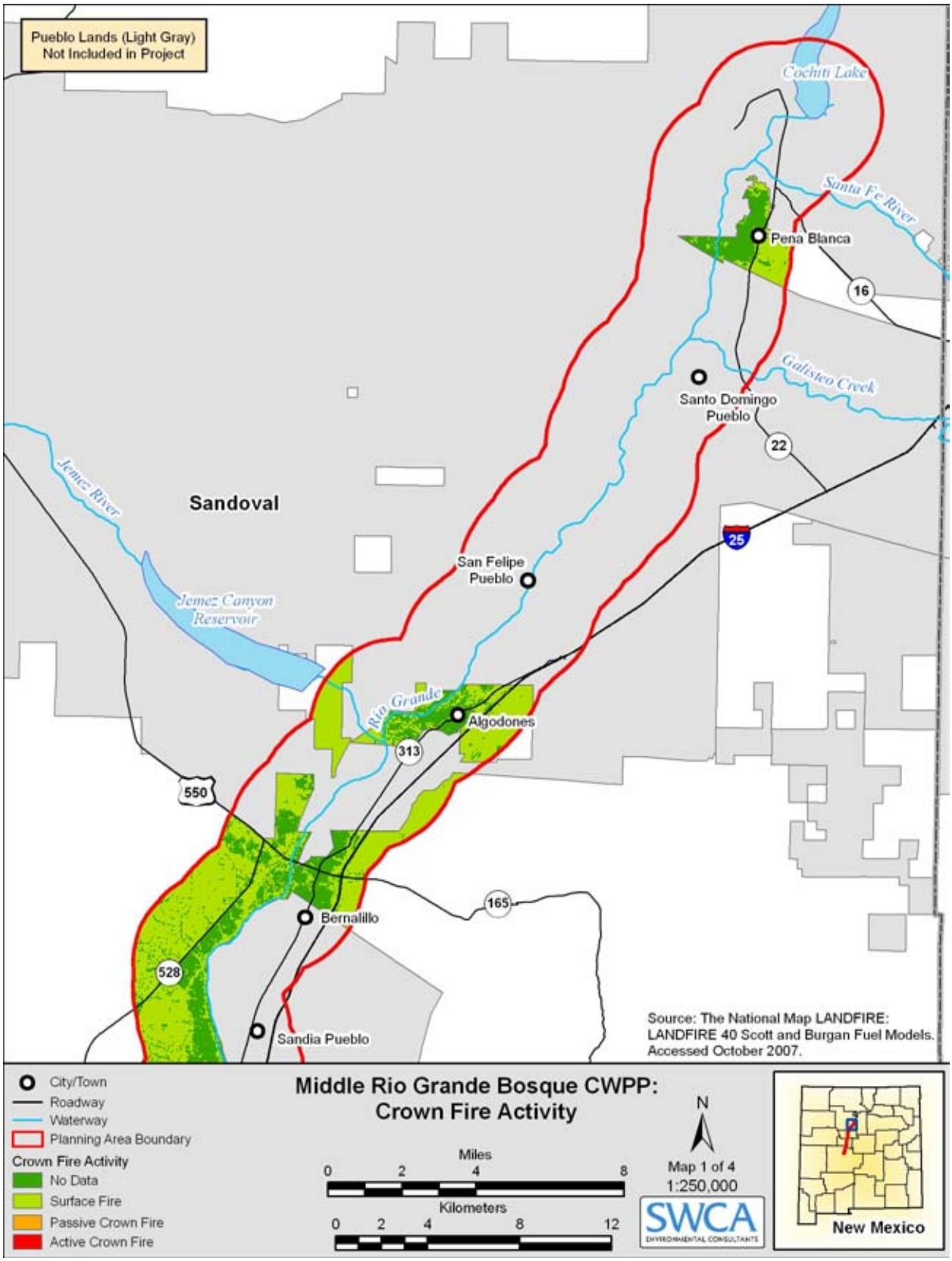
Map 18. Rate of spread for Bernalillo County section.



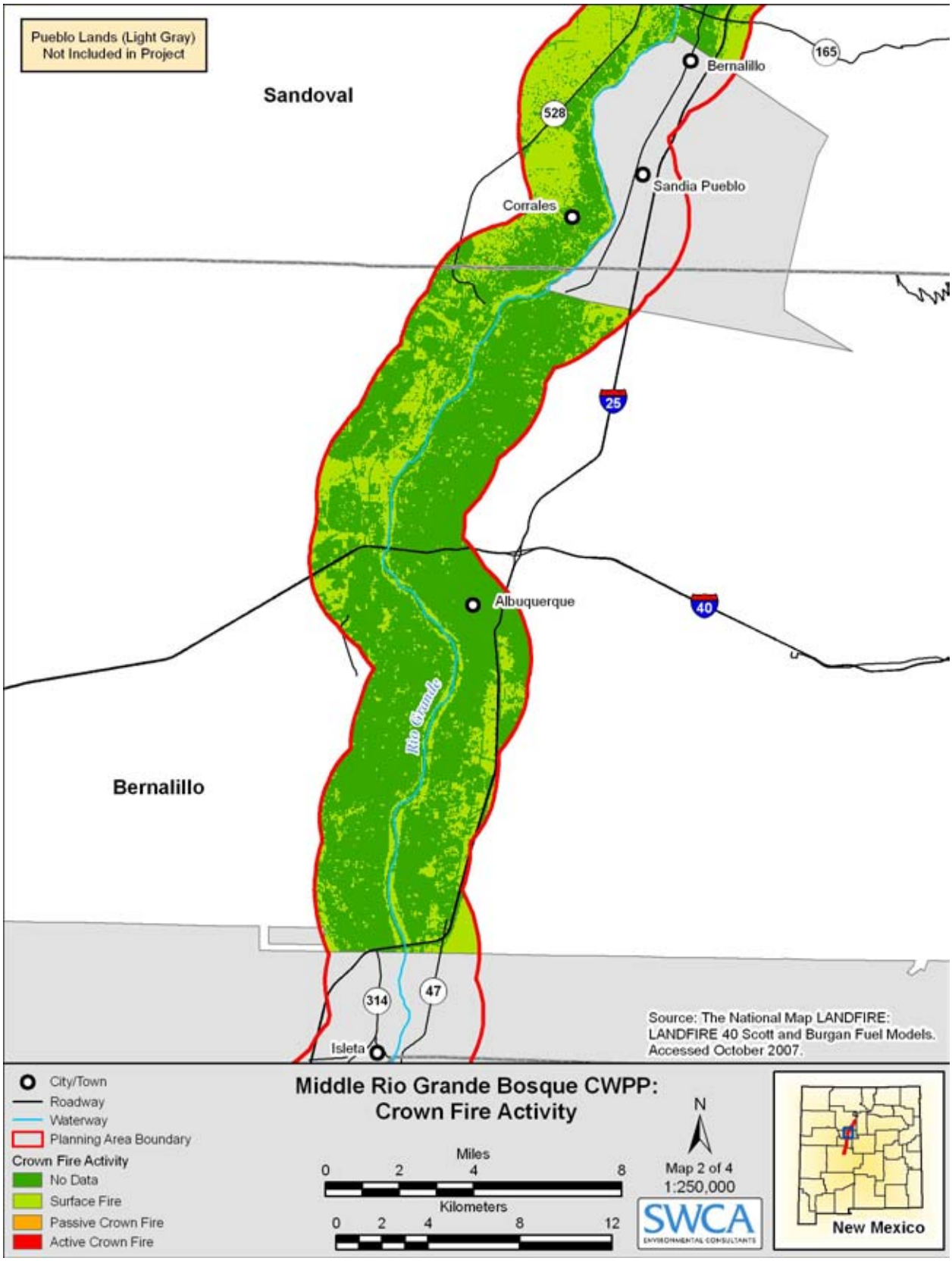
Map 19. Rate of spread for Valencia County section.



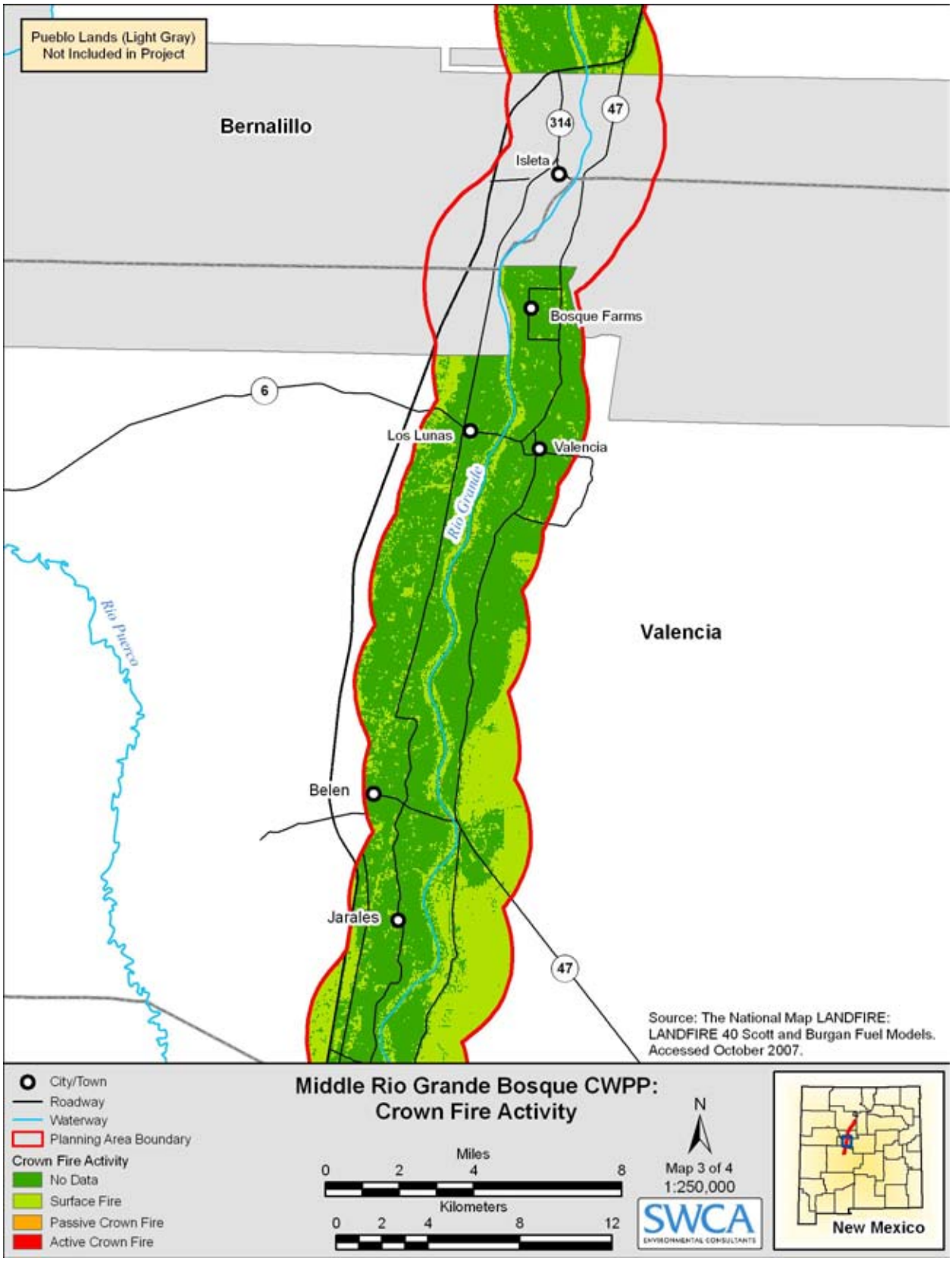
Map 20. Rate of spread for Socorro County section.



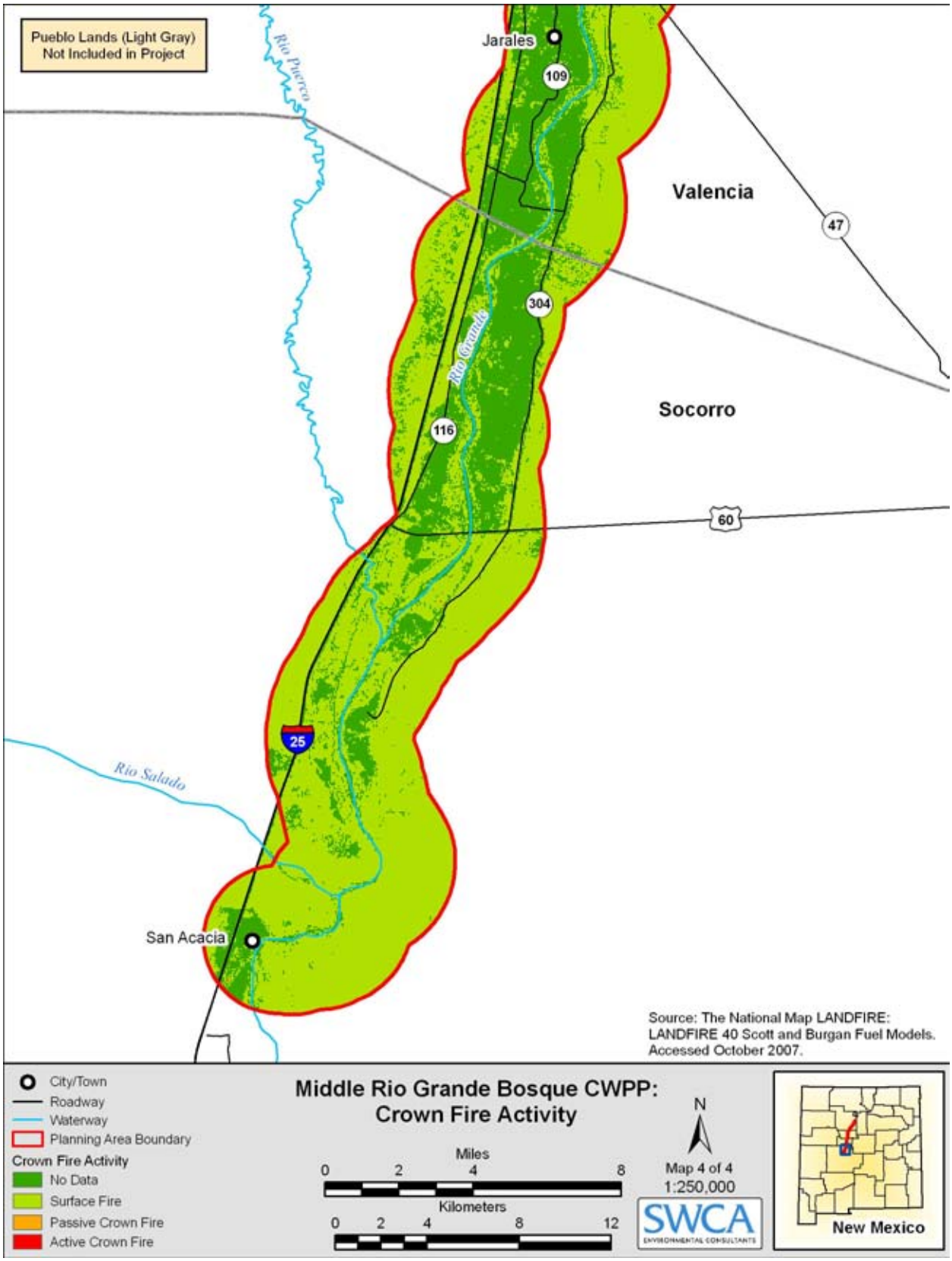
Map 21. Crown fire potential for Sandoval County section.



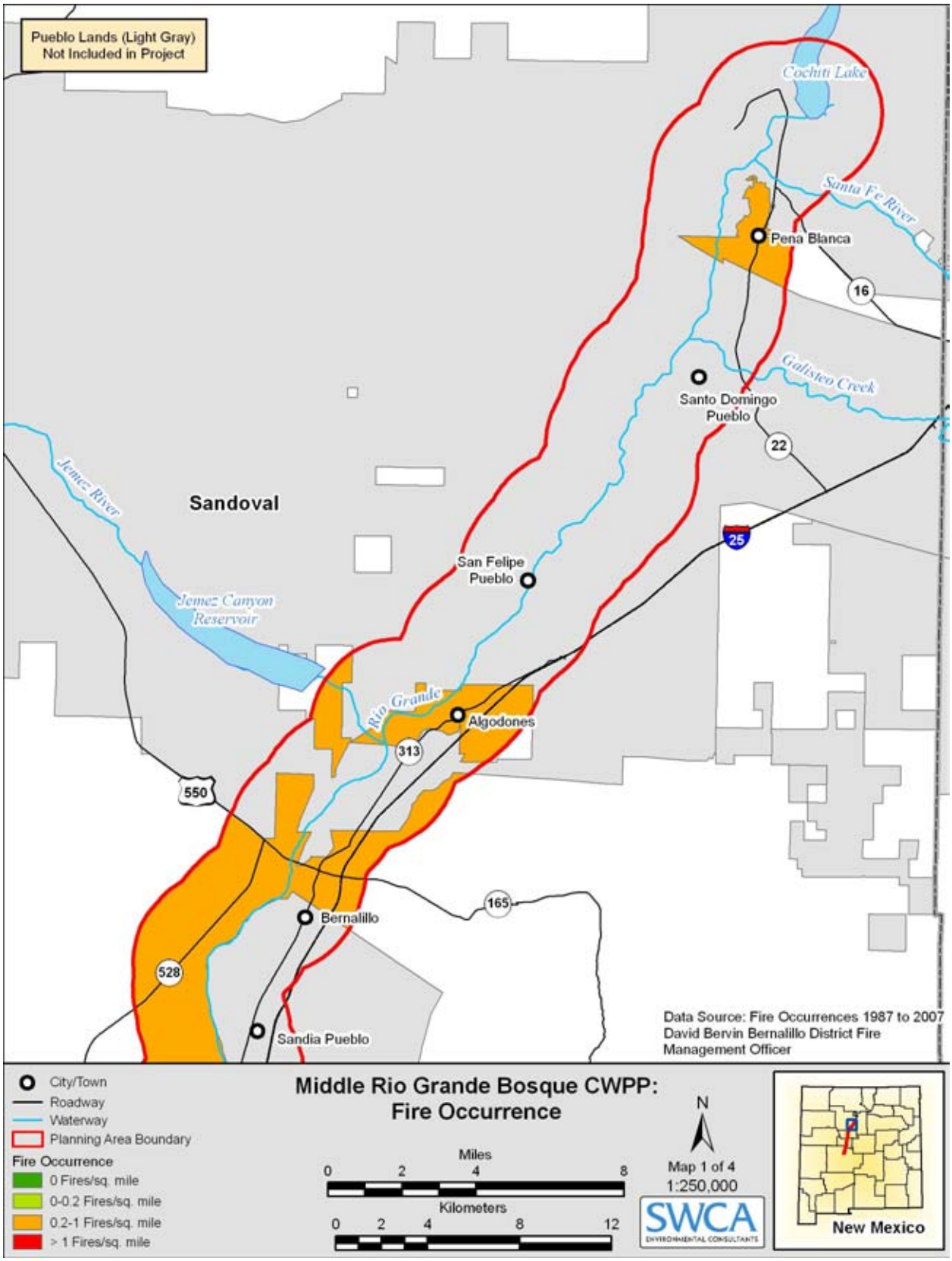
Map 22. Crown fire potential for Bernalillo County section.



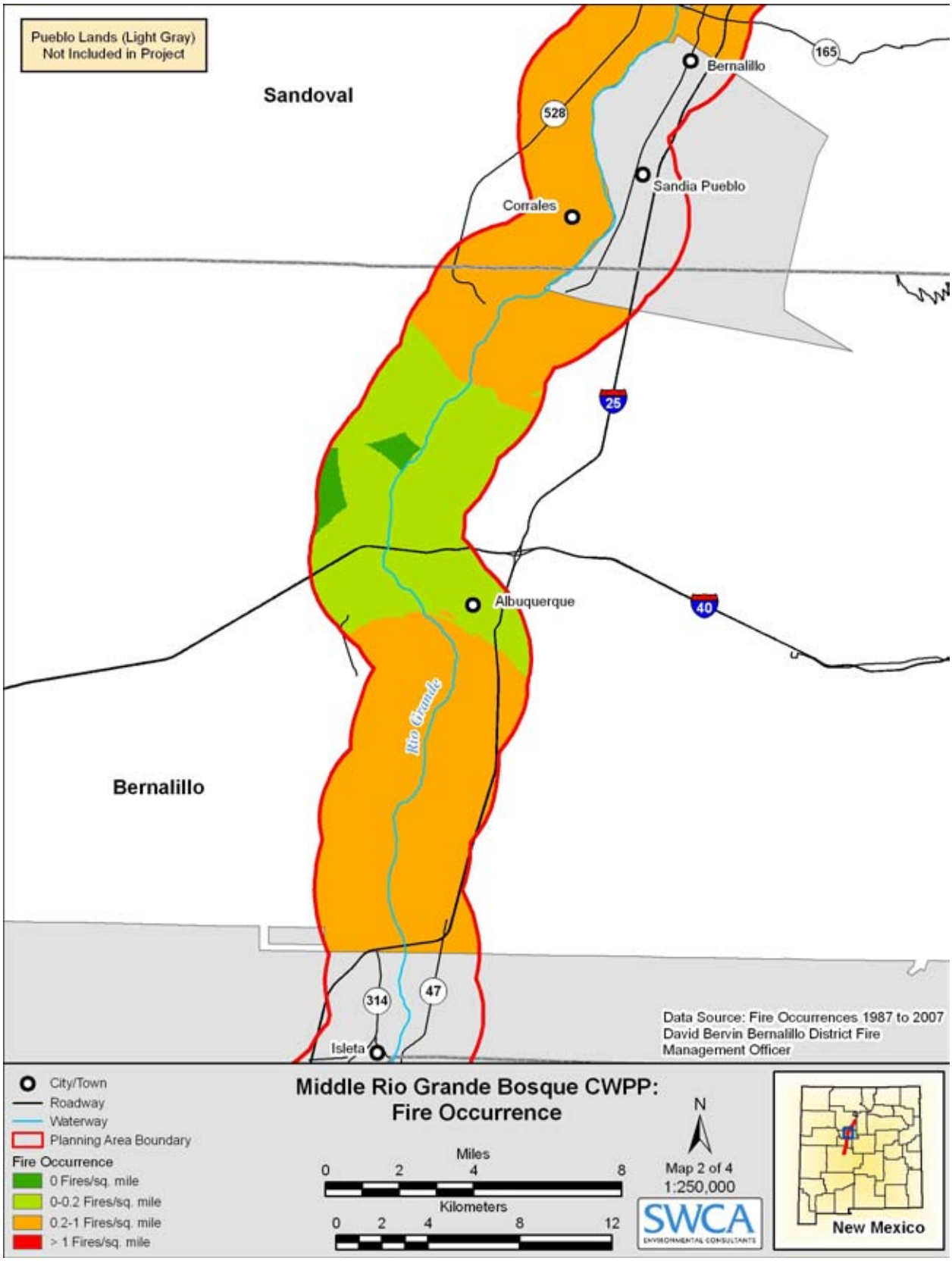
Map 23. Crown fire potential for Valencia County section.



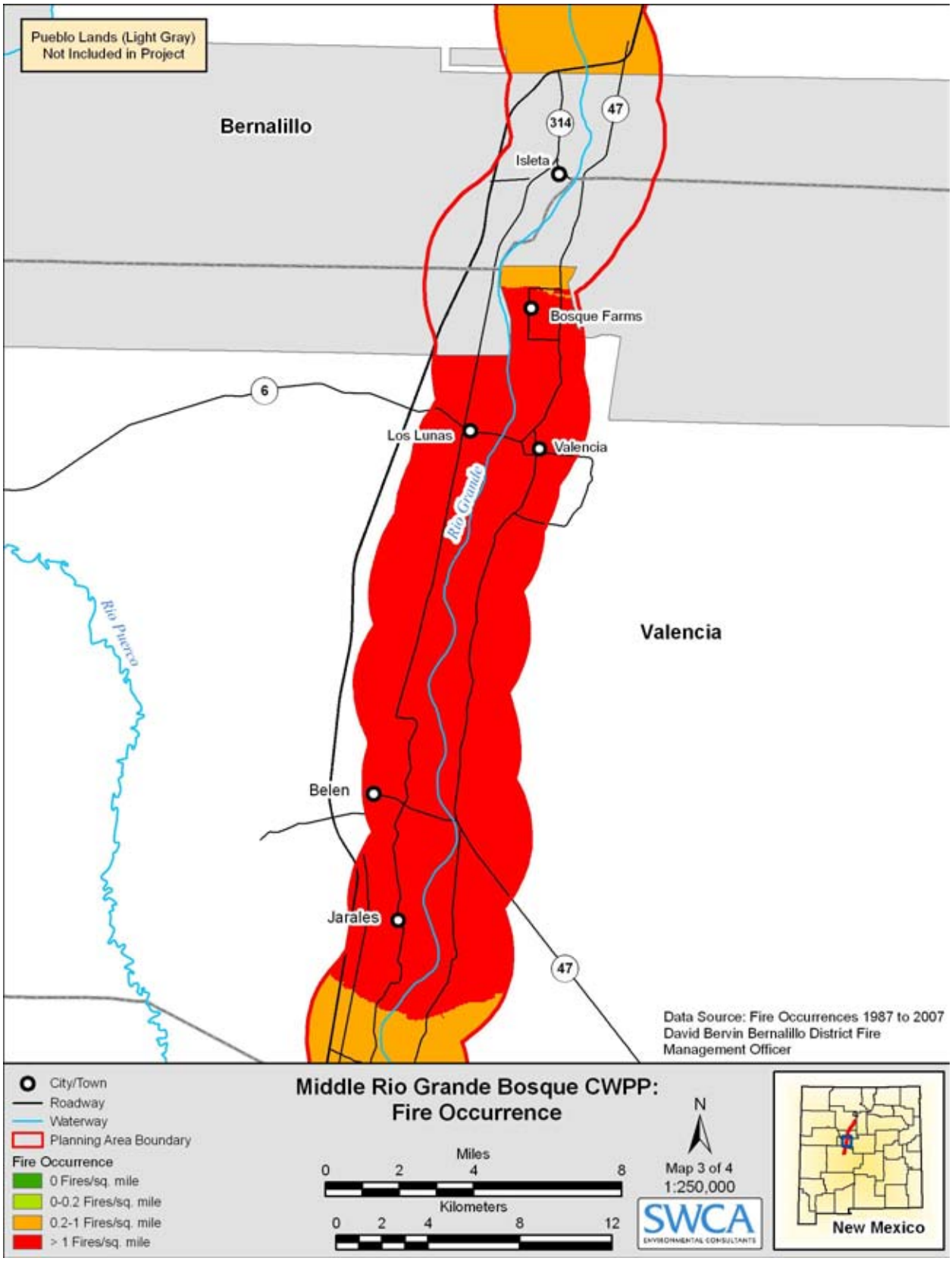
Map 24. Crown fire potential for Socorro County section.



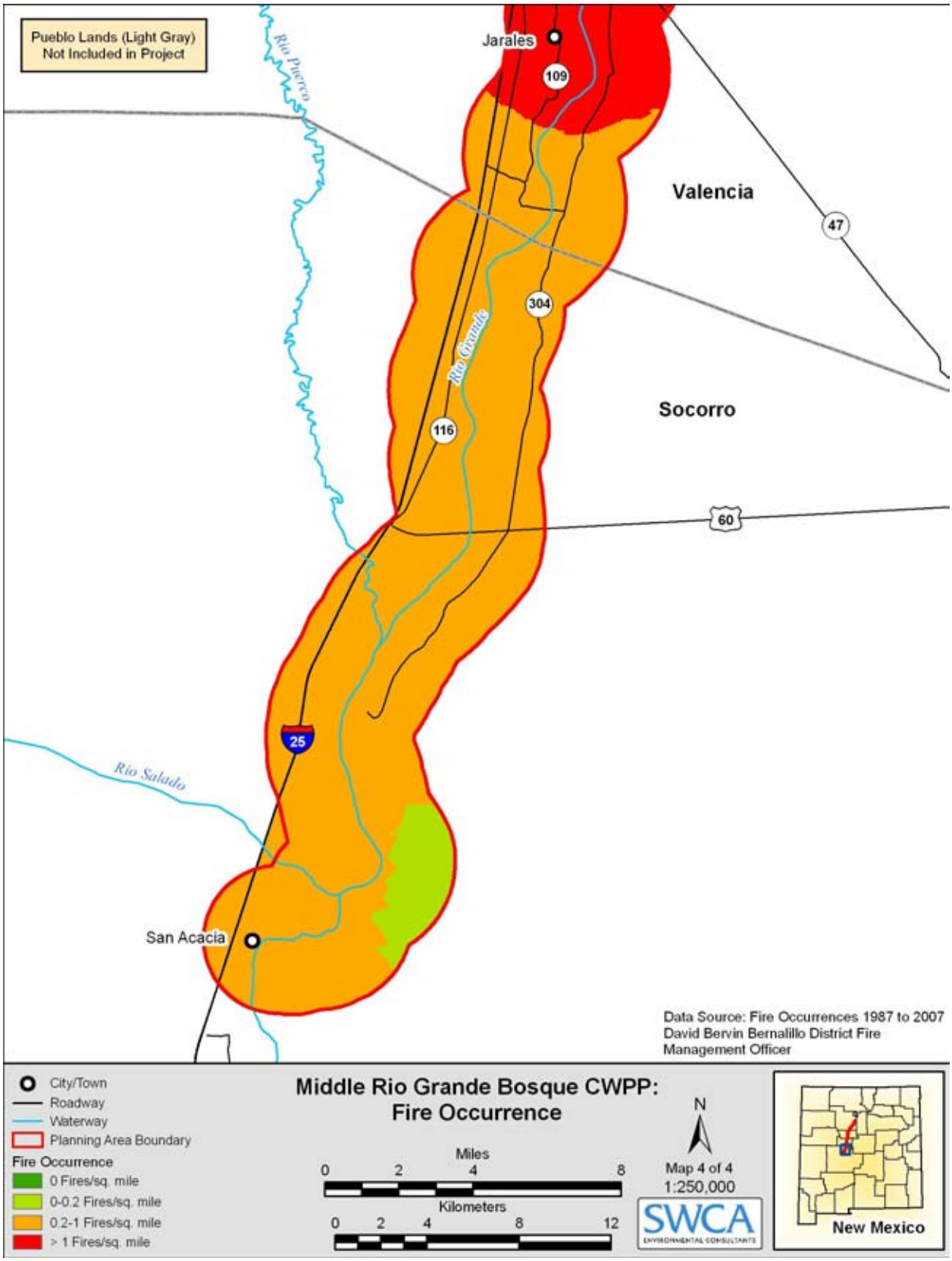
Map 25. Fire occurrence for Sandoval County section.



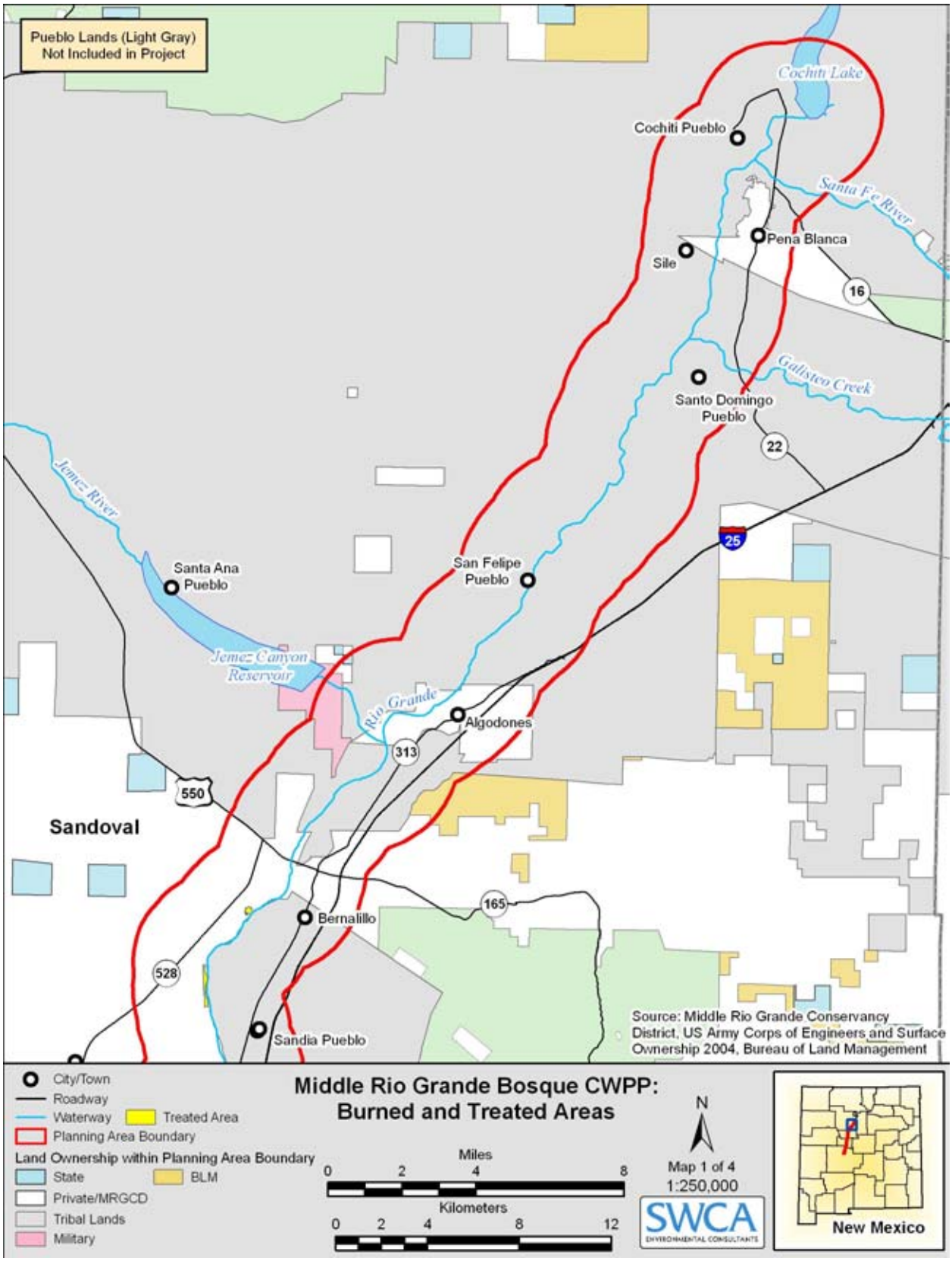
Map 26. Fire occurrence for Bernalillo County section.



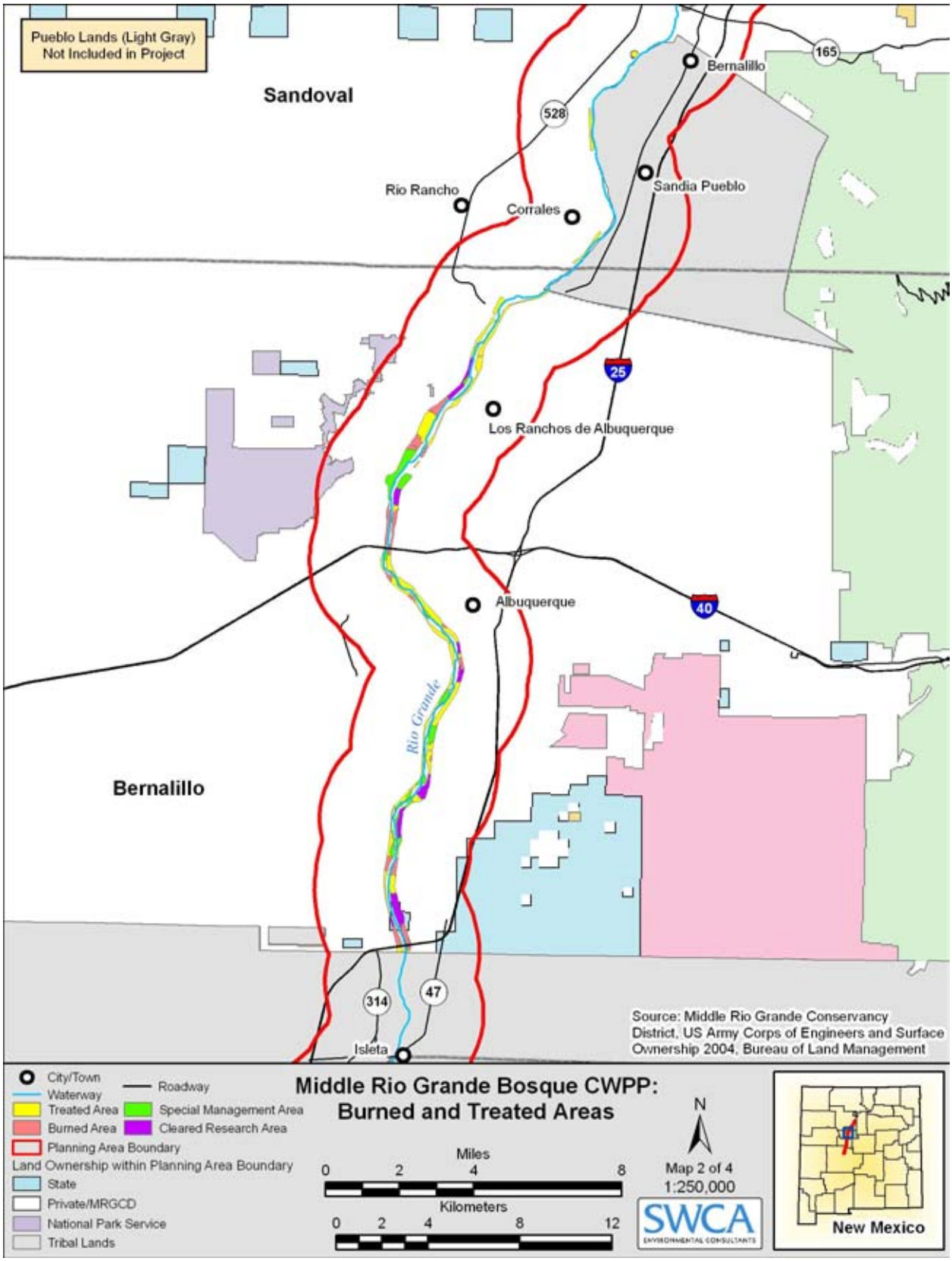
Map 27. Fire occurrence for Valencia County section.



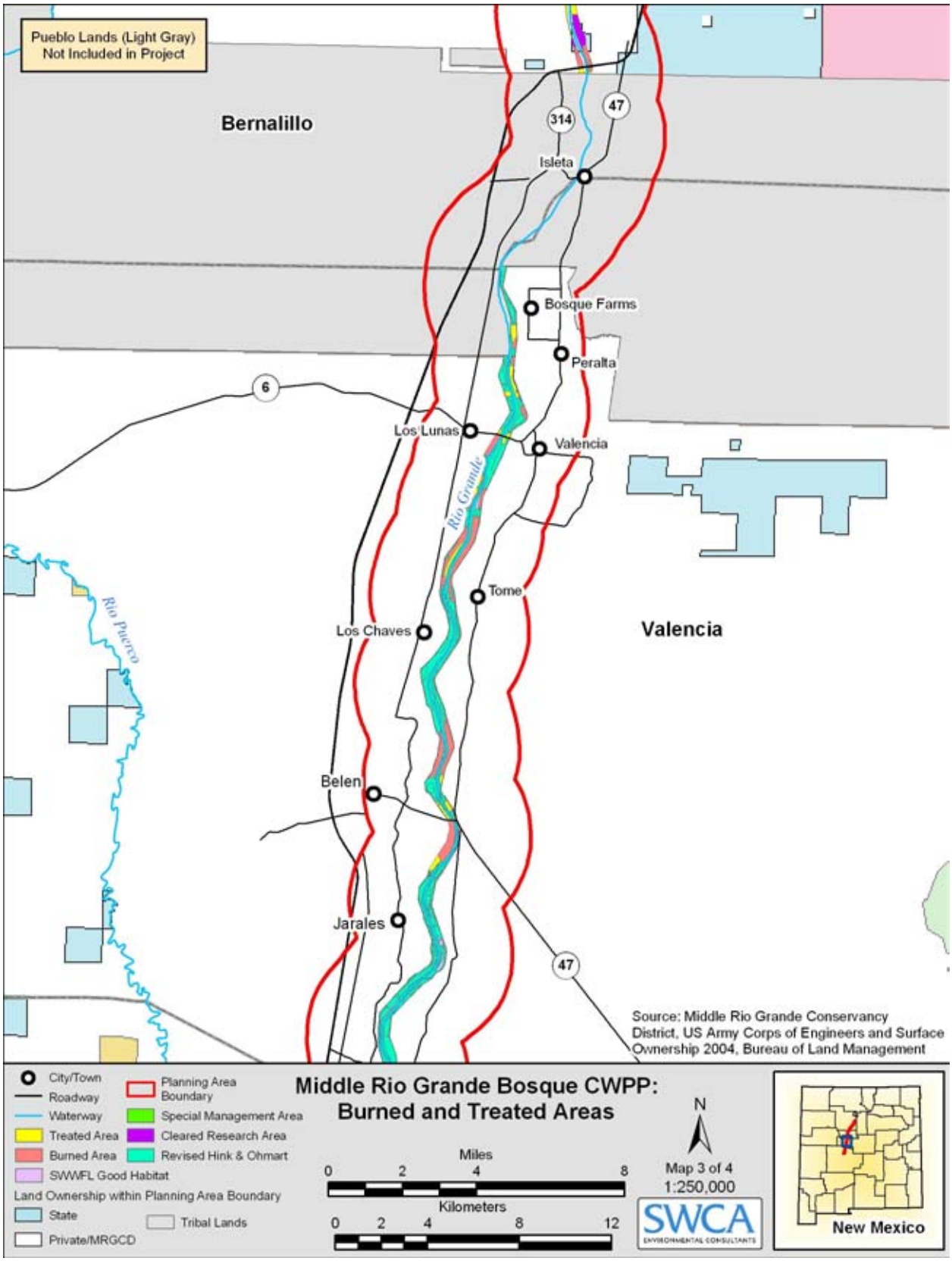
Map 28. Fire occurrence for Socorro County section.



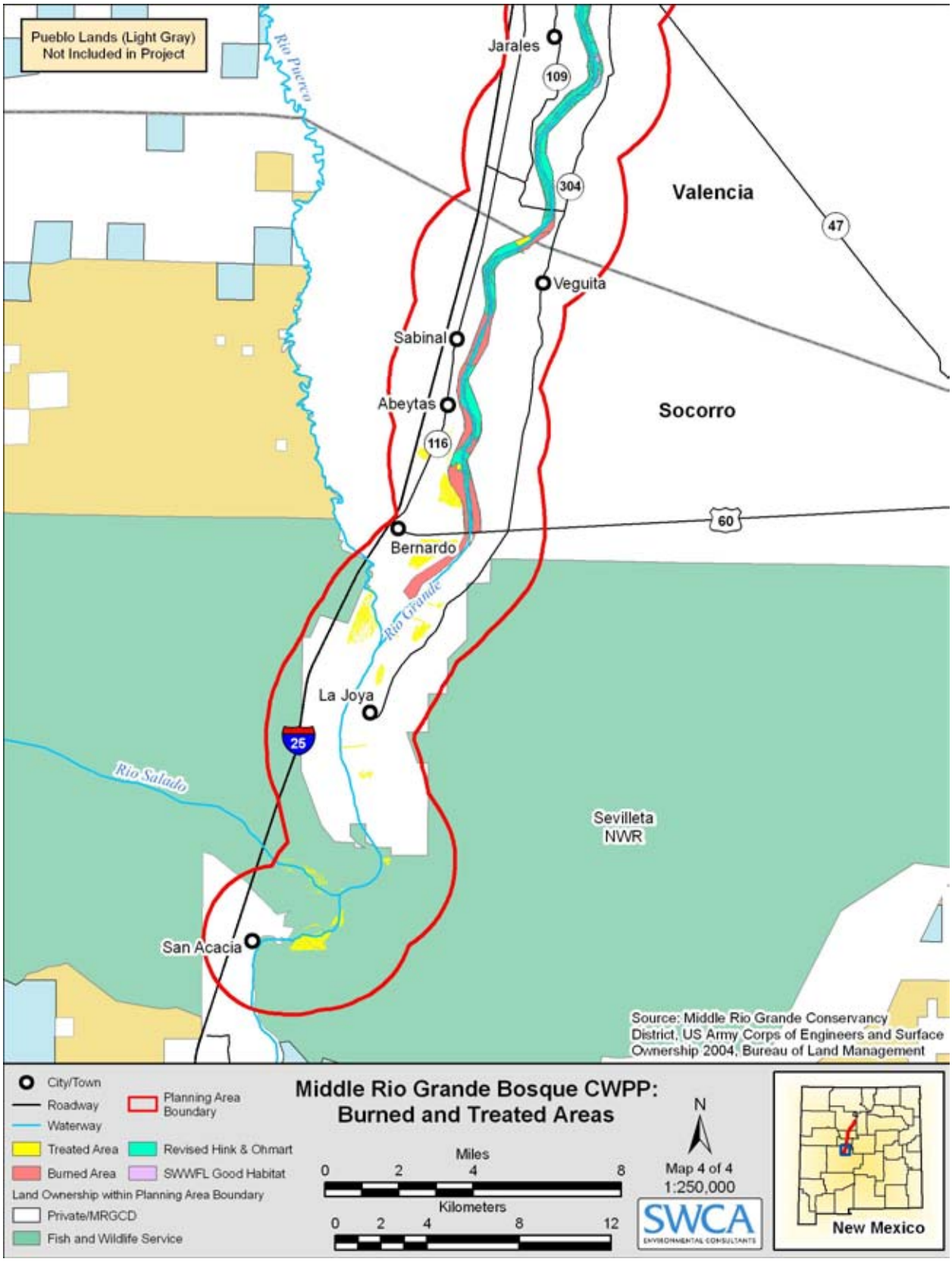
Map 29. Burned and treated areas for Sandoval County section.



Map 30. Burned and treated areas for Bernalillo County section.



Map 31. Burned and treated areas for Valencia County section.



Map 32. Burned and treated areas for Socorro County section.

Fire Regime Condition Class (maps 5-8)

The Fire Regime Condition Class (FRCC) is a measure of the degree of departure from reference conditions, possibly resulting in changes to key ecosystem components, such as vegetation characteristics (i.e., species composition, structural stage, stand age, canopy closure, and mosaic pattern); fuel composition; fire frequency, severity, and pattern; and other associated disturbances, such as insect and disease mortality, grazing, and drought (Hann et al. 2003). Several factors, such as fire suppression, timber harvesting, livestock overgrazing, introduction and establishment of non-native species, introduced disease and insects, and other management activities, are all possible causes of this departure from historic conditions (Schmidt et al. 2002; Hann et al. 2003).

There are three FRCC rankings:

FRCC 1 No or low departure from the central tendency of the reference conditions.

FRCC 2 Moderate departure from the central tendency of the reference conditions.

FRCC 3 High departure from the central tendency of the reference conditions.

The *central tendency* is a composite estimate of the reference condition vegetation characteristics; fuel composition; fire frequency, severity, and pattern; and other associated natural disturbances. Low departure includes a range of plus or minus 33 percent deviation from the central tendency (Hann and Bunnell 2001; Hardy et al. 2001; Schmidt et al. 2002 in Hann et al. 2003).

Fire Regime and Condition Classifications for the MRGB CWPP Planning Area

The majority of the vegetation within the bosque zone is riparian. The natural fire regime for the bosque ecosystem is infrequent and mixed severity class III, which has been classified largely as FRCC 1 to 2 with some patches of 3 depending on the condition of the site. These FRCC 3 areas, which are just north of the confluence of the Jemez River and Rio Grande; portions of east side bosque through Albuquerque; east side bosque just south of Isleta; west side bosque just south of Belen; and east side bosque between the Socorro County line and Highway 60, may coincide with bosque areas that are yet to undergo thinning, and may have a large degree of encroachment by non-natives. Grasslands and shrublands within the planning area have a natural fire regime of class I, with an FRCC of 1–2 in the northern quarter (Cochiti–Sandia Pueblo) and larger areas of class 2 south of Isleta down to San Acacia. Pinyon-juniper and juniper forests are variable in their natural fire regimes and FRCC classifications across the planning area. Juniper savanna communities most likely had a natural fire regime of class I with the fire severity ranging from low to moderate. Many of these stands have experienced extensive encroachment of trees and are shown on the maps as FRCC 3 in the vicinity of the planning area, particularly in the northern portion (Cochiti–Sandia Pueblo). Based on stand age structures that have been observed in pinyon-juniper landscapes, dense stands of pinyon-juniper are likely to have natural fire regimes of I or II. These stands are potentially denser with brushier understory and have FRCC of 3

Generally the FRCC maps illustrate that a large proportion of the planning area is classified as FRCC 1, suggesting that the bosque vegetation has very little departure from its natural reference conditions. Given the previous discussion regarding the intensity of fires in the bosque relative to historic disturbances, this classification should be considered with caution. It is important to note that FRCC is used most often in forest restoration to identify areas of considerable departure from natural fire regimes; this is most accurately applied in forest types that have undergone considerable study. FRCC may not accurately represent the degradation observed in riparian ecosystems since these ecosystems have undergone little fire regime research, and calibration has occurred on a landscape scale that is difficult to apply to small areas within the planning area. Changes to ignition sources due to increased development and flood regime have also contributed considerably to the current fire regime in MRGB ecosystems, so management should not be based on FRCC alone.

Appendix B
Core Team List

Middle Rio Grande Bosque CWPP Core Team List

Name	Agency/Organisation	Position
Victoria Williams	SWCA	Lead Planner
Yasmeen Najmi	MRGCD	Planner
Anthony Martinez	Village of Corrales	Fire Chief
Atilano Chavez	Los Lunas	Los Lunas Fire Chief
Candy Ford	BOR	Realty Specialist (BOR)
Casey Davis	Valencia County	Valencia County FMO
Charles Eaton	Valencia County	Valencia County Fire Marshall
Charlie Sanchez	BLM	Board Chairman
Craig Sevier	Bernalillo County Sheriffs Office	Sergeant
Danielle Galloway	USACE	Biologist
David Bervin	NMSF—Bernalillo District	FMO
David Hawksworth	USDA Forest Service	
Deborah Ridley		Member of Public
Don Kearney	US Fish and Wildlife Service	Fire Management
Fred Hollis	Socorro County	Fire Marshal
Jack Dickey	NMSF-Socorro District	FMO

Middle Rio Grande Bosque CWPP Core Team List

Name	Agency/Organisation	Position
Jake Grandy	MRGCD	Field Coordinator
James Maxon	Sandoval County	Fire Marshal
James Tobin	Rio Rancho	Fire Chief
Jerry Wheeler	Socorro County	Fire Marshal
Jess Lewis	Sandoval County	Emergency Manager
John Estrada	Town of Bernalillo	Fire Chief
John Murtagh	Bernalillo County	Battalion Commander
Jonathon Garcia	Bernalillo County	Fire Chief
Kenny Jaramillo	BIA/SPA	Acting FMP
Lann Moore	BLM	FMO
Marc Sandoval	Rio Rancho FD	District Commander
Matt Schmader	City of Albuquerque	Open Space Division Superintendent
Michael Jaramillo	Village of Los Lunas	Park and Rec Supervisor
Mike Chavez	Bernalillo County FD	Commander
Nancy Umbright	BOR	Biologist

Middle Rio Grande Bosque CWPP Core Team List

Name	Agency/Organisation	Position
Nyleen Troxel Stowe	Socorro Soil and Water Conservation District	Special Project Manager
Ondrea Hummel	USACE	Bosque Restoration and Wildfire Programs
Pat Baca		Member of Public
Pat Jaramillo	Los Lunas	Park Ranger
Robert Ortega	City of Albuquerque	Fire Dept Chief
Roger Tannen	Bernalillo County	Emergency Manager
Ron Keyworth	Bernalillo County	County Commander
Sandra Brown	Corrales Bosque Advisory Commission	
Sue Hansen	Ciudad SWCD	Project Manager
Terrell Treat	NM State Forestry	WUI Specialist
Terry Tadano	Sevilleta National wildlife Refuge	Manager
Todd Richards	BLM	Fire
Zack Romero	Los Lunas	Emergency Manager

Appendix C
Community at Risk List

Community at Risk List

This Community at risk list is developed for the New Mexico Fire Planning Task Force. The communities listed are based upon Core Team input and the Risk Assessment carried out as part of this CWPP.

The Communities are rated as High, Moderate, Low or No Risk and organized by county. Because this is a county wide plan, it is recommended that more detailed analysis be carried to identify to a subdivision level communities to be added to this CAR list in the future.

Community	County	Risk Rating
Algodones	Sandoval County	High
Corrales	Sandoval County	High
Rio Rancho	Sandoval County	Moderate
Pena Blanca	Sandoval County	Moderate
Sile	Sandoval County	Moderate
Bernalillo	Sandoval County	Moderate
Los Ranchos de Albuquerque	Bernalillo County	Moderate
Albuquerque (south valley)	Bernalillo County	Moderate
Tome	Valencia County	High
Los Chavez	Valencia County	High
Bosque Farms	Valencia County	High
Jarales	Valencia County	High
Belen	Valencia County	High
Los Lunas	Valencia County	High
Peralta	Valencia County	High
Valencia	Valencia County	Moderate
Veguita	Socorro County	High
Abeytas	Socorro County	High
La Joya	Socorro County	High
Bernardo	Socorro County	High
Jarales	Socorro County	High
Sabinal	Socorro County	High
San Acacia	Socorro County	High

Appendix D
Community Comments

1. What NATURAL features/landmarks in or around the Middle Rio Grande Bosque (MRG) are most at risk in the event of wildfire?

Sandoval County
Our precious cottonwood and New Mexico olive trees.
Bosque
Flora & Fauna—cottonwood forest, nesting sites/dens—consider bosque in Corrales first & foremost a nature preserve.
Old, majestic, historic cottonwoods
The bosque flora & fauna
Bosque & wildlife preserve
The Cottonwoods, the wildlife
Coronado state monument
Cottonwoods, wildlife habitat
Bernalillo County
Cottonwoods & wildlife. I am concerned that the MRG has been indiscriminately been cutting out vegetation that adds to the beauty of our natural environment and shields wildlife.
Ducks, geese, herons. Wildlife such as birds, beavers, muskrats,coyotes, etc. Natural habitats of above named wildlife which include trees & natural vegetation.
Vegetation near the river and ditches
Native habitat—at risk both from fires and fuel reduction activities
Trees, old decaying logs, bushes.
The 20-acre Jardines del Bosque park & bicycle trail and walking trail that extends from Bridge Street to Rio Bravo. Also the future site of an ethno botanical garden and seasonal wetlands as proposed in the Phase III bosque restoration recommendations.
Natural habitat
Trees (cottonwoods), animals
Mature Cottonwoods, farm lands
Mature Cottonwoods, farm lands
Bachechi open space (Alameda & Rio Grande); Pecan orchard, Durand Open space (4812 Isleta Blvd SW) winter wheat and alfalfa crops grown for wild birds (appox. 9.5. acres), Valle del Bosque Park and open space (480 Sunset Rd SW) Cottonwood pole plantings adjacent to bosque.
The ecosystem
Wildlife, visual appeal of trees, undeveloped area
Trees & wildlife
The entire ecosystem
Trees & wildlife
The cottonwoods and all the wildlife—coyotes, birds, porcupines—all the ecosystem needs to be protected. How could clearing be done to promote a good ecosystem for the animals?
The entire ecosystem. How can you separate animals & or plant-life as one being more important
The bosque ecosystem.
The bosque
Cottonwood trees and beautiful landscapes
The cottonwood trees, the birds, the native plants.

1. What NATURAL features/landmarks in or around the Middle Rio Grande Bosque (MRG) are most at risk in the event of wildfire (continued)?

Bernalillo County, continued
Housing development, roads and shopping malls are being developed on the uncovered open space areas. This development is leading to increased people and therefore increased threat of wildfire. Increased people also deplete precious water resources, wildlife habitat and pollute the atmosphere all leading to greater prevalence of wildfire.
Valencia County
wildlife
Vegetation
wildlife Trees and plants—watershed
Habitat, archeological sites
Native vegetation
The trees
The bosque itself & associated wetlands. Tome Hill & the east mesa should also be considered
Bosque area as well as the drainage canals.
Socorro
Wetlands, older cottonwoods, san antonio or box
Anyone's home
Almost everything that will burn or be affected by the fire, heat or ashes.
Bosque del Apache NWR
Cottonwoods/willow stands

2. What MAN MADE features/landmarks in or around the Middle Rio Grande Bosque (MRG) are most at risk in the event of wildfire?

Sandoval County
Bridges, homes—esp. those without of control weed growth.
Homes east of Corrales from south/north
WUI near bosque
Neighboring homes, stables, human & animal life, MRGCD's system of drains and irrigation ditches and associated ditch banks used for recreation.
Homes, bosque school, bridges
Homes adjacent to bosque & impact on levee
houses, agricultural fields and orchards
Residential homes, livestock, main bridge US550
Houses
Bernalillo County
Homes and other structures, bridges
Trails
The National Hispanic Cultural Center—its museum, permanent and loaned exhibits & substantial collection of New Mexico art; its three theater Disney performing arts center & its state of the art equipment, its historic pueblo style History and Literary Arts building, the torreon with its beautiful and priceless fresco of the history of New Mexico and Americas by artist Federico Vigil, the Spanish Resource Center, Cervantes Institute, NHCC Foundation offices; countless trees and La Fonda del Bosque Restaurant.

2. What MAN MADE features/landmarks in or around the Middle Rio Grande Bosque (MRG) are most at risk in the event of wildfire (continued)?

Bernalillo County, continued
BEMP field sites, trails
Houses, schools, bridges, roads
Historic ditches, National Hispanic Cultural Center, homes/barns bordering ditches.
Historic ditches, National Hispanic Cultural Center, homes/barns bordering ditches.
Bachechi open space (Alameda & Rio Grande); Pecan orchard, Bosque Trail: Three wood-decked bridges as part of trail system (South of Bridge Blvd on the East side of the Rio Grande.
The buildings bordering the conservancy district on either side of the river
Houses along the ridge between Central & I-40
Houses
Their credibility. No, on second thought, it's already in ashes.
Homes on edge of river—both sides.
All the houses along the Bosque.
All the houses along the Bosque.
Residential homes.
The bio park, my home & property, & freeway bridge
Homes
Nearby houses, fences, barns.
Valencia County
homes, businesses
homes, businesses
Homes, farms
Homes—crops—equipment—people
Subdivisions, homes, churches
Houses, barns, sheds
Private homes and improvements
Los Lunas & Belen bridges over river Highway 47 & Manzano expressway. UNMVC Schools, subdivisions houses, farms, barns. Electric lines on east mesa.
River Park and the amenities that have been installed at the location, Hwy 6 Bridge, Los Lunas Treatment Plant, neighborhoods and the three additional parks bordering the drainage canals. Commercial Business, and the Post Office.
Socorro County
Nature center, National Hispanic Cultural Center, farm properties, pueblo ruins
The Bosque
Farmsteads/homes
Don't know
Private structures, power lines, natural gas pipeline, railroad tracks/trestles, bridges, fences, roads/transportation

3. What NATURAL features/landmarks in or around the MRG would you most like to see protected from wildfire?

Sandoval County
Old trees, vegetation next to river and riverside drain (clear ditch) wildlife preservation trails.
Bosque
Bosque
Flora & Fauna—natural vegetation & wildlife
Cottonwoods, NM olive, native vegetation
the bosque flora & fauna
Bosque & wildlife preserve (along Corrales clear ditch)
The whole bosque but especially the derse and old eagle roosting area, area of NM olive next to the river north of the boy scout bridge.
Preserve the bosque
Cottonwoods, many Russian olives, NM olives, willows and birdlife.
Bernalillo County
Rio Grande Nature Center. I would like to see natural/native vegetation planted and trees pruned to reduce fire risk and preserve the natural beauty of the Bosque.
Vegetation near the river and ditches
Native habitat
Water quality, trees
The trees, wildlife habitat
Cottonwoods
Bachechi open space (Alameda & Rio Grande); Pecan orchard, Durand Open space (4812 Isleta Blvd SW) winter wheat and alfalfa crops grown for wild birds (appox. 9.5. acres), Valle del Bosque Park and open space (480 Sunset Rd SW) Cottonwood pole plantings adjacent to bosque.
Wildlife
Wildlife
Trees and wildlife
Our neighborhood
Cottonwoods
All the houses
The bosque ecosystem
The bosque
Wildlife & trees
The cottonwood trees, the migratory birds, native plants.
Valencia County
Cottonwoods, animals, birds
Trees
River & bosque trees!
watershed—wildlife
The mesa & bosque ecosystems are entertwined—they must both be protected
Natural vegetation
Trees

3. What NATURAL features/landmarks in or around the MRG would you most like to see protected from wildfire (continued)?

Valencia County, continued
Native trees & vegetation, wetlands, wildlife
The Bosque
Socorro County
see above
All of the Bosque
Native cottonwood forest
Cottonwoods

4. What MAN MADE features/landmarks in or around the MRG would you most like to see protected from wildfire?

Sandoval County
A man-made feature needing removal would be the jetty jacks to allow for safe movement of fire vehicles in case of fire.
WUI near Bosque
Functioning drains and Irrigation systems & Physical integrity of levees
Homes & schools
levee, vegetation ditches
The old adobes along the Sandoval lateral
Life, homes
Houses
Bernalillo County
Homes and other structures, bridges
National Hispanic Cultural Center
Trails, picnic areas, BEMP field sites
Bachechi open space (Alameda & Rio Grande); Pecan orchard, Bosque Trail: Three wood-decked bridges as part of trail system (South of Bridge Blvd on the East side of the rio Grande.
The structures on Tingley
Houses along ridge
Houses yards
Our neighborhood
Tingeley Park. Alt Country Club. Bridges
All the houses
Obviously our wonderful aquarium—botanic park. However I would not want to see any homeowners affected.
Residential homes
Bio park & home & property, freeway bridge
Homes
Houses

4. What MAN MADE features/landmarks in or around the MRG would you most like to see protected from wildfire (continued)?

Valencia County
The bosque should not have been disturbed by anything man-made!!
Bridges & Roads. Gas & electric lines
Bridges & Roadway railroad track
Homes
Gas pipes
structures
Private homes and livestock
Major roads infrastructure UNMVA W. Chavez Park River bridges subdivisions on East Mesa houses & barns
River Park, Hwy 6 bridge, Los Lunas Treatment Plant, Neighborhoods and the three additional Parks bordering the drainage canals. Commercial Business and the Post Office
Socorro County
All of it

5. How prepared is your community for a large wildfire? (rank 1 low -5 high)

Sandoval County
1
Blank
Left blank
3
3
3
5
3
1
2
Bernalillo County
3
2
The community is VERY poorly prepared for a large wildfire. Thankfully, the last fire did not reach the NHCC nor Bueno Foods because of the bosque restoration work that was conducted in the riparian forest to the west of the NHCC in 2003–2004. Regrowth has come back and will be eradicated in the 8-acre parcel west of the NHCC campus in November 2007. There continues to be a need to eradicate excessive regrowth and invasive species as well as to eliminate fuel load on the bosque floor in the acreage to the west and south of the NHCC. There is also a need to inform drivers along Bridge Street NOT to throw burning cigarettes out their window onto the dry grass slope next to the road. This is one of the greatest fire risks near the NHCC.
3
3
3
1 or 2

5. How prepared is your community for a large wildfire (continued)? (rank 1 low -5 high)

Bernalillo County, continued
2
1
2
1
3
2
2
3
3
3
Valencia County
3
3
1
3
Negitive 10!!
1
3
2
1
Socorro County
3
3 to 4
3
3
3

6. What information would help you be more prepared for a wildfire?

Sandoval County
Learning the funding needs of our fire dept. to combat wildfire and funding available for fuel reduction in Corrales. Education to homeowners about how to decrease risk to their property.
Coordinated communication with overlapping agencies and public safety (fire & police)
Patterns of fire in bosque
Home site preparation, evacuation plan for village
A system for quickly communicating the existence of a fire to local residents. A system, when appropriate, for including qualified local residents in emergency fire fighting (if a significant fire breaks out) Training, call list?

6. What information would help you be more prepared for a wildfire (continued)?

Sandoval County, continued
What to do with our animals. There is an awful lot of dead wood that has accumulated since cutting firewood in the bosque was outlawed following the establishment of the Bosque Preserve. I wish that a plan could be devised to allow residents of Corrales to remove dead wood one or two weekends in the winter. I would like to have the jetty jacks adjoining the train in the Bosque between Mariquite Road and the Boy scout bridge removed as soon as possible. They are dangerous and they prevent the fire dept. brush truck from traveling north and south in the bosque in case of a fire.
A lot
Not sure about me, but community education, people still starting camp fires and smoking in the bosque.
Bernalillo County
This plan should include money for replanting after areas are cleaned and money for removing jetty jacks
It is important that we find a balance between removing vegetation for fire prevention and retaining the beauty and habitat of the bosque for people and wildlife.
Native habitat is at risk not only from fires, but also from fuel load reduction activities. However, fuel load reduction activities also create opportunities for restoration and improvement of habitat. In preparing the CWPP, I hope that the district is consulting with biologists from UNM, FWS, COE and the like so as to identify and take advantagte of those restoration opportunities. Fuel load reduction should focus on the removal of non-native vegetation and should not, as happened in locations in the bosque in Albuquerque, strip the bosque of native shrubs and entirely remove shrubby habitat.
Phone numbers of people to contact on what to do and where to go.
Prevention and on-going reduction of fuel load is the best response. Continued money, other resources and manpower need to be made available to NHCC, MRGCD and other stakeholders interested in protecting the bosque as an important environmental and cultural resource.
Increased education about how fires start & spread
Prevention is the answer—clearing out bosque of dead & down wood & hot deposit mulch right on site, or if so, minimal mulch. This survey seems really vague—was there a real purpose?? It seems like something more in-depth would have been more worth yours & my time.
When complete, share the plan. Include: points of contact, ID potential danger zones as well as key places to protect, and procedures for evacuation communication and safety in event of a large wildfire. Training for community and/or local organizations to provide basic skills to help, if needed, in the event of a large wildfire.
Criteria for optimum clearing of foliage & trees around one's property
Clearing low brush that is not native to the area but in a gentle way not to overly destroy the flora & fauna
Fire safety prevention info. Tools and equipment to clear debris. Money to build fire proof structures
Phone numbers to access help.
Is there a web site with recommendations?
It is action - money oriented. We need TV specials. We need TV ads @ clearing land
What resources are available?

6. What information would help you be more prepared for a wildfire (continued)?

Bernalillo County, continued
Who to call? How to inform neighbors
Atfer the fire, so many tumbleweeds move in that you cannot even access the river, and there is all this standing dead cottonwood that present a limb falling hazard. Response agencies should only use water, and not chemicals, to fight wildfires in bosque, and they should have boom materials and erosion barriers to protect the water quality. Revegetation with native plants should happen as quickly as possible and be monitored and be successful.
Valencia County
How to protect property. What should or could you do to make your property fire safe. Spread the word.
Vegetation - landscaping - buildings
How can we eliminate the causes of fire in Valencia?
Please note: Our community extends beyond the bosque. Please expand the area to incorporate the mesas! In 2007, there were more fires, and more acerage of mesa burned than bosque!
Public education concerning no burn days. I am a firefighter with TAFO & NMSF
Agency assistance—plans
Training, Equipment, Mitigation of fuels of the Bosque, Public awareness.
Socorro County
website resources
Who would I call in case of fire
Remove jetty-jacks—Dangerous for firefighters & equipment

Middle Rio Grande Bosque CWPP
Public Meeting Minutes:

SANDOVAL COUNTY: CORRALES—15TH OCTOBER
CORRALES MUNICIPAL COURT HOUSE 6–7:30PM

The Sandoval County Meeting was attended by 18 people.

Issues Raised:

Vegetation:
- Vegetation management
- Maintain integrity of bosque preserve in Corrales
- Landmark trees

Priorities for treatment:
- Jetty jacks—remove

Bosque Safety/Arson:
- Illegal camping and squatter camps

Fire Department Resources:
- Unified geographic information systems (GIS) mapping across agencies and departments
- Identify/map water sources and potential for dry hydrants off clear ditch
- Trails for Quads/small tactical type 6
- Unified training for agencies and include volunteer fire fighters

Building Codes/Ordinances
- Building codes that support fire prevention/safety
- Ordinances for fire safety (i.e., defensible space/vegetation management)

Implementation:

Access:
- Improved access on bridges and through gates
- Signage at entrance of bosque and drainages
- Firewood collection—community days
  - want this to be controlled
  - usable fuel wood
  - permits for firewood

Community:
- Involve flood control authorities in planning processes and fuels treatments
- Firewise and more community/public education
- Funding for community-based fire programs and stewardship organizations
- Public education- what private landowners and citizens can do

BERNALILLO COUNTY: ALBUQUERQUE—16TH OCTOBER
LOS DURANES COMMUNITY CENTER 6–7:30PM

The Bernalillo County Meeting was attended by 17 people.

Issues Raised:

Vegetation:

- Vegetation management
- Re-vegetation
  - Erosion control
- Monitoring
  - Wildlife
  - Vegetation/habitat
  - Effects and successes of fuels treatments
- Riparian corridor along river as well as along drains, which is used as a significant migratory pathway
- Critical wildlife habitat and nesting areas
- Riparian vegetation
- Vegetation—provide privacy/safety as it creates a vegetation buffer between private land and public access areas
- Ditches and drains through neighborhoods: desire maintaining some trees for habitat, privacy, shade

Priorities for treatment:

- Jetty jacks—remove: They are a safety hazard and unsightly

Bosque Safety/Arson:

- Illegal camping and squatter camps

Fire Department Resources:

- Unified GIS mapping across agencies and departments
- Identify/map water sources and potential for dry hydrants off clear ditch
- Trails for Quads/small tactical type 6
- Unified training for agencies and include volunteer fire fighters

Building Codes/Ordinances

- Building codes that support fire prevention/safety
- Ordinances for fire safety (i.e., defensible space/vegetation management)

Implementation:

Access:

- Improved access on bridges and through gates
- Footbridge from Thomas Village to Bosque Trail

- Maintain access to and maintenance of bosque trails

Community:

- Need more information and community outreach from MRGCD about bosque management
- Local disappointment towards MRGCD's policy and practice of "stripping all the vegetation from around the ditches, which leaves it vulnerable to erosion and weed growth and harms wildlife."
- Desire a better program of planting native vegetation in conjunction with removing weeds and non-native vegetation
- Firewise and more community/public education
- Community-watch/bosque groups
- Funding for community-based fire programs and stewardship organizations
- Public education—what private landowners and citizens can do
- Bosque schools—good opportunity to connect bosque monitoring/environmental education with community outreach/public education
- Want information on bosque commission
- Contact more neighborhood associations
- Need more direct communication between communities and agencies

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VALENCIA COUNTY: LOS LUNAS—17TH OCTOBER
LOS LUNAS FIRE DEPARTMENT TRAINING ROOM 6–7:30PM

The Valencia County meeting was attended by 20 people.

Issues Raised:

Zack Romero, Emergency Manager for Valencia County, provided a copy of the wildfire section (section VII) of the Valencia County Hazard/Emergency Management plan. Provided fire history data for Valencia County.

East Mesa:

Jack Dickey raised concern about the east mesa in Valencia County as an area prone to fire risk. This area is outside the planning area, but could be addressed as concern for the county to drive development of a county-wide plan.

Two high power transmission lines
- Need water sources

Vegetation:

Trees growing into the river and accumulating trash were voiced as a concern for fire hazard.

- Recommendation: Clearance of dense trees in the bosque

The group discussed fuels and identified the southern areas of the county as having the greatest fuel problems in the bosque. These fuels introduce a huge fire risk that is heightened by the presence of high-capacity transmission lines.

One attendee asked if Community Wildfire Protection Plan (CWPP)-related funding can be used to establish parks and trails in the bosque. Dave Bervin with State Forestry said that often fuel breaks can be established that are used for recreational purposes.

- Vegetation management
- Revegetation
  - Erosion control
- Monitoring
  - Wildlife
  - Vegetation/habitat
  - Effects and successes of fuels treatments

Priorities for treatment:

- Jetty jacks—remove: They are a safety hazard and unsightly

Bosque Safety/Arson:

One attendee mentioned the need for an organized bosque patrol. Dave Bervin (State Forestry) stated this couldn't be funded under the CWPP but recommendations for a community led bosque group may achieve the same thing.

- Recommendation: Community-led bosque patrols. Funding could also come from sources independent of the CWPP—for example, New Mexico Department of Homeland Security.
- A community watch program or fire watch program could be initiated under recommendation from the CWPP. This could follow a similar approach which has been successful in Corrales (Sandoval County), where a bosque advisory commission has been established. Yasmeen Najmi of the Middle Rio Grande Conservancy District (MRGCD) mentioned the Socorro "Save our Bosque Task Force" and said maybe a similar collaborative model would work for Valencia County.
- Concerns that trees are growing up to bridges, in part due to the river filling up with sediment (increased elevation of river bed), which enables tree growth.
- Trash piling up with sediments
- Desire patrol in bosque
- Fuels high and dense south of river road
- Homeless population and camps concern
- Illegal camping and squatter camps

Man-made ignitions were identified as the most common causes of fire in the county.

- Recommendation: Education was identified as one of the biggest problems in the county; this point generated discussion about the formation of community bosque groups. This

would be especially important with the development of new subdivisions along the bosque in Tome.

Homeless camps were discussed as a potential source of fuels and fire risk.

- Recommendation: A community fire watch program was suggested as a way to reduce the number of camps, though the question of enforcement was raised. Need to establish what kind of power for enforcement a bosque task force could have.

Fire Department Resources:

A number of fire fighters present at the meeting agreed that funding that would help build resources for the fire departments throughout the county.

- Recommendation: More training, equipment, and protective equipment.
- Recommendation: Basic wildland fire fighter training was mentioned.
- Recommendation: Yasmeen Najmi emphasized the importance of homeowner education and awareness so they don't have to be so dependent on the fire departments

Improved collaboration between neighboring fire departments and counties was discussed and the need for better communication and collaboration was raised.

- Recommendation: Training that would inform neighboring fire departments of different fuel types, access areas, and hazards was identified as a need. This could be achieved in parallel with establishing an improved incident command structure.
- More training and wildland fire equipment (personal protection devices etc.) for local fire departments/emergency rescue
- Training for fire suppression in wildland urban interface (WUI)
- Training: get departments together
- More interagency cooperation and coordination for incident command

Building Codes/Ordinances

Uncontrolled development was identified as a fire hazard in the bosque.

- Recommendation: Greater building codes are needed—International Code Council (ICC) code could be a way to implement these codes in the WUI. Strengthening the burn ordinance was also discussed as a way to control potential spread to bosque. Suggestions were to have a stand-alone ordinance for burning and a permitting process.
- Building codes that support fire prevention/safety
- Adopt international WUI code in county
- Strengthen burn ordinance
- Improve burn permitting process through tracking
- Ordinances for fire safety (i.e., defensible space/vegetation management)

Implementation:

- Parks/trails: Create fuel breaks that can be used for trails/parks

Access:

- Access to houses/escape routes

- Improved access on bridges and through gates

Community:

- Education:any type of education for what homeowners can do
- Bosque users education about fire safety
- Firewise programs: example—Socorro had Firewise training for all community
- New housing developments near bosque need education
- Fire-watch/community watch: community task-force (but what do they have the power to enforce?)
- Advocate for community preparedness

Implementation:

Jack Dickey provided examples of implementation of the Socorro County CWPP:

- Purchased Firewise prevention materials and fire department traveled to communities to carry out training.
- One area was identified as exhibiting poor access. An escape route was constructed as a result of the CWPP.
- Indirect funding was sought for restoration of post burn areas. This funding was not obtained directly as a result of the CWPP.

Priorities for treatment:

One gentleman asked where homeowners could obtain information regarding treatments for saltcedar. The soil and water conservation districts (SWCDs) can provide this information.

One lady suggested that an area for priority treatment should be Road 304 where it dead ends by a recreational vehicle park. This area had poor ingress/egress and should be prioritized for treatment.

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SOCORRO COUNTY: SEVIETTA—18TH OCTOBER
SEVIELTTA NATIONAL WILDLIFE REFUGE 6–7:30PM

The Socorro Meeting was attended by 14 people.

Issues Raised

Access:

One of the issues that was raised for Socorro County was the issue of access in the bosque. Locked gates were raised as a concern by fire department personnel. Yasmeen Najmi explained that she contacts the local fire departments annually to let them know how to get a key to the

gates (at the Belen Division Office). Locks are changed in January or February every year. Fire department representatives had elected that keys be centralized.

- Recommendation: Improve communication regarding access to keys.
- Recommendation: Identify where to gain access to bosque—map of access points.
- Recommendation: Identify access points where heavy equipment can be used.

Another concern is the narrowness of the ditch roads and other access roads

- Recommendation: Identify turn around spots.
- Recommendation: Widen road. Evaluate ingress/egress

Another concern is load limits of bridges

- Recommendation: Identify areas where funding could be spent to reinforce bridges.

Community:

Fire department representatives stated that there are many areas that are hazards because of insufficient defensible space. Also, new subdivisions, increasing density of population, and many newcomers are unaware of fire threat. New subdivisions depend on neighborhood associations to enforce new building codes. County clerk's office can provide copies of the codes.

- Recommendation: Educate public about defensible space. Emphasize that suppression activity will be limited if fire fighter safety is compromised by lack of defensible space.
- Recommendation: School presentations to inform the public.
- Recommendation: Cost share programs/ incentives (i.e., Bureau of Land Management (BLM) Wideman Amendment offers the opportunity for funding for private landowners whose homes are adjacent to federal lands. Also National Resource Conservation Service (NRCS) funding for removal of noxious weeds.
- Also SWCD funding opportunities.
- Recommendation: Community members to draw up pre-plan for fire departments. Awareness for pre-plans could be raised through the Northern Socorro County Neighborhood Society. Kelly Voris could be a contact for learning about needs related to pre-planning.

Jetty jacks:

Jetty jacks were identified as a hazard to fire safety.

- Recommendation: Remove jetty jacks
- Recommendation: Provide maps of jetty jack locations

Vegetation:

Dense vegetation was cited as a fire hazard.

Heavy fuel loading on Sevietta land identified as a fire hazard.

Highway 60 south to San Acacia Dam is a high risk area that the community wishes to see prioritized for treatment.

Saltcedar density also identified as a fire threat. La Joya (east side of river) is identified as a high risk area, mainly because of poor access.

Yasmeen Najmi stated that a number of fuel breaks have been provided in the Bernardo area. An attendee highlighted that the efficacy of the fuel break depends on the neighboring vegetation.

New subdivisions are developing in areas that were historically grazed. Fuels are changing.

- Recommendation: Fuel breaks that run east-west.
- Recommendation: Pre-determine where a fire break could be constructed; during a fire these areas could be used as staging areas and/or to input dozer lines.
- Recommendation: Fuel breaks should be in areas where there are access points that can be used with heavy equipment and/or where there are ditch crossings.

Water sources:

Water sources for suppression were discussed: Lann Moore of the BLM raised the issue of aerial resources and suggested that dip sites be identified in the plan.

- Recommendation: Map potential dip sites.
- Recommendation: Yasmeen Najimi said that vegetation removal could be carried out to provide greater aerial access for suppression.

Railroad:

The railroad was identified as a fire hazard. The railroad has a hazard mitigation plan. There is also a Local Emergency Planning Committee plan. Dennis Baca was mentioned as a contact for the railroad.

- Recommendation: Improve communication between railroad and fire responders.
- Recommendation: Identify railroad as a hazard in the risk assessment.

Agriculture/ Farming:

Haystacks were recognized as a fire hazard. This is alleviated in part through insurance companies placing a limit on hay storage.

- Recommendation: Agricultural land to be identified as a hazard and a value at risk.
- Recommendation: Horse farms to be identified as a value at risk.

Spreading word: Bear Albrecht discussed linking the draft from the fire marshal Web site.

****** Sandoval County is completing a county wide CWPP that was also contracted to SWCA Environmental Consultants (SWCA). Vicky Williams attended this meeting to gather any further public comments on the bosque areas throughout Sandoval County.*

SANDOVAL COUNTY PUBLIC MEETING—7TH NOVEMBER 2007
BERNALILLO COMMISSIONERS MEETING ROOM: 6PM

Members of the public raised concern regarding the density of fuels in the bosque around Bernalillo. They discussed the need for a community-driven model like the Corrales Bosque Task Force.

A number of treatments have been carried out by Bernalillo County, City of Albuquerque, MRGCD, Ciudad SWCD. Communities were also informed of the Firewise program and how that could help coordinate communities.

The Bernalillo bosque was identified as a high-risk area for fire in the county.

Small diameter trees could/should be removed from around people's own property.

Public members from Bosque Encantado identified areas south and north of the village as having the highest fuels. There are a lot of standing dead cottonwoods that citizens felt should be removed.

A potential fire risk was identified as 4×4 vehicles. There is signage to prevent such vehicles in the bosque but it is not enforced. The public feel that more visible signage may reduce this problem. An alternative could be designated trails for different users.

New Bosque bridges were identified as a need for funding.

The issue of insurance was raised, with regard to reduced premiums for homeowners who clear up around their properties or retrofit for fire protection. It was believed amongst those attending that that practice is not in place at present but that insurance companies are refusing to insure some homes if the fire risk is too high and the homeowner hasn't made fire preventive measures.

People want greater communication before treatments occur on the bosque.

Values at risk were identified as:

- The Museum at 550 bridge
- The Coronado Monument
- Wildlife in the bosque area

Appendix E
Fire Fighting Resources

Sandoval County Fire Department

Number of Stations
2
Location of Stations

Algodones Station 35.378969, -106.48143
Pena Blanca Station 35.567816, -106.336569

Equipment at each Station

Algodones
1 Engine, 1250 gpm, 1000 gallons
1 Ladder Truck, 1500 gpm, 300 gallons
1 Tanker, 500 gpm, 3000 gallons
1 Tanker, 250 gpm, 1800 gallons
1 Brush Truck, 750 gpm, 300 gallons
1 Brush Truck, 125 gpm, 250 gallons

Pena Blanca
1 Engine, 1250 gpm, 1000 gallons
1 Tanker, 250 gpm, 1800 gallons
1 Brush Truck, 125 gpm, 250 gallons

Number of Personnel

16 Paid (Fire Fighter/EMT/Chief Officers)
20 volunteers in Algodones district
15 volunteers in Pena Blanca district

Approximate Degree of Wildland Fire Fighting Training Among Crew

95 % are Firefighter I including Basic Wildland fire fighter training

Other Information Useful to the Plan : Sandoval County currently holds a county-wide mutual aid agreement with all fire agencies within the county.

Town of Bernalillo Fire Department

Number of Stations

1

Location of Station

Station 14: 739 Camino Del Pueblo, Bernalillo 35.305329, -106.548733

Location of Identifiable Water Tanks

Hydrants only

Equipment

1 Brush Truck

Number of Personnel

3 Paid
18 Volunteer
21 Total

Approximate Degree of Wildland Fire Fighting Training Among Crew

NM State Certified Wildland 1 I-00 L-180 S130 S190 3. 3 With Red Card.

Corrales Fire Department

Number of Stations

2

Location of Stations

Main: 4920 Corrales Road, Corrales 35.230658, -106.612393
Sub-station: 100 Paseo Tomas Montoya, Corrales 35.223089, -106.615878

Location of Identifiable Water Tanks

30,000 Gallons at main station and 54,000 at sub-station

Equipment at each Station

Main Station
1 Engine, 1000 gpm, 1000 gallons
1 Engine, 1250 gpm, 100 gallons
2 Tankers, 250 gpm, 1800 gallons
1 Tanker, 500 gpm, 2000 gallons
1 Brush Truck

Number of Personnel

8 Paid
14 Volunteer
22 Total

Approximate Degree of Wildland Fire Fighting Training Among Crew

Other Information Useful to the Plan

Rescue transport capable, Advanced Life Support (ALS) stocked.

Bernalillo County Fire Department

Number of Stations

10 (plus 3 unmanned substations)

Location of Stations

Station 1: 9819 2nd Street NW, Albuquerque * 35.192922, -106.612846
Station 2: 1701 Arenal SW, Albuquerque * 35.053572, -106.680388
Station 3: 3909 Barcelona SW, Albuquerque * 35.030633, -106.717249
Station 4: 2801 Don Felipe SW, Albuquerque * 34.998964, -106.715738
Station 5: 11700 Paseo Del Norte, Albuquerque * 35.173945, -106.509807
Station 6: 25 Frost Rd., Sandia Park 35.162109, -106.341711
Station 8: 3610 Prince SE, Albuquerque * 35.024786, -106.653757
Station 10: 17 S. Zamora Rd., Tijeras 35.09589, -106.369355
Station 11: 10838 Hwy 337, Tijeras 34.979167, -106.323011
Station 13: 4 Dressage Rd., Tijeras 35.0987, -106.28202

Fire Shops: 1120 Coors Blvd SW, Albuquerque (houses reserve apparatus) 35.065413, -106.709656

* considered for immediate response for MRGCD Bosque CWPP

Location of Identifiable Water Tanks

Variable. Most areas within the WUI boundary in Bernalillo County are close to a municipal water system (hydrants). Some commercial properties have their own draft hydrants or gravity tanks on the property.

Equipment at each Station (excludes rescue and specialty apparatus)

Station 1
1 Ladder, 2000 gpm, 550 gallons
1 Brush, 250 gpm, 250 gallons

Station 2
1 Engine, 2000 gpm, 1000 gallons
1 Brush, 250 gpm, 250 gallons

Station 3
1 Engine, 2000 gpm, 1000 gallons
1 Brush, 250 gpm, 250 gallons
1 Tanker, 500 gpm, 1500 gallons

Station 4
1 Engine, 2000 gpm, 1000 gallons
1 Reserve Ladder, 2000 gpm, 550 gallons
1 Brush, 250 gpm, 250 gallons

Station 5
1 Engine, 2000 gpm, 1000 gallons
1 Brush, 250 gpm, 250 gallons
1 Tanker, 500 gpm, 1800 gallons

Station 6
1 Engine, 2000 gpm, 1000 gallons
1 Brush, 250 gpm, 250 gallons
1 Tanker, 1000 gpm, 1500 gallons
- Sub Station 6
1 Tanker, 500 gpm, 1800 gallons

Station 8
1 Ladder, 2000 gpm, 550 gallons

Station 10
1 Engine, 2000 gpm, 1000 gallons
1 Brush, 250 gpm, 250 gallons
1 Tanker, 1500 gpm, 2000 gallons
- Sub Station 10
1- Wildland Engine, 1000 gpm, 750 gallons
1- Wildland Engine, 500 gpm, 1800 gallons

Station 11
1 Engine, 2000 gpm, 1000 gallons
1 Brush, 250 gpm, 250 gallons
1 Tanker, 750 gpm, 1500 gallons
- Sub Station 11
1 Tanker, 250 gpm, 2000 gallons

Station 13
1 Engine, 2000 gpm, 1000 gallons

Shops or substations
5 Reserve Engines, 750 to 2000 gpm, 750 to 1000 gallons

Number of Personnel

162 Full-time Uniformed
56 Support/Admin/Volunteer/Mechanics
218 Total

Number of Personnel per Station (as of 11/22/07)

Station 1: 5
Station 2: 5
Station 3: 5
Station 4: 4
Station 5: 4
Station 6: 5
Station 8: 5
Station 10: 4
Station 11: 4
Station 13: 4

Command Staff: 12
Office of Emergency Management (OEM): 3
Fire Marshal: 9
Other: 3

Approximate Degree of Wildland Fire Fighting Training Among Crew

All full time, uniformed career staff and active volunteers have a minimum of S-130 and S-190 Wildland training. Additionally, Bernalillo County has a Wildland specialty team with advanced training and the Wildland "Red Card."

Other Information Useful to the Plan

Bernalillo County maintains a full time Public Works Division with qualified heavy equipment operators. The Bernalillo County Sheriff's Department has a Rotor-Wing aircraft that can be utilized for fire suppression.

Village of Los Ranchos Fire Department

Number of Stations

1

Location of Station

Station 12: 6718 Rio Grande Blvd N.W, Albuquerque 35.158993, -106.655009

Equipment

1 Engine, 1000 gal
1 Tanker, 2000 gal
1 Brush Truck, 200 gal
1 Airboat, equipped for scouting and light duty fire suppression

Number of Personnel

12 Paid
32 Volunteer
44 Total

Approximate Degree of Wildland Fire Fighting Training Among Crew

All members are have the Red Card. There currently is one sawyer and two crew bosses.

Highland Meadows Fire Department

Number of Stations

1

Location of Stations

22 San Pedro, Laguna 34.953378, -107.172030

Location of Identifiable Water Tanks

22 San Pedro, Laguna 34.953378, -107.172030

Equipment

1 Engine, 750 gpm, 500 gallons
1 Engine, 1000 gpm, 1000 gallons
1 Tanker, 250 gpm, 800 gallons
1 Brush Truck, 125 gpm, 300 gallons

Number of Personnel

10 Volunteers

Approximate Degree of Wildland Fire Fighting Training Among Crew

3 members have wildland fire training

Peralta Fire Department

Number of Stations

1

Location of Station

05 McGee Rd, Peralta NM 87042 34.835812, -106.691193

Location of Identifiable Water Tanks

6000 gallon overhead tank located at station

Equipment

1 Engine, 1250 gpm, 1000 gallons
1 Engine 750 gpm, 1250 gallons
1 Tanker, 500 gpm, 2000 gallons
1 Tanker, 500 gpm, 1800 gallons
1 Brush Truck, 125 gpm, 300 gallons
1 Brush Truck, 225 gpm, 375 gallons

Number of Personnel

14 Volunteers

Approximate Degree of Wildland Fire Fighting Training Among Crew

10 members have wildland fire training

Los Lunas Fire Department

Number of Stations

2

Location of Stations

Main Station: 465 Main St. 34.805387, -106.730994
Sub-station: 1000 West Main St. 34.805503, -106.724635

Location of Identifiable Water Tanks

Hydrants only

Equipment at each Station

Main Station
1 Brush Truck
Sub-station
1 Brush Truck (In Service 12-8-07)

Number of Personnel

14 Paid
25 Volunteers
39 Total

Approximate Degree of Wildland Fire Fighting Training Among Crew

Approximately six members have tested for Red Card.

Other Information Useful to the Plan

Three units of emergency medical services.

Meadow Lake Fire Department

Number of Stations

1

Location of Station

755 Meadow Lake Rd, Los Lunas NM 87031 34.804377, -106.562886

Location of Identifiable Water Tanks

There is a community water system stand pipe in front of the station and hydrants located in the Cypress Gardens Subdivision.

Equipment

1 Engine, 1250 gpm, 1000 gallons
1 Engine, 1500 gpm, 750 gallons
1 Tanker, 500 gpm, 3600 gallons
1 Brush Truck, 250 gpm, 500 gallons
2 Brush Trucks, 150 gpm, 300 gallons

Number of Personnel

15 Volunteers

Approximate Degree of Wildland Fire Fighting Training Among Crew

8 members have wildland fire training

Valencia El-Cerro Fire Department

Number of Stations

2

Location of Station

Main: 60 N. El-Cerro Loop, Los Lunas NM 87031 34.792178, -106.674918
Sub-station: 03 N. El-Cerro Loop, Los Lunas NM 87031 34.797514, -106.700901

Location of Identifiable Water Tanks

Hydrants only

Equipment

1 Engine, 1300 gpm, 1200 gallons
1 Engine, 1250 gpm, 1000 gallons
1 Tanker, 500 gpm, 2500 gallons
1 Brush Truck 250 gpm, 300 gallons

Number of Personnel

12 Volunteers

Approximate Degree of Wildland Fire Fighting Training Among Crew

Manzano Vista Fire Department

Number of Stations

1

Location of Station

311 El-Cerro Mission Blvd, Los Lunas 87031 34.76929, -106.632609

Location of Identifiable Water Tanks

6000 gallon overhead tank located at station

Equipment

1 Engine, 1250 gpm, 1200 gallons
1 Tanker, 1000 gpm, 1000 gallons
1 Tanker, 1800 gallons
1 Brush Truck, 250 gpm, 300 gallons

Number of Personnel

14 Volunteer

Approximate Degree of Wildland Fire Fighting Training Among Crew

4 members have wildland fire training

Tome-Adelino Fire Department

Number of Stations

2

Location of Stations

Valley Station: 2755 Highway 47, Los Lunas 34.713116, -106.730783
Mesa Station: 680 Manzano Expressway, Los Lunas 34.738465, -106.676249

Location of Identifiable Water Tanks

16,000 gallon overhead tank located at Valley Station. Hydrants are located along Main Street in Los Lunas, at the UNM Valencia Campus (280 Las Entrada Road), at the Pasitos de Ciello subdivision, Las Maravillas Subdivision, along River Road in Belen, and in Rio Communities. A 16,000 gallon overhead tank is located at the Tome-Adelino Valley Station (2755 Highway 47). Floating pumps can be placed in the riverside drains along the levees. However, these and the other ditches are not available to draft out of—the possibility of sucking up silt and ruining a pump are too great.

Equipment at each Station

Valley Station
1 Pumper, 1500 gpm, 1000 gallon (#21)
1 Tanker, 250 gpm, 2500 gallon (#25)
1 Squad, 250 gpm, 300 gallon (#23)
1 Engine, 100 gpm, 300 gallon (#27)

Mesa Station
1 Pumper, 1500 gpm, 1000 gallon (#22)
1 Tanker, 250 gpm, 2500 gallon (#26)
1 Squad, 100 gpm, 300 gallon (#24)

Number of Personnel

20 Volunteers

Approximate Degree of Wildland Fire Fighting Training Among Crew

18 of 20 members are trained to the FFT2 level, and attend annual refreshers, but do not have the Red Carded. 10 members have had Intermediate Wildland Fire Behavior (S-290) and Fire Operations in the WUI (S-215) training. Several members have had Wildland Power Saw Training (S-212). 3 Members hold current NM State Forestry /National Wildlife Coordinating Group (NWCG) Engine Boss Red Cards.

Los Chavez Fire Department

Number of Stations

1

Location of Station

19662 Highway 314, Belen 34.72601, -106.755645

Location of Identifiable Water Tanks

19662 Highway 314, Belen 34.72601, -106.755645

Equipment

1 Engine, 1250 gpm, 1200 gallons
1 Engine, 1500 gpm, 1300 gallons
2 Tankers, 2500 gallons
1 Brush Truck 250 gpm, 300 gallons
1 Brush Truck 125 gpm, 300 gallons

Number of Personnel

18 Volunteers

Approximate Degree of Wildland Fire Fighting Training Among Crew

10 members have wildland fire training

Rio Grande Estates Fire Department

Number of Stations

1

Location of Station

108 Rio Communities Blvd Belen New Mexico 87002 34.650658, -106.734971

Location of Identifiable Water Tanks

Hydrants only

Equipment

1 Engine, 1250 gpm, 1000 gallons
1 Engine, 1250 gpm, 500 gallons
1 Tanker, 750, gpm, 1800 gallons
2 Brush Trucks, 150 gpm, 300 gallons

Number of Personnel

16 Volunteers

Approximate Degree of Wildland Fire Fighting Training Among Crew

12 members have wildland fire training

Jarales Fire Department

Number of Stations

1

Location of Station

424 Jarales Rd, Belen 34.613606, -106.763736

Location of Identifiable Water Tanks

5000 gallon overhead fill located at the station

Equipment

1 Engine, 1250 gpm, 1000 gallons
1 Tanker, 4600 gallons
1 Tanker, 2500 gallons
1 Brush Truck, 250 gpm, 250 gallons
1 Brush Truck, 125 gpm, 200 gallons
1 Brush Truck, 125 gpm, 250 gallons

Number of Personnel

22 Volunteers

Approximate Degree of Wildland Fire Fighting Training Among Crew

16 members have wildland fire training

Veguita Fire District

Number of Stations

1

Location of Station

1319 NM Highway 304 34.507153, -106.767925

Location of Identifiable Water Tanks

Veguita Fire Station: 42,000 gallons, La Promesa School: 80,000 gallons

Equipment

1 Engine, 1000 gpm, 1,000 gallons
1 Engine, 750 gpm, 750 gallons
1 Engine, 350 gpm, 1,200 gallons
1 Tanker, 350 gpm, 3,800 gallons
1 Brush Truck, 125 gpm, 300 gallon
1 Brush Truck, 250 gpm, 300 gallon (In-service 3-08)
1 Brush Truck, 350 gpm, 1500 gallon

Number of Personnel

16 Volunteers

Approximate Degree of Wildland Fire Fighting Training Among Crew

30% of members have wildland fire training

Midway Hose Company/Fire District

Number of Stations

1

Location of Station

13 Cambon Rd. Lemitar, New Mexico 34.159671, -106.911737

Location of Identifiable Water Tanks

Hydrants only

Equipment

1 Engine, 1250 gpm, 1000 gallons
1 Tanker, 500 gpm, 2000 gallons
1 Brush Truck, 125 gpm, 200 gallon
1 Brush Truck, 125 gpm, 500 gallon

Number of Personnel

19 Volunteers

Approximate Degree of Wildland Fire Fighting Training Among Crew

20% of members have wildland fire training

La Joya Fire District

Number of Stations

1

Location of Station

Mile Marker 0 NM Highway 304, De la Escuela Calle Rd.

Location of Identifiable Water Tanks

Hydrants only

Equipment

1 Engine, 1250 gpm, 1,000 gallons
1 Tanker, 400 gpm, 3,000 gallons
2 Brush Trucks, 125 gpm, 200 gallons

Number of Personnel

28 Volunteers

Approximate Degree of Wildland Fire Fighting Training Among Crew

30% of members have wildland fire training

Abeytas Fire District

Number of Stations

2

Location of Stations

Abeytas Station: 387 NM Highway 116, Bosque 34.531658, -106.795572
Sabinal Station: Mile Marker 8 NM Highway 116

Location of Identifiable Water Tanks

25,000 gallons at the Abeytas station

Equipment at each Station

Abeytas Station
1 Tanker, 500 gpm, 3000 gallons
1 Tanker, 500 gpm, 1750 gallons
1 Brush Truck, 125 gpm, 250 gallons
Sabinal Station
1 Engine, 1250 gpm, 1000 gallons
1 Tanker, 500 gpm, 2500 gallons
1 Brush Truck, 250 gpm, 300 gallons

Number of Personnel

26 Volunteers, 13 at each station

Approximate Degree of Wildland Fire Fighting Training Among Crew

80% of members have wildland fire training

Table C.1. Fire Station Locations throughout the MRGB CWPP Planning Area

Department - Station	Latitude	Longitude
Sandoval County Fire Department - Pena Blanca	35.567816	-106.336569
Sandoval County Fire Department - Algodones	35.378969	-106.481430
Town of Bernalillo Fire Department	35.305329	-106.548733
Corrales Fire Department - Main	35.230658	-106.612393
Corrales Fire Department - Substation	35.223089	-106.615878
Bernalillo County Fire Department - 1	35.192922	-106.612846
Bernalillo County Fire Department - 5	35.173945	-106.509807
Bernalillo County Fire Department - 6	35.162109	-106.341711
Village of Los Ranchos Fire Department	35.158993	-106.655009
Bernalillo County Fire Department - 13	35.098700	-106.282020
Bernalillo County Fire Department - 10	35.095890	-106.369355
Bernalillo County Fire Department - Shop	35.065413	-106.709656
Bernalillo County Fire Department - 2	35.053572	-106.680388
Bernalillo County Fire Department - 3	35.030633	-106.717249
Bernalillo County Fire Department - 8	35.024786	-106.653757
Bernalillo County Fire Department - 4	34.998964	-106.715738
Bernalillo County Fire Department - 11	34.979167	-106.323011
Highland Meadows Fire Department	34.953378	-107.172030
Peralta Fire Department	34.835812	-106.691193
Los Lunas Fire Department - Sub-station	34.805503	-106.724635
Los Lunas Fire Department - Main	34.805387	-106.730994
Meadow Lake Fire Department	34.804377	-106.562886
Valencia El-Cerro Fire Department - Sub-station	34.797514	-106.700901
Valencia El-Cerro Fire Department - Main	34.792178	-106.674918
Manzano Vista Fire Department	34.769290	-106.632609
Tome-Adelino Fire Department - Mesa Station	34.738465	-106.676249
Los Chavez Fire Department	34.726010	-106.755645
Tome-Adelino Fire Department - Valley Station	34.713116	-106.730783
Rio Grande Estates Fire Department	34.650658	-106.734971
Jarales Fire Department	34.613606	-106.763736
Abeytas Fire District - Abeytas	34.531658	-106.795572
Veguita Fire District	34.507153	-106.767925
Midway Hose Company / Fire District	34.159671	-106.911737

Appendix F
Funding Opportunities

The following section provides information on federal, state, and private funding opportunities for conducting wildfire mitigation projects.

I. Federal Funding Information

Source: Pre-Disaster Mitigation Grant Program
Agency: Department of Homeland Security Federal Emergency Management Agency (DHS FEMA)
Website: http://www.fema.gov/government/grant/pdm/index.shtm
Description: The DHS includes FEMA and the U.S. Fire Administration. FEMA's Federal Mitigation and Insurance Administration is responsible for promoting pre-disaster activities that can reduce the likelihood or magnitude of loss OF life and property from multiple hazards, including wildfire. The Disaster Mitigation Act of 2000 created a requirement for states and communities to develop pre-disaster mitigation plans, and established funding to support the development of the plans and to implement actions identified in the plans. This competitive grant program, known as PDM, has funds available to state entities, tribes, and local governments to help develop multi-hazard mitigation plans and to implement projects identified in those plans.

Source: Section 319 Base Grant to State Entities and Indian Tribes
Agency: Environmental Protection Agency
New Mexico State 319 Coordinator
David Hogge
New Mexico Environment Department
P.O. Box 26110
Santa Fe, NM 87502
Phone: (505) 827-2981
Fax: (505) 827-0160
david_hogge@nmenv.state.nm.us
Website: http://www.epa.gov
Description: Funding under this program is often used for reduction of nonpoint-source pollution; however, one community successfully used the grant to obtain funding to reduce hazardous fuels to protect the municipal watershed. For additional information on this success story, visit http://www.santafewatershed.com. To learn about obtaining this type of funding for your community, contact New Mexico's 319 Grant Coordinator, Dave Hogge, New Mexico Environmental Dept. (505) 827-2981.

This funding opportunity is a Request for Proposals from state entities and Indian tribes for competitive grants under section 319 of the Clean Water Act (CWA). The purpose of this grant program is to provide funding to implement nonpoint-source management programs developed pursuant to CWA section 319(b). The primary goal of this management program is to control nonpoint-source pollution. This is done through implementation of management measures and practices to reduce pollutant loadings resulting from each category or subcategory of nonpoint-source identified in the grant recipient's nonpoint-source assessment report, which should be developed pursuant to CWA section 319(a). The Environmental

Protection Agency (EPA) has set aside a portion of section 319 funds appropriated by Congress for competitive grant awards to Tribes for the purpose of funding the development and implementation of watershed-based plans and other on-the-ground watershed projects that result in a significant step toward solving nonpoint-source impairments on a watershed-wide basis. Please note that the funding opportunity described here is found in section B of the full announcement. (Section A includes the EPA's national guidelines, which govern the process for awarding non-competitive base grants to all eligible Tribes.)

Source: Funding for Fire Departments and First Responders
Agency: DHS, U.S. Fire Administration
Website: http://www.usfa.dhs.gov/fireservice/grants/
Description: Includes grants and general information on financial assistance for fire departments and first responders. Programs include the Assistance to Firefighters Grant Program (AFGP), Reimbursement for Firefighting on Federal Property, State Fire Training Systems Grants, and National Fire Academy Training Assistance.

Source: Conservation Innovation Grants (CIG)
Agency: National Resource Conservation Service
Website: http://www.nm.nrcs.usda.gov/programs/cig/cig.html
Description: CIG State Component. CIG is a voluntary program intended to stimulate the development and adoption of innovative conservation approaches and technologies while leveraging federal investment in environmental enhancement and protection, in conjunction with agricultural production. Under CIG, Environmental Quality Incentives Program (EQIP) funds are used to award competitive grants to non-federal governmental or non-governmental organizations, Tribes, or individuals. CIG enables the Natural Resources Conservation Service (NRCS) to work with other public and private entities to accelerate technology transfer and adoption of promising technologies and approaches to address some of the nation's most pressing natural resource concerns. CIG will benefit agricultural producers by providing more options for environmental enhancement and compliance with federal, state, and local regulations. The NRCS administers the CIG program. The CIG requires a 50–50 match between the agency and the applicant. The CIG has two funding components: national and state. Funding sources are available for water resources, soil resources, atmospheric resources, and grazing land and forest health.

Source: Volunteer Fire Assistance
Agency: U.S. Department of Agriculture (USDA) Forest Service
Website: http://www.fs.fed.us/fire/partners/vfa/
Description: USDA Forest Service funding will provide assistance, through the states, to volunteer fire departments to improve communication capabilities, increase wildland fire management training, and purchase protective fire clothing and fire fighting equipment. For more information, contact your state representative; contact information can be found on the National Association of State Foresters web site.

Source: Economic Action Programs
Agency: USDA Forest Service
Website: http://www.fs.fed.us/spf/coop/programs/eap/index.shtml
Description: USDA Forest Service funding will provide for Economic Action Programs that work with local communities to identify, develop, and expand economic opportunities related to traditionally under-utilized wood products and to expand the utilization of wood removed through hazardous fuel reduction treatments. Information, demonstrations, application development, and training will be made available to participating communities. For more information, contact a Forest Service Regional Representative.

Source: Collaborative Forest Restoration Program (CFRP)
Agency: USDA Forest Service
Website: http://www.fs.fed.us/r3/spf/cfrp/index.shtml
Description: The Community Forest Restoration Act of 2000 (Title VI, Public Law 106-393) established a cooperative forest restoration program in New Mexico to provide cost-share grants to stakeholders for forest restoration projects on public land to be designed through a collaborative process (the CFRP). Projects must include a diversity of stakeholders in their design and implementation, and should address specified objectives including: wildfire threat reduction; ecosystem restoration, including non-native tree species reduction; re-establishment of historic fire regimes; reforestation; preservation of old and large trees; increased utilization of small-diameter trees; and the creation of forest-related local employment. The act limits projects to four years, and sets forth cost limits and provisions respecting collaborative project review and selection, joint monitoring and evaluation, and reporting. The act authorizes appropriations of up to $5 million annually, and directs the Secretary to convene a technical advisory panel to evaluate proposals that may receive funding through the CFRP.

Source: Catalog of Federal Funding Sources for Watershed Protection
Agency: N/A
Website: http://cfpub.epa.gov/fedfund/
Examples of the types of grants found at this site are:

- Native Plant Conservation Initiative, http://www.nfwf.org/AM/Template.cfm?Section=Browse_All_Programs&TEMPLATE=/CM/ContentDisplay.cfm&CONTENTID=3966
- Targeted Watershed Grants Program, http://www.epa.gov/owow/watershed/initiative/
- Pre-Disaster Mitigation Program, http://www.fema.gov/government/grant/pdm/index.shtm
- Environmental Education Grants, http://www.epa.gov/enviroed/grants_contacts.html

Source: Firewise
Agency: Multiple
Website: http://www.firewise.org
Description: The Wildland/Urban Interface Working Team (WUIWT) of the National Wildfire Coordinating Group, is a consortium of wildland fire organizations and federal agencies responsible for wildland fire management in the United States. The WUIWT includes the USDA Forest Service, U.S. Department of the Interior (USDI) Bureau of Indian Affairs, USDI Bureau of Land Management, USDI Fish and Wildlife Service, USDI National Park Service, FEMA, U.S. Fire Administration, International Association of Fire Chiefs, National Association of State Fire Marshals, National Association of State Foresters, National Emergency Management Association, and National Fire Protection Association. There are many different Firewise activities that can help homes and whole neighborhoods become safer from wildfire without significant expense. Community clean-up days, awareness events, and other cooperative activities can often be successfully accomplished through partnerships among neighbors, local businesses, and local fire departments, at little or no cost. The Firewise Communities/USA recognition program page (http://www.firewise.org/usa) provides a number of excellent examples of these kinds of projects and programs.

The kind of help you need will depend on who you are, where you are, and what you want to do. Among the different activities individuals and neighborhoods can undertake, the following actions often benefit from some kind of seed funding or additional assistance from an outside source:

- Thinning/pruning/tree removal/clearing on private property—particularly on very large, densely wooded properties
- Retrofit of home roofing or siding to noncombustible materials
- Managing private forest
- Community slash pickup or chipping
- Creation or improvement of access/egress roads
- Improvement of water supply for fire fighting
- Public education activities throughout the community or region

Some additional examples of what communities, counties, and states have done can be found in the National Database of State and Local Wildfire Hazard Mitigation Programs at http://www.wildfireprograms.usda.gov. You can search this database by keyword, state, jurisdiction, or program type to find information about wildfire mitigation education programs, grant programs, ordinances, and more. The database includes links to local web sites and e-mail contacts.

Source: The National Fire Plan
Website: http://www.forestsandrangelands.gov/
Description: Many states are using funds from the National Fire Plan to provide funds through a cost-share with residents to help them reduce the wildfire risk to their private property. These actions are usually in the form of thinning or pruning trees, shrubs, and other

vegetation and/or clearing the slash and debris from this kind of work. Opportunities are available for rural, state, and volunteer fire assistance.

Source: Staffing for Adequate Fire and Emergency Response (SAFER)
Agency: DHS
Website: http://www.firegrantsupport.com/safer/
Description: The purpose of SAFER grants is to help fire departments increase the number of frontline fire fighters. The goal is for fire departments to increase their staffing and deployment capabilities and ultimately attain 24-hour staffing, thus ensuring that their communities have adequate protection from fire and fire-related hazards. The SAFER grants support two specific activities: (1) hiring of fire fighters and (2) recruitment and retention of volunteer fire fighters. The hiring of fire fighters activity provides grants to pay for part of the salaries of newly hired fire fighters over the five-year program. SAFER is part of the Assistance to Firefighters Grants and is under the purview of the Office of Grants and Training of the DHS.

Source: The Fire Prevention and Safety Grants (FP&S)
Agency: DHS
Website: http://www.firegrantsupport.com/fps/
Description: The FP&S are part of the Assistance to Firefighters Grants and are under the purview of the Office of Grants and Training in the DHS. FP&S grants support to projects that enhance the safety of the public and fire fighters who may be exposed to fire and related hazards. The primary goal is to target high-risk populations and mitigate high incidences of death and injury. Examples of the types of projects supported by FP&S include fire prevention and public safety education campaigns, juvenile fire-setter interventions, media campaigns, and arson prevention and awareness programs. In fiscal year 2005, Congress reauthorized funding for FP&S and expanded the eligible uses of funds to include fire fighter safety research and development.

II. State Funding Information

Source: State and Private Forestry Programs
Agency: National Association of State Foresters
Website: http://www.stateforesters.org/S&PF/coop_fire.html
Description : The National Association of State Foresters recommends that funds become available through a competitive grant process on Wildland-Urban Interface hazard mitigation projects. State fire managers see opportunities to use both the State Fire Assistance Program and the Volunteer Fire Assistance Program to improve the safety and effectiveness of fire fighters in the interface, as well as in other wildland fire situations. To ensure firefighter safety, minimize property and resource loss, and reduce suppression costs, land management agencies, property owners, local leaders, and fire protection agencies must work cooperatively to mitigate interface fire risks, as well as to ensure that wildland fire fighters receive the training, information, and equipment necessary to safely carry out their responsibilities.

The 2007 Western WUI Grant Program is a specific grant available under the State Fire Assistance Program. It includes opportunities for hazardous fuels reduction, education, and community and homeowner actions. An application and instructions can be found at: http://www.firesafecouncil.org/news/ attachments/2007_CDF_application-proccess_final168.pdf

Source: New Mexico Association of Counties 2007–2008 Wildfire Risk Reduction Program
Agency: New Mexico Association of Counties
Website: http://www.nmcounties.org/wildfire.html
Description: This program targets at-risk communities by offering seed money to help defray the costs of community wildfire protection projects. During the past two years, the Wildfire Risk Reduction Grant Program has primarily funded projects for the development of Community Wildfire Protection Plans (CWPP), a pre-requisite to all other activities. In 2007, priority was given to projects that requested funding for hazardous fuel reduction, wildfire prevention, and community outreach activities that were identified in completed CWPPs.

III. Private Funding Information

Source: The Urban Land Institute (ULI)
Website: http://www.uli.org
Description: ULI is a 501(c)(3) nonprofit research and education organization supported by its members. The institute has more than 22,000 members worldwide, representing the entire spectrum of land use and real estate development disciplines, working in private enterprise and public service. The mission of the ULI is to provide responsible leadership in the use of land to enhance the total environment. ULI and the ULI Foundation have instituted Community Action Grants (http://www.uli.org/Content/NavigationMenu/MyCommunity/CommunityActionGrants/Community_Action_Gr.htm) that could be used for Firewise activities. Applicants must be ULI members or part of a ULI District Council. Contact actiongrants@uli.org or review the web page to find your District Council and the application information.

Source: Environmental Systems Research Institute (ESRI)
Website: http://www.esri.com/grants
Description: ESRI is a privately held firm and the world's largest research and development organization dedicated to geographic information systems. ESRI provides free software, hardware, and training bundles under ESRI-sponsored Grants that include such activities as conservation, education, and sustainable development, and posts related non-ESRI grant opportunities under such categories as agriculture, education, environment, fire, public safety, and more. You can register on the website to receive updates on grant opportunities.

Source: StEPP Foundation
Website: http://www.steppfoundation.org/default.htm
Description: StEPP is a 501(c)(3) organization dedicated to helping organizations realize their vision of a clean and safe environment by matching projects with funders nationwide.

The StEPP Foundation provides project oversight to enhance the success of projects, increasing the number of energy efficiency, clean energy, and pollution prevention projects implemented at the local, state, and national levels for the benefit of the public. The web site includes an online project submittal system and a Request for Proposals page.

Source: The Public Entity Risk Institute (PERI)
Website: http://www.riskinstitute.org
Description: PERI is a not for profit, tax-exempt organization. Its mission is to serve public, private, and nonprofit organizations as a dynamic, forward-thinking resource for the practical enhancement of risk management. With its growing array of programs and projects, along with its grant funding, PERI's focus includes supporting the development and delivery of education and training on all aspects of risk management for public, nonprofit, and small business entities, and serving as a resource center and clearinghouse for all areas of risk management.

IV. IV. Other Funding information

The following resources may also provide helpful information for funding opportunities:
National Agricultural Library Rural Information Center: http://www.nal.usda.gov/ric/ricpubs/fire_department_resources.htm
Forest Service Fire Management web site: http://www.fs.fed.us/fire/
Insurance Services Office Mitigation Online (town fire ratings): http://www.isomitigation.com/
National Fire Protection Association: http://www.nfpa.org
National Interagency Fire Center, Wildland Fire Prevention/Education: http://www.nifc.gov/preved/rams.htm
U.S. Department of Agriculture "How to Get Information" (contacts): http://www.usda.gov/wps/portal/!ut/p/_s.7_0_A/7_0_1OB/.cmd/ad/.ar/sa.retrievecontent/.c/6_2_1UH/.ce/7_2_5JN/.p/5_2_4TR/.d/0/_th/J_2_9D/_s.7_0_A/7_0_1OB?PC_7_2_5JN_navid=NEW_NOTEWORTHY&PC_7_2_5JN_navtype=RT&PC_7_2_5JN_parentnav=NEWSROOM#7_2_5JN
Department of Homeland Security U.S. Fire Administration: http://www.usfa.dhs.gov/fireservice/grants/rfff/

Appendix G
Homeowners Guide

This guide has been developed to address site-specific information on wildfire for the Middle Rio Grande Bosque. In public meetings and written comments, residents expressed a need for better information on reducing wildfire risk and what to do in the event of a wildfire. This document was developed to meet these expressed community needs, as well as to fulfill requirements for the Community Wildfire Protection Plan. This guide (1) suggests specific measures that can be taken by homeowners to reduce structure ignitability and (2) enhances overall preparedness in the planning area by consolidating preparedness information from several local agencies and departments.

BEFORE THE FIRE—PROTECTION AND PREVENTION

REDUCING STRUCTURE IGNITABILITY

Structural Materials

Roofing—The more fire-resistant the roofing material, the better. The roof is the portion of the house that is most vulnerable to ignition by falling embers, known as firebrands. Metal roofs afford the best protection against ignition from falling embers. Slate or tile roofs are also non-combustible, and Class-A asphalt shingles are recommended as well. The most dangerous type of roofing material is wood shingles. Removing debris from roof gutters and downspouts at least twice a year will help to prevent fire, along with keeping them functioning properly.

Siding—Non-combustible materials are ideal for the home exterior. Preferred materials include stucco, cement, block, brick, and masonry.

Windows—Double-pane windows are most resistant to heat and flames. Smaller windows tend to hold up better within their frames than larger windows. Tempered glass is best, particularly for skylights, because it will not melt as plastic will.

Fencing and trellises—Any structure attached to the house should be considered part of the house. A wood fence or trellis can carry fire to your home siding or roof. Consider using non-flammable materials or use a protective barrier such as metal or masonry between the fence and the house.

If you are designing a new home or remodeling your existing one, do it with fire safety as a primary concern. Use non-flammable or fire resistant materials and have the exterior wood treated with UL-approved fire-retardant chemicals. More information on fire-resistant construction can be found at http://www.firewise.org.

SCREEN OFF THE AREA BENEATH DECKS AND PORCHES

The area below an aboveground deck or porch can become a trap for burning embers or debris, increasing the chances of the fire transferring to your home. Screen off the area using screening with openings no larger than one-half inch. Keep the area behind the screen free of all leaves and debris.

FIREWOOD, KINDLING, AND OTHER FLAMMABLES

Although convenient, stacked firewood on or below a wooden deck adds fuel that can feed a fire close to your home. Be sure to move all wood away from the home during fire season. Stack all firewood uphill, at least 30 feet and preferably 100 feet from your home.

When storing flammable materials such as paint, solvents, or gasoline, always store them in approved safety containers away from any sources of ignition such as hot water tanks or furnaces. The fumes from highly volatile liquids can travel a great distance after they turn into a gas. If possible, store the containers in a safe, separate location away from the main house.

PNM does not have sufficient crews for frequent inspection of all its high-voltage power lines. If you have high-voltage lines running near your property, take a moment to walk underneath them and ensure that no tree branches are close to the towers or lines. If there is any situation that could be a fire hazard, contact a customer service representative from PNM.

CHIMNEYS AND FIREPLACE FLUES

Inspect your chimney and damper at least twice a year and have the chimney cleaned every year before first use. Have the spark arrestor inspected and confirm that it meets the latest safety code. Your local fire department will have the latest edition of National Fire Prevention Code 211 covering spark arrestors. Make sure to clear away dead limbs from within 15 feet of chimneys and stovepipes

FIREPLACE AND WOODSTOVE ASHES

Never take ashes from the fireplace and put them into the garbage or dump them on the ground. Even in winter, one hot ember can quickly start a grass fire. Instead, place ashes in a metal container, and as an extra precaution, soak them with water. Cover the container with its metal cover and place it in a safe location for a couple of days. Then either dispose of the cold ash with other garbage or bury the ash residue in the earth and cover it with at least 6 inches of mineral soil.

PROPANE TANKS

Your propane tank has many hundreds of gallons of highly flammable liquid that could become an explosive incendiary source in the event of a fire. The propane tank should be located at least 30 feet from any structure. Keep all flammables at least 10 feet from your tank. Learn how to turn the tank off and on. In the event of a fire, you should turn the gas off at the tank before evacuating, if safety and time allow.

SMOKE ALARMS

A functioning smoke alarm can help warn you of a fire in or around your home. Install smoke alarms on every level of your residence. Test and clean smoke alarms once a month and replace batteries at least once a year. Replace smoke alarms once every 10 years.

FIRE-SAFE BEHAVIOR

- If you smoke, always use an ashtray in your car and at home.

- Store and use flammable liquids properly.
- Keep doors and windows clear as escape routes in each room.

DEFENSIBLE SPACE

The removal of dense, flammable foliage from the area immediately surrounding the house reduces the risk of structure ignition and allows fire fighters access to protect the home. A 100-foot safety zone, free of all trees and shrubs, is recommended by the fire department; the minimum distance is 30 feet. Steep slopes require increased defensible space because fire can travel quickly uphill.

Within the minimum 30-foot safety zone, plants should be limited to fire-resistant trees and shrubs. Focus on fuel breaks such as concrete patios, walkways, rock gardens, and irrigated garden or grass areas within this zone. Use mulch sparingly within the safety zone, and focus use in areas that will be watered regularly. In areas such as turn arounds and driveways, non-flammable materials such as gravel are much better than wood chips or pine needles.

Pine needles provide important erosion protection for soil but also may carry a surface fire. It is simply not feasible to remove all the pine needles around your property. However, it is a good idea to remove any accumulations of pine needles or cones within the safety zone and extending out as far as possible. This is particularly important if pine needles tend to build up alongside your house or outbuildings. Removing needles and leaves and exposing bare mineral soil are recommended in a 2-foot-wide perimeter along the foundation of the house. Also, be sure to regularly remove pine needles and debris from gutters, especially during summer months.

All trees within the safety zone should have lower limbs removed to a height of 6–10 feet. Remove any branches within 15 feet of your chimney or overhanging any part of your roof. Ladder fuels are short shrubs or trees growing under the eaves of the house or under larger trees. Ladder fuels carry fire from the ground level onto the house or into the tree canopy. Be sure to remove all ladder fuels within the safety zone first. The removal of ladder fuels within about 100 feet of the house will help to limit the risk of crown fire around your home. More information about defensible space is provided at http://www.firewise.org.

FIRE RETARDANTS

For homeowners who would like home protection beyond defensible space and fire-resistant structural materials, fire retardant gels and foams are available. These materials are sold with various types of equipment for applying the material to the home. They are similar to the substances applied by firefighters in advance of wildfire to prevent ignition of homes. Different products have different timelines for application and effectiveness. The amount of product needed is based on the size of the home, and prices may vary based on the application tools. Prices range from a few hundred to a few thousand dollars. An online search for "fire blocking gel" or "home fire fighting" will provide a list of product vendors.

ADDRESS POSTING

Locating individual homes is one of the most difficult tasks facing emergency responders. Every home should have the address clearly posted with numbers at least three inches high. The colors

of the address posting should be contrasting or reflective. The address should be posted so that it is visible to cars approaching from either direction.

ACCESS

Unfortunately, limited access may prevent fire fighters from reaching many homes throughout the bosque. Many of the access problems occur at the property line and can be improved by homeowners. First, make sure that emergency responders can get in your gate. This may be important not only during a fire but also to allow access during any other type of emergency response. If you will be gone for long periods during fire season, make sure a neighbor has access, and ask them to leave your gate open in the event of a wildfire in the area.

Ideally, gates should swing inward. A chain or padlock can be easily cut with large bolt cutters, but large automatic gates can prevent entry. Special emergency access red boxes with keys are sold by many gate companies but are actually not recommended by emergency services. The keys are difficult to keep track of and may not be available to the specific personnel that arrive at your home. An alternative offered by some manufacturers is a device that opens the gate in response to sirens. This option is preferred by fire fighters but may be difficult or expensive to obtain.

Beyond your gate, make sure your driveway is uncluttered and at least 12 feet wide. The slope should be less than 10 percent. Trim any overhanging branches to allow at least 13.5 feet of overhead clearance. Also make sure that any overhead lines are at least 14 feet above the ground. If any lines are hanging too low, contact the appropriate phone, cable, or power company to find out how to address the situation.

If possible, consider a turn around within your property at least 45 feet wide. This is especially important if your driveway is more than 300 feet in length. Even small fire engines have a hard time turning around and cannot safely enter areas where the only means of escape is by backing out. Any bridges must be designed with the capacity to hold the weight of a fire engine.

NEIGHBORHOOD COMMUNICATION

It is important to talk to your neighbors about the possibility of wildfire in your community. Assume that you will not be able to return home when a fire breaks out and may have to rely on your neighbors for information and assistance. Unfortunately, it sometimes takes tragedy to get people talking to each other. Don't wait for disaster to strike. Strong communication can improve the response and safety of every member of the community.

PHONE TREES

Many neighborhoods use phone trees to keep each other informed of emergencies within and around the community. The primary criticism is that the failure to reach one person high on the tree can cause a breakdown of the system. However, if you have willing and able neighbors, particularly those that are at home during the day, the creation of a well-planned phone tree can often alert residents to the occurrence of a wildfire more quickly than media channels. Talk to your neighborhood association about the possibility of designing an effective phone tree.

NEIGHBORS IN NEED OF ASSISTANCE

Ask mobility-impaired neighbors if they have notified emergency responders of their specific needs. It is also a good idea for willing neighbors to commit to evacuating a mobility-impaired resident in the event of an emergency. Make sure that a line of communication is in place to verify the evacuation.

ABSENTEE OWNERS

Absentee owners are often not in communication with their neighbors. If a home near you is unoccupied for large portions of the year, try to get contact information for the owners from other neighbors or your neighborhood association. Your neighbors would probably appreciate notification in the event of an emergency. Also, you may want to contact them to suggest that they move their woodpile or make sure that the propane line to the house is turned off.

HOUSEHOLD EMERGENCY PLAN

A household emergency plan does not take much time to develop and will be invaluable in helping your family deal with an emergency safely and calmly. One of the fundamental issues in the event of any type of emergency is communication. Be sure to keep the phone numbers of neighbors with you rather than at home.

It is a good idea to have a contact family member who lives out of state. When disaster strikes locally, it is often easier to make outgoing calls to a different area code than local calls. Make sure everyone in the family has the contact phone number and understands why they need to check in with that person in the event of an emergency. Also, designate a meeting place for your family. Having an established meeting site helps to ensure that family members know where to go, even if they can't communicate by phone.

CHILDREN

Local schools have policies for evacuation of students during school hours. Contact the school to get information on how the process would take place and where the children would likely go.

The time between when the children arrive home from school and when you return home from work is the most important timeframe that you must address. Fire officials must clear residential areas of occupants to protect lives and to allow access for fire engines and water drops from airplanes or helicopters. If your area is evacuated, blockades may prevent you from returning home to collect your children. It is crucial to have a plan with a neighbor for them to pick up your children if evacuation is necessary.

PETS AND LIVESTOCK

Some basic questions about pets and livestock involve whether you have the ability to evacuate the animals yourself and where you would take them. Planning for the worst-case scenario may save your animals. An estimated 90 percent of pets left behind in an emergency do not survive. Don't expect emergency service personnel to prioritize your pets in an emergency. Put plans in place to protect your furry family members.

PETS

Assemble a pet disaster supply kit and keep it handy. The kit should contain a three-day supply of food and water, bowls, a litter box for cats, and a manual can opener if necessary. It is also important to have extra medication and medical records for each pet. The kit should contain a leash for each dog and a carrier for each cat. Carriers of some kind should be ready for birds and exotic pets. In case your pet must be left at a kennel or with a friend, also include an information packet that describes medical conditions, feeding instructions, and behavioral problems. A photo of each pet will help to put the right instructions with the right pet.

In the event of a wildfire you may be prevented from returning home for your animals. Talk to your neighbors and develop a buddy system in case you or your neighbors are not home when fire threatens. Make sure your neighbor has a key and understands what to do with your pets should they need to be evacuated.

If you and your pets were evacuated, where would you go? Contact friends and family in advance to ask whether they would be willing to care for your pets. Contact hotels and motels in the area to find out which ones accept pets. Boarding kennels may also be an option. Make sure your pets' vaccinations are up-to-date if you plan to board them.

Once you have evacuated your pets, continue to provide for their safety by keeping them cool and hydrated. Try to get your pets to an indoor location rather than leaving them in the car. Do not leave your pets in your vehicle without providing shade and water. It is not necessary to give your pets water while you are driving, but be sure to offer water as soon as you reach your destination.

LIVESTOCK

Getting livestock out of harm's way during a wildfire is not easy. You may not be able or allowed to return home to rescue your stock during a wildfire evacuation. Talk to your neighbors about how you intend to deal with an evacuation. If livestock are encountered by emergency responders, they will be released and allowed to escape the fire on their own. Make sure your livestock have some sort of identification. Ideally, your contact information should be included on a halter tag or ear tag so that you could be reached if your animal is encountered.

If you plan to evacuate your livestock, have a plan in place for a destination. Talk to other livestock owners in the area to find out whether they would be willing to board your stock in the event of an emergency. Often in large-scale emergencies, special accommodations can be made at fair and rodeo grounds, but personal arrangements may allow you to respond more quickly and efficiently.

If you do not own a trailer for your horses or other livestock, talk to a neighbor who does. Find out whether they would be willing to assist in the evacuation of your animals. If you do own a trailer, make sure it is in working condition with good, inflated tires and functioning signal lights. Keep in mind that even horses that are accustomed to a trailer

may be difficult to load during an emergency. Practicing may be a good idea to make sure your animals are as comfortable as possible when being loaded into the trailer.

HOUSE AND PROPERTY

Insurance companies suggest that you make a video that scans each room of your house to help document and recall all items within your home. This video can make replacement of your property much easier in the unfortunate event of a large insurance claim. See more information on insurance claims in the After the Fire section below.

PERSONAL ITEMS

During fire season, items you would want to take with you during an evacuation should be kept in one readily accessible location. As an extra precaution, it may be a good idea to store irreplaceable mementos or heirlooms away from your home during fire season.

It is important to make copies of all important paperwork, such as birth certificates, titles, and so forth, and store them somewhere away from your home, such as in a safe deposit box. Important documents can also be protected in a designated fire-safe storage box within your home.

IN THE EVENT OF A FIRE

NOTIFICATION

In the event of a wildfire, announcements from the local Emergency Management office will be broadcast over local radio and television stations. Media notification may be in the form of news reports or the Emergency Alert System (EAS). On the radio, the AM station 770 KOB generally provides frequent updates. On television, the emergency management message will scroll across the top of the screen on local channels. The notice is not broadcast on non-local satellite and cable channels.

One good way to stay informed about wildfire is to use a National Oceanic and Atmospheric Administration (NOAA) weather alert radio. The radios can be purchased at most stores that carry small appliances, such as Target, Sears, or Radio Shack. The radio comes with instructions for the required programming to tune the radio to your local frequency. The programming also determines the types of events for which you want to be alerted. The weather alert radio can be used for any type of large incident (weather, wildfire, hazardous materials, etc.), depending on how it is programmed. Local fire personnel can assist with programming if needed.

WHEN FIRE THREATENS

Before an evacuation order is given for your community, there are several steps you can take to make your escape easier and to provide for protection of your home. When evaluating what to do as fire threatens, the most important guideline is: DO NOT JEOPARDIZE YOUR LIFE.

Back your car into the garage or park it in an open space facing the direction of escape. Shut the car doors and roll up the windows. Place all valuables that you want to take with you in the vehicle. Leave the keys in the ignition or in another easily accessible location. Open your gate.

Close all windows, doors, and vents, including your garage door. Disconnect automatic garage openers and leave exterior doors unlocked. Close all interior doors as well.

Move furniture away from windows and sliding glass doors. If you have lightweight curtains, remove them. Heavy curtains, drapes, and blinds should be closed. Leave a light on in each room.

Turn off the propane tank or shut off gas at the meter. Turn off pilot lights on appliances and furnaces.

Move firewood and flammable patio furniture away from the house or into the garage.

Connect garden hoses to all available outdoor faucets and make sure they are in a conspicuous place. Turn the water on to "charge," or fill your hoses and then shut off the water. Place a ladder up against the side of the home, opposite the direction of the approaching fire, to allow fire fighters easy access to your roof.

EVACUATION

When evacuation is ordered, you need to go *immediately*. Evacuation not only protects lives, it also helps to protect property. Many roads throughout the bosque are too narrow for two-way traffic, especially with fire engines. Fire trucks often can't get into an area until the residents are out. Also, arguably the most important tool in the wildland urban interface toolbox is aerial attack. Airplanes and helicopters can be used to drop water or retardant to help limit the spread of the fire, but these resources cannot be used until the area has been cleared of civilians.

Expect emergency managers to designate a check-out location for evacuees. This process helps to ensure that everyone is accounted for and informs emergency personnel as to who may be remaining in the community. Every resident should check out at the designated location before proceeding to any established family meeting spot.

A light-colored sheet closed in the front door serves as a signal to emergency responders that your family has safely left. This signal saves firefighters precious time, as it takes 12–15 minutes per house to knock on each door and inform residents of the evacuation.

AFTER THE FIRE

RETURNING HOME

First and foremost, follow the advice and recommendations of emergency management agencies, fire departments, utility companies, and local aid organizations regarding activities following the wildfire. Do not attempt to return to your home until fire personnel have deemed it safe to do so.

Even if the fire did not damage your house, do not expect to return to business as usual immediately. Expect that utility infrastructure may have been damaged and repairs may be necessary. When you return to your home, check for hazards, such as gas or water leaks and electrical shorts. Turn off damaged utilities if you did not do so previously. Have the fire department or utility companies turn the utilities back on once the area is secured.

INSURANCE CLAIMS

Your insurance agent is your best source of information as to the actions you must take in order to submit a claim. Here are some things to keep in mind. Your insurance claim process will be much easier if you photographed your home and valuable possessions before the fire and kept the photographs in a safe place away from your home. Most if not all of the expenses incurred during the time you are forced to live outside your home could be reimbursable. These could include, for instance, mileage driven, lodging, and meals. Keep all records and receipts. Don't start any repairs or rebuilding without the approval of your claims adjuster. Beware of predatory contractors looking to take advantage of anxious homeowners wanting to rebuild as quickly as possible. Consider all contracts very carefully, take your time to decide, and contact your insurance agent with any questions.

POST-FIRE REHABILITATION

Homes that may have been saved in the fire may still be at risk from flooding and debris flows. Burned Area Emergency Rehabilitation (BAER) teams are inter-disciplinary teams of professionals who work to mitigate the effects of post-fire flooding and erosion. These teams often work with limited budgets and manpower. Homeowners can assist the process by implementing treatments on their own properties as well as volunteering on burned public lands to help reduce the threat to valuable resources. Volunteers were instrumental in implementing many of the BAER treatments following the Cerro Grande fire. Volunteers can assist BAER team members by planting seeds or trees, hand mulching, or helping to construct straw-bale check dams in small drainages.

Volunteers can help protect roads and culverts by conducting storm patrols during storm events. These efforts dramatically reduce the costs of such work as installing trash racks, removing culverts, and rerouting roads.

Community volunteers can also help scientists to better understand the dynamics of the burned area by monitoring rain gauges and monitoring the efficacy of the installed BAER treatments.