1.0 PURPOSE AND NEED FOR ACTION

1.1 INTRODUCTION

The New Mexico Interstate Stream Commission (NMISC) seeks to implement part of the Reasonable and Prudent Alternative (RPA) in the March 2003 U.S. Fish and Wildlife Service (USFWS) Biological Opinion (2003 BiOp) for Reclamation's Water and River Maintenance Operations, the U.S. Army Corps of Engineers' Flood Control Operations, and Related Non-Federal Actions on the Middle Rio Grande, New Mexico, 2003 (USFWS 2003) and to address priority habitat restoration goals of the Middle Rio Grande Endangered Species Act Collaborative Program (Collaborative Program). Under the Collaborative Program, both governmental and nongovernmental entities work cooperatively to address Endangered Species Act (ESA) issues in the Middle Rio Grande (MRG). The NMISC is proposing to implement river restoration activities for the benefit of the federally listed Rio Grande silvery minnow (*Hybognathus amarus*; silvery minnow), specifically activities to improve adult and juvenile over-wintering habitat and silvery minnow egg retention and rearing habitat within the Albuquerque Reach of the Rio Grande. Restoring the riverine habitats that support the silvery minnow is considered to be an essential element for recovering the species.

Changes in riverine ecosystem processes and habitats have been linked to declines in silvery minnow, the last remaining member of a guild of small, pelagic spawning minnows native to the Rio Grande (Sublette et al. 1990; Bestgen and Platania 1991). Restoring specific riverine habitats that support the silvery minnow in river reaches where flow is more assured is a priority for the Collaborative Program (Collaborative Program Request for Proposals, October 2004; Collaborative Program Request for Proposals, November 2005).

This project, termed the Middle Rio Grande Riverine Habitat Restoration Project Phase II (Project), is led by the NMISC and proposes to apply several habitat restoration techniques in four subreach locations of the river in the Albuquerque Reach of the MRG to enhance, restore, and create habitat for silvery minnow. The Collaborative Program primarily funds the Project, with partial funding by the State of New Mexico. This Environmental Assessment (EA) has been conducted to evaluate the impacts of these riverine habitat restoration techniques associated with the Project on other resources and their relationship to other projects and undertakings in compliance with the National Environmental Policy Act (NEPA) (42 U.S.C. 4331-4335). In addition, note that during December 2005 a final EA was completed for the Middle Rio Grande Riverine Habitat Restoration Project Phase I and a Finding of No Significant Impact (FONSI) was signed December 8, 2005 (Reclamation. 2005). While the Proposed Action and many of the habitat restoration techniques proposed herein are similar to those completed in Phase I, this Project seeks to employ additional restoration techniques. Phase II is the second phase of the four-phase restoration project to be completed by the NMISC.

1.2 PROPOSED ACTION

The Proposed Action involves the design and implementation of various habitat restoration/rehabilitation techniques intended to enhance, restore and/or create aquatic habitat for the benefit of the silvery minnow within the river in the Albuquerque Reach of the MRG (Figure 1.1). The proposed rehabilitation and restoration would occur within the river floodway at the following four locations: (1) from U.S. Highway 550 to approximately 1,200 m downstream (550

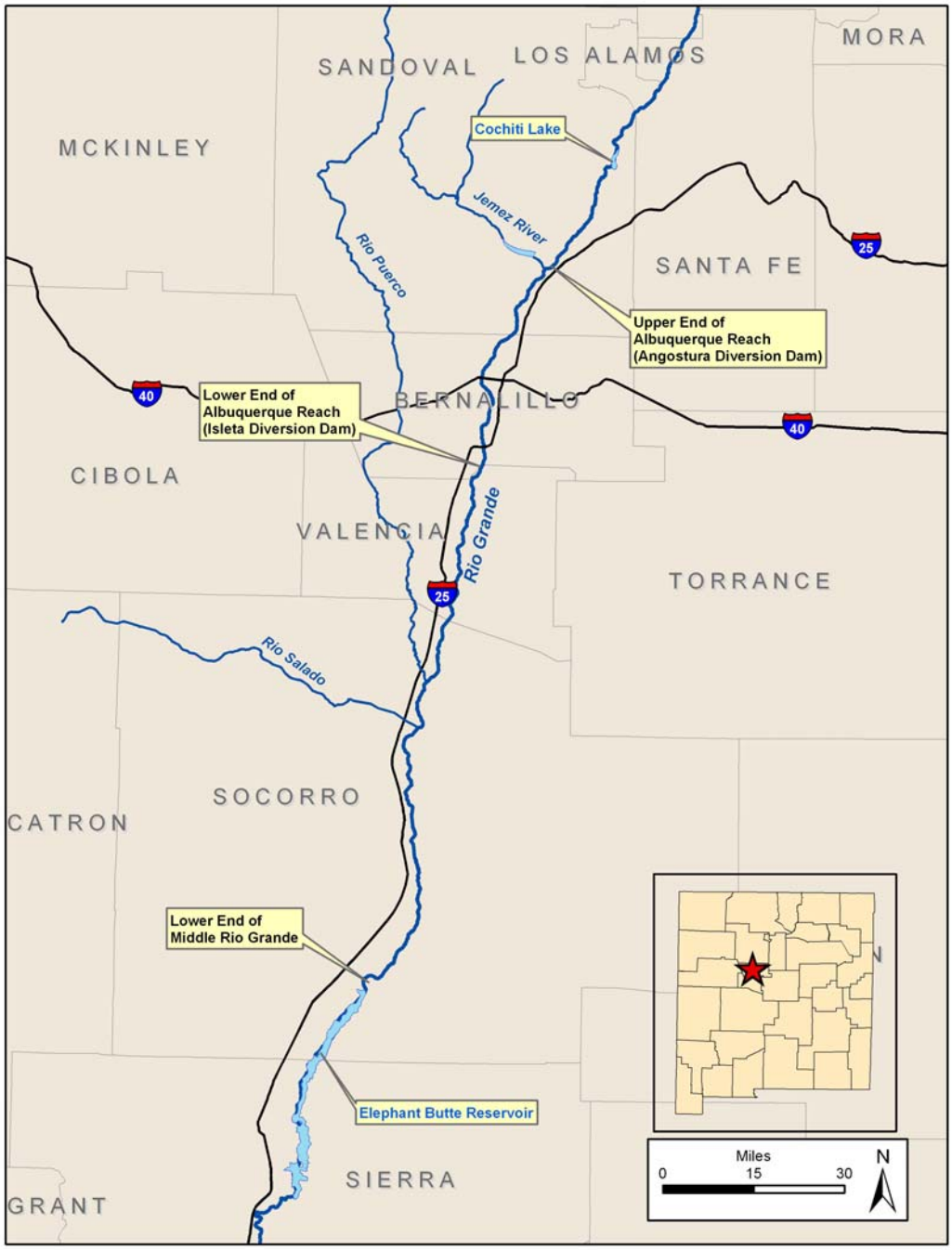

Figure 1.1. Project location map.

Subreach); (2) from Paseo del Norte to Montaño Road (PDN Subreach); (3) from I-40 to approximately 1,015 m downstream of Central Avenue (I-40 Subreach); and (4) from the South Diversion Channel to I-25 (SDC Subreach) (Figure 1.2). Projects at specific sites on vegetated islands, bars, and riverbanks would be implemented to test the efficacy of the selected techniques (Figures 1.3 – 1.7) (Table 1.1). Techniques would be implemented to evaluate the river's ability to naturally mobilize sediments and create silvery minnow habitat under a variety of flow conditions.

This is Phase II of a four-phase project. Phase I began in 2006 and Phase IV will continue through 2009 (Reclamation 2005). Approximately 75–90 acres would be treated during Phase II, with treatment areas that include islands, bars, banks, and a diversion structure. A phased approach would be applied to future restoration activities, with monitoring and evaluation of the outcomes utilized in subsequent phases. This EA evaluates and analyzes potential impacts of the Project on resources that may occur within the Project area during Phase II of the Project, which will take place between January 2007 and April 2008.

1.3 PURPOSE AND NEED

The proposed action is to develop and construct silvery minnow habitat within the Albuquerque Reach of the Rio Grande to provide adult and juvenile over-wintering habitat and silvery minnow egg retention and rearing habitat. The Project would also evaluate the efficacy of each restoration technique and its contribution in situ to the riverine and riparian environment and the overall recovery goals for the silvery minnow in the Albuquerque Reach of the MRG.

The proposed action is needed to satisfy federal requirements under the 2003 BiOp. The BiOp requires the funding and collaborative execution of habitat restoration projects on the MRG that will improve survival of all life stages of the endangered silvery minnow, as specified in RPA Element S:

> In consultation with the [U.S. Fish and Wildlife] Service and appropriate Pueblos and in coordination with parties to the consultation, action agencies shall conduct habitat/ecosystem restoration projects in the Middle Rio Grande to increase backwaters and oxbows, widen the river channel, and/or lower river banks to produce shallow water habitats, overbank flooding, and regeneration stands of willows and cottonwood to benefit the silvery minnow, the flycatcher, or their habitats. Projects should be examined for depletions. It is the Service's understanding that the objective of the action agencies and parties to the consultation is to develop projects that are depletion neutral. By 2013, additional restoration totaling 1,600 acres (648 hectares) will be completed in the action area. In the short term (5 years or less), the emphasis for silvery minnow habitat restoration projects shall be placed on river reaches north of the San Acacia Diversion Dam. Projects should result in the restoration/creation of blocks of habitat 24 hectares (60 acres) or larger [USFWS 2003:95–96].

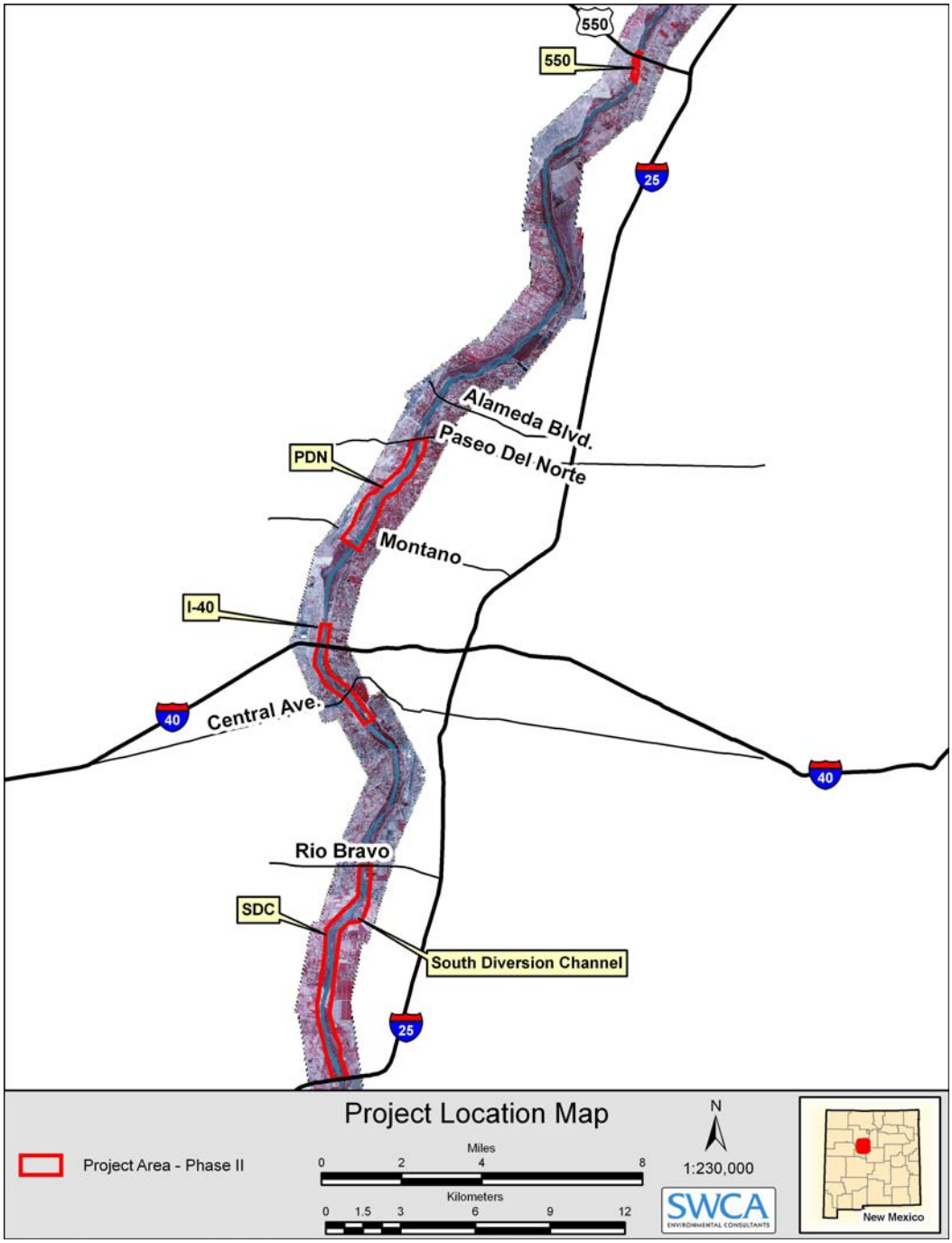

Figure 1.2. Proposed riverine habitat restoration subreaches.

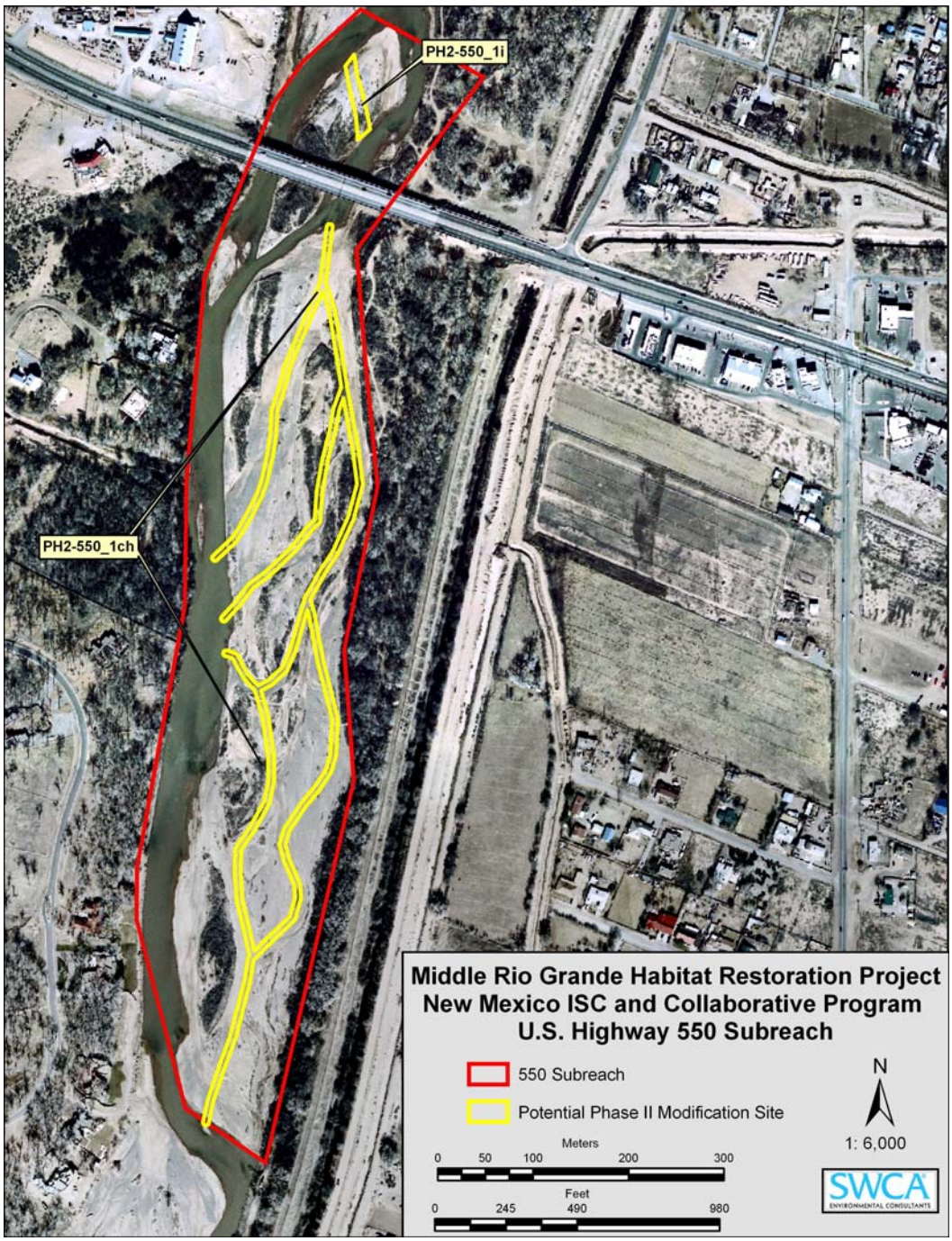

Figure 1.3. U.S. 550 Subreach treatment locations.

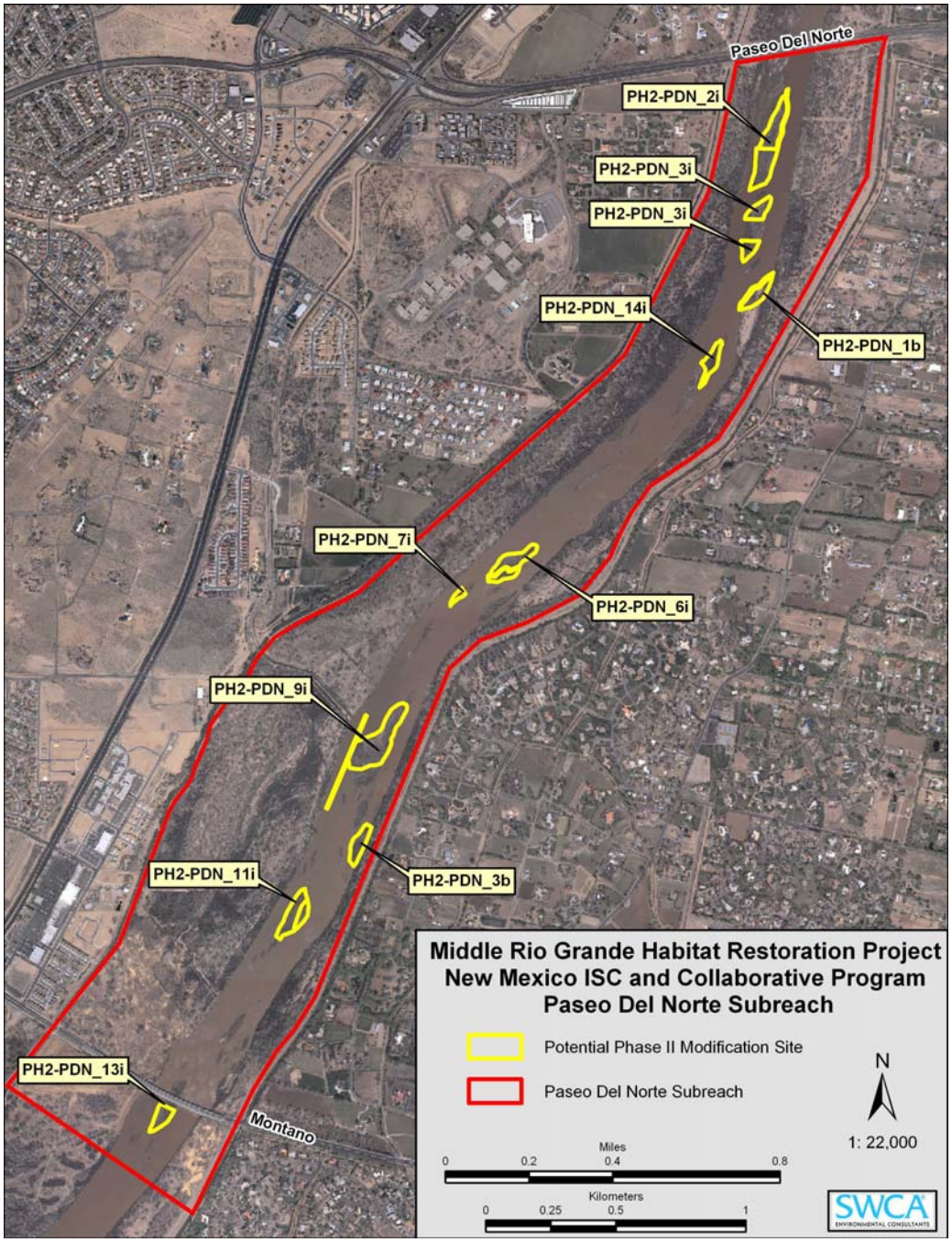

Figure 1.4. Paseo del Norte Subreach treatment locations.

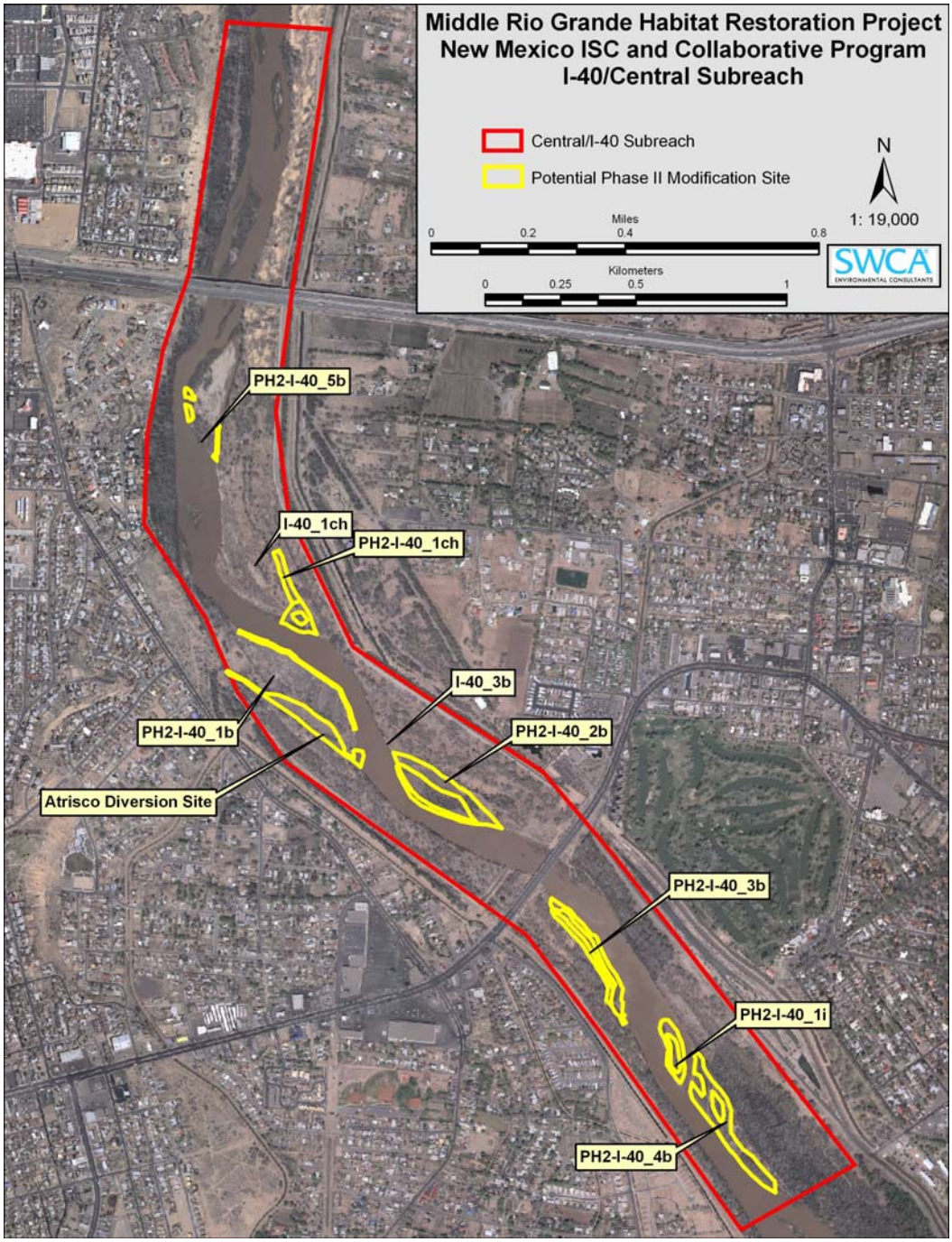

Figure 1.5. I-40 Subreach treatment locations.

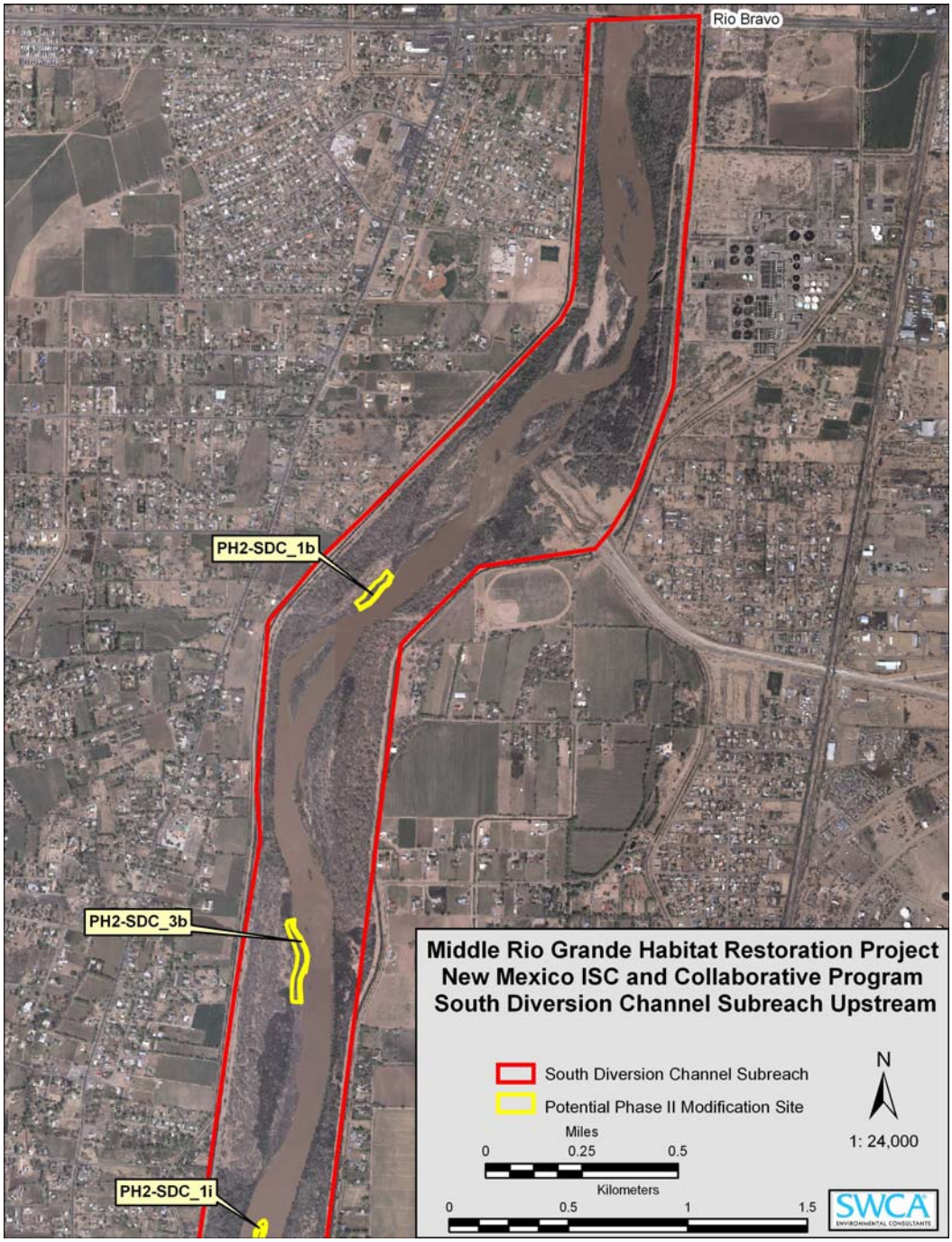

Figure 1.6. South Diversion Channel Subreach treatment locations, upstream section.

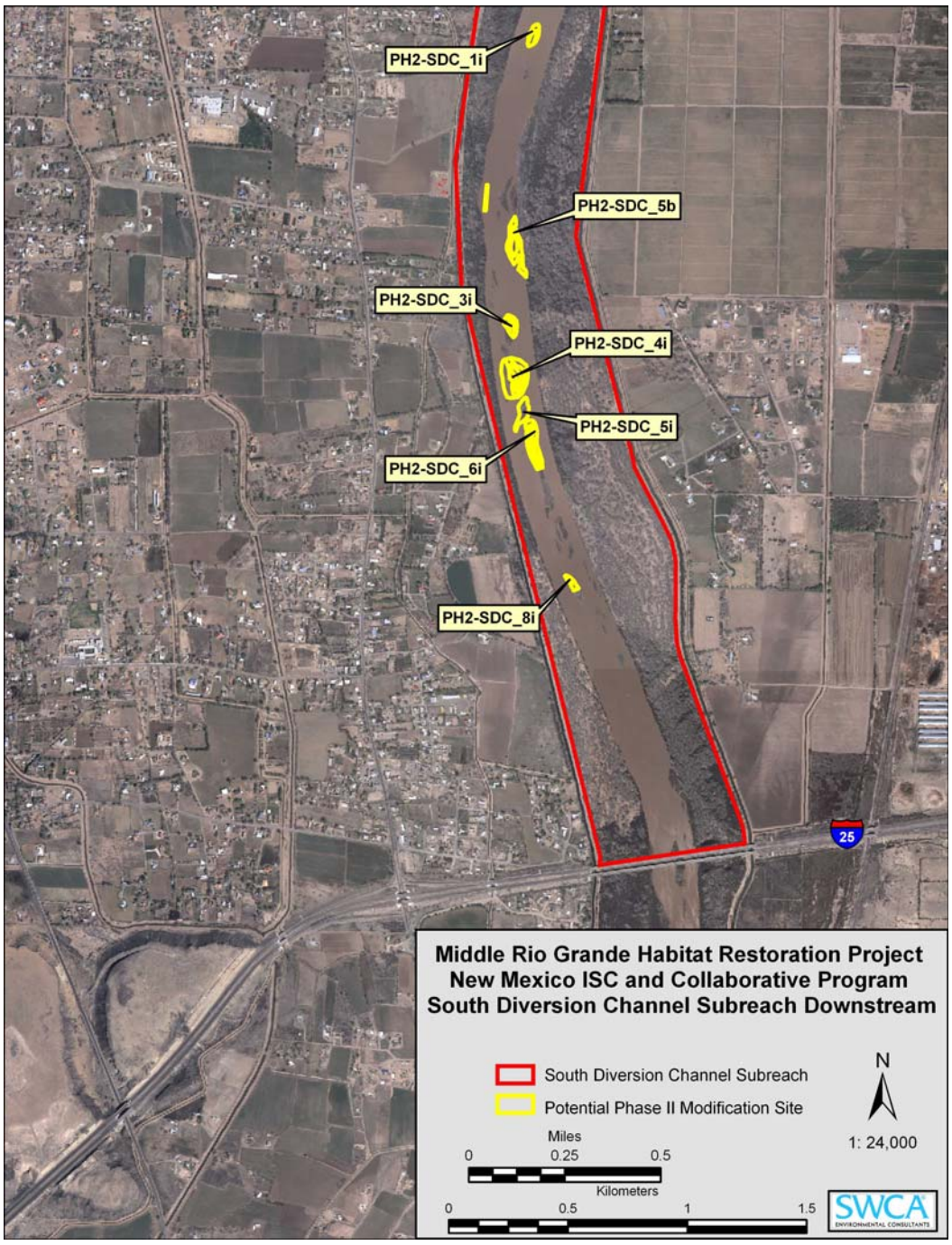

Figure 1.7. South Diversion Channel Subreach treatment locations, downstream section.

Table 1.1. Proposed Restoration Techniques, Estimated Costs, and Number of Sites

Restoration Technique	Proposed Phase II Sites (2006–2007)	Phase II Acres Treated (Approx.)	Phase II Locations and Costs			
			U.S. 550	Paseo del Norte	I-40/Central	
Vegetated Island Modification and Evaluation	16 Islands	35.2-40.0	Yes	Yes	Yes	
Backwater Channels and Embayments	3 Sites	5.0-5.3	No	No	Yes	
Large Woody Debris	Multiple Sites	TBD	Yes	Yes	Yes	
Bank Modification	11 Sites	32.2–32.8	No	Yes	Yes	
Removal of Lateral Confinements	2 Sites	0.5	No	Yes	No	
Drain Enhancement	1 Site	7.1	No	No	Yes	
Ephemeral Channels	4 Sites	4.3	Yes	Yes	No	
State of NM Component:			$68,500	$150,000	$530,000	
Collaborative Program Component:			$68,500	$450,000	$1,277,000	
TOTAL ESTIMATED COSTS:			$137,000	$600,000	$1,807,000	

1.4 ISSUES

Ecological Values

The Rio Grande floodplain, including the riparian corridor (bosque) and river channel, is highly valued by the residents of the City of Albuquerque (City) and all of New Mexico for its natural beauty, recreational opportunities, importance as a refuge for birds and other wildlife, and the presence of rare and protected species. The majority of the Project area is located within part of the Rio Grande Valley State Park (RGVSP), which is managed cooperatively by the City Open Space Division and the Middle Rio Grande Conservancy District (MRGCD). Only the 550 Subreach is located outside of the RGVSP. The 4,300-acre park extends south from Sandia Pueblo through Albuquerque to the northern boundary of Isleta Pueblo. Restoration activities within the RGVSP can be controversial for residents because of competing interests.

Economic Commitments for Endangered Species Recovery

The 2003 BiOp requires the funding and collaborative execution of habitat restoration projects to improve survival of all life stages of the silvery minnow and other endangered species to aid in their recovery. Reclamation has been the primary source of federal funding for the Collaborative Program, which has approved federal funding for this Project through its proposal process. The State of New Mexico is managing the Project and is contributing funding as part of a nonfederal cost share for the Collaborative Program. The use of state and federal funds for this Project could be an issue for some citizens.

Net Water Depletions

The Rio Grande Compact limits the amount of water that can be depleted (consumed) in the MRG (Rio Grande Compact 1939). In keeping with the Rio Grande Compact, RPA Element S of the 2003 BiOp states, "projects should be examined for depletions. It is the Service's [USFWS] understanding that the objective of the action agencies and parties to the consultation is to develop projects that are depletion neutral." In addition, the Office of the State Engineer (OSE) has determined that the MRG is fully appropriated. Therefore, any increase in water use in one sector must be offset by a reduction in use in another sector to ensure that senior water rights or New Mexico's ability to meet its downstream delivery obligations are not impaired. Additionally, the New Mexico State Water Plan (OSE/NMISC 2003) states that habitat restoration projects should not increase net water depletions, or that should depletions occur they would be offset through a permitting process established by the OSE.