Summary of mussel species to be considered by Covered Species Work Group (Draft 3 Nov 2010)

Table 1. Listing status of mussel species occurring in the vicinity of the southern segment of the Edwards Aquifer and associated springs. The four species in bold are those most likely to warrant consideration by the covered species workgroup.

Taxa	Range	Federal Status	State Status
Texas fatmucket *Lampsilis bracteata*	**Colorado and Guadalupe River Basins**	**P**	**T**
Salina mucket *Disconaias salinasensis*	Rio Grande River Basin; may occur in Kinney County	P	T
Golden Orb *Quadrula aurea*	**Guadalupe, San Antonio, and Nueces River Basins**	**P**	**T**
Texas pimpleback *Quadrula petrina*	**Colorado and Guadalupe River Basins**	**P**	**T**
False spike mussel *Quincuncina mitchelli*	**Rio Grande, Brazos, Colorado, and Guadalupe River Basins**	**P**	**T**
Mexican fawnsfoot *Truncilla cognata*	Rio Grande River Basin; may occur in Kinney County	P	T

P: species has been proposed for listing as endangered

T: species is listed as threatened

The nine species of freshwater mussels that have been proposed for listing are all in the family Unionidae and all occur (or historically have occurred) in Texas (Howells 2007). Six species occur in the plan area and are detailed below. Texas freshwater mussels burrow into the substrate of stream beds where they filter feed on algae, detritus, and bacteria.

The Texas fatmucket (*Lampsilis bracteata*), is a rhomboidal or oval tan/brown mussel that reaches 9 centimeters in length. This species is found in the sand, mud or gravel substrates of shallow (less than one meter) streams and rivers, including two tributaries of the Colorado River, the Llano River, the upper San Saba River, and the upper Guadalupe River. Bluegill (*Lepomis macrochirus*) and green sunfish (*Lepomis cyanellus*) are glochidial hosts for Texas fatmuckets. The USFWS issued a positive 90 day finding for the Texas fatmucket on 15 December 2009, citing the threats to the species as, "present or threatened destruction, modification, or curtailment of the species' habitat or range."

The Salina mucket (*Disconaias salinasensis*) can be tan, dark brown or black, has an oval shape and reaches a length of 10.5 centimeters. The currently understood distribution of this species includes flowing streams and rivers with sand and gravel substrates in Texas this species inhabits the Rio Grande River near Big Bend (Brewster County) downstream to Falcon Dam (Starr

County). This species is currently undergoing taxonomic revisions, which will be investigated by USFWS during the review process for this species. The USFWS issued a positive 90 day finding for the Salina mucket on 15 December 2009, citing the threats to the species as, "present or threatened destruction, modification, or curtailment of the species' habitat or range" and "population isolation."

The golden orb (*Quadrula aurea*) is a 7.7 centimeter long rectangular or broadly elliptical mussel that varies in color from tan, reddish-brown, orange-brown to gray-brown. This species inhabits flowing waters with sand, gravel and cobble bottoms with depths varying from a few centimeters to a few meters. The currently understood distribution of this species is the upper and central Guadalupe River, lower San Marcos River, and Lake Corpus Christi. The USFWS issued a positive 90 day finding for the golden orb on 15 December 2009, citing the threats to the species as, "present or threatened destruction, modification, or curtailment of the species' habitat or range."

The Texas pimpleback (*Quadrula petrina*) is tan to brown, sometimes with green and yellow markings, and has a glossy shell. The habitat characteristics of this species includes rivers with low flow rates with mud, gravel and sand substrates, and the species' currently understood distribution includes two tributaries of the Colorado River, the lower Concho and upper San Saba, and the upper San Marcos Rivers. The USFWS issued a positive 90 day finding for the Texas pimpleback on 15 December 2009, citing the threats to the species as, "present or threatened destruction, modification, or curtailment of its habitat or range," "overutilization for commercial, recreational, scientific, or educational purposes," and "inadequacy of existing regulatory mechanisms to protect the species from this potential threat," referring to the overutilization of the species.

The false spike mussel (*Quincuncina mitchelli*) has an oval to round tawny-brown to dark brown or black shell, and reaches a length of 13.2 centimeters. The shell of the false spike has parallel, ripple-like ridges in the central and posterior portion. The only known population of this species still in existence occurs in the lower San Marcos River. Historically, false spikes have been found in mixed mud, sand and gravel or cobble substrates in medium to large rivers. The USFWS issued a positive 90 day finding for the false spike mussel on 15 December 2009, citing the threats to the species as, "present or threatened destruction, modification, or curtailment of its habitat or range."

The Mexican fawnsfoot (*Truncilla cognata*) is an elliptical yellow to gray-green species that reaches a length of 4.4 centimeters. The species is currently only known to inhabit the lower Rio Grande River, but additional habitat information is largely undocumented. The USFWS issued a positive 90 day finding for the Mexican fawnsfoot on 15 December 2009, citing the threats to the species as, "present or threatened destruction, modification, or curtailment of its habitat or range."