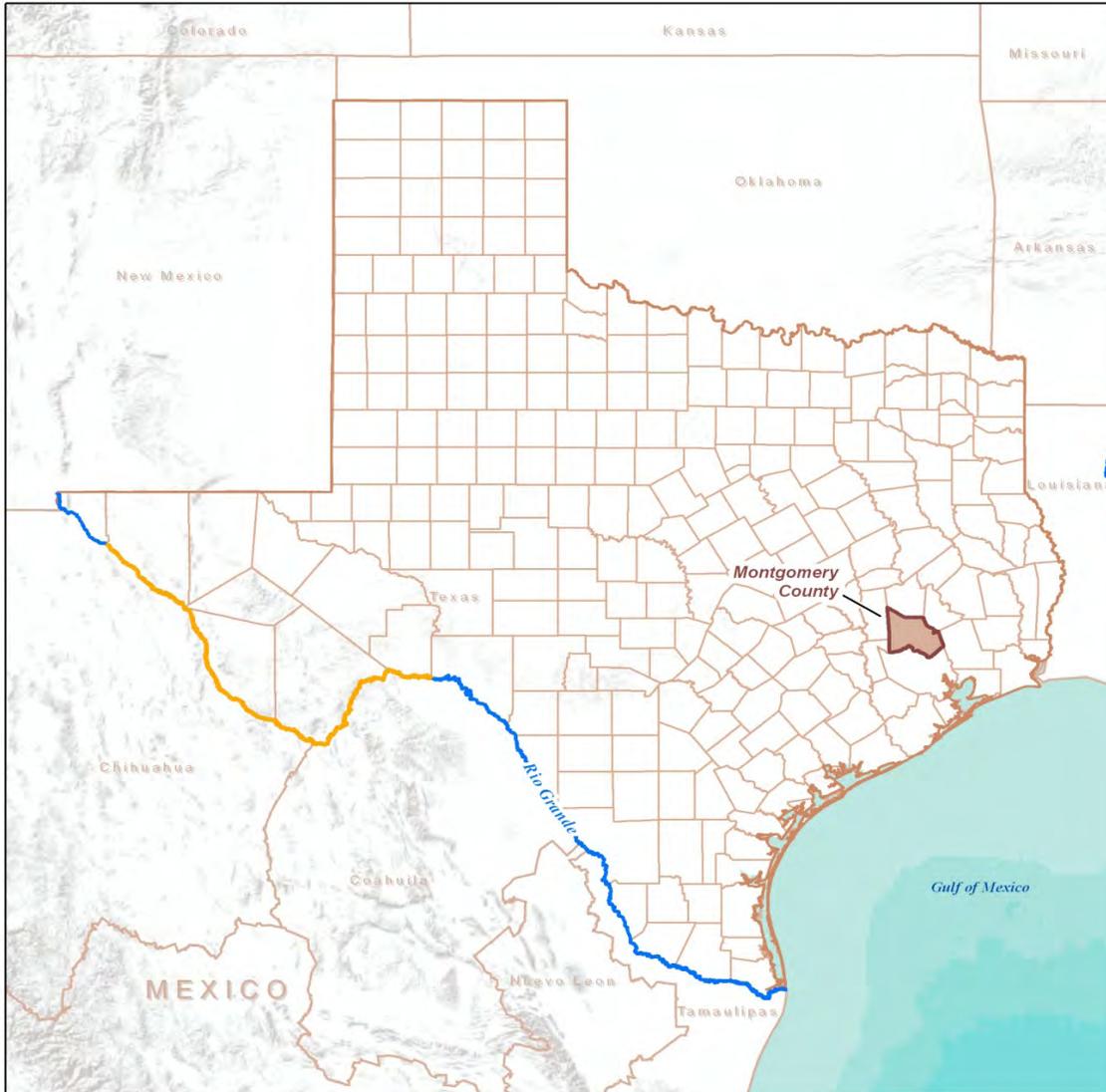


Appendices

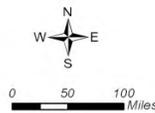
Appendix A-1
Water Resources Information



**Panorama Village
Hazardous Fuels Reduction**
Project # 1999-0004

Legend

-  Designated River Segment
-  Nondesignated River Segment
-  Montgomery County



**Designated Wild and Scenic
Rivers of Texas**



Data Sources: NPS, TNRIS
Service Layer Credits: Copyright © 2013 Esri, DeLorme, NAVTEQ, TomTom



**Panorama Village
Hazardous Fuels Reduction**
Project # 1999-0004

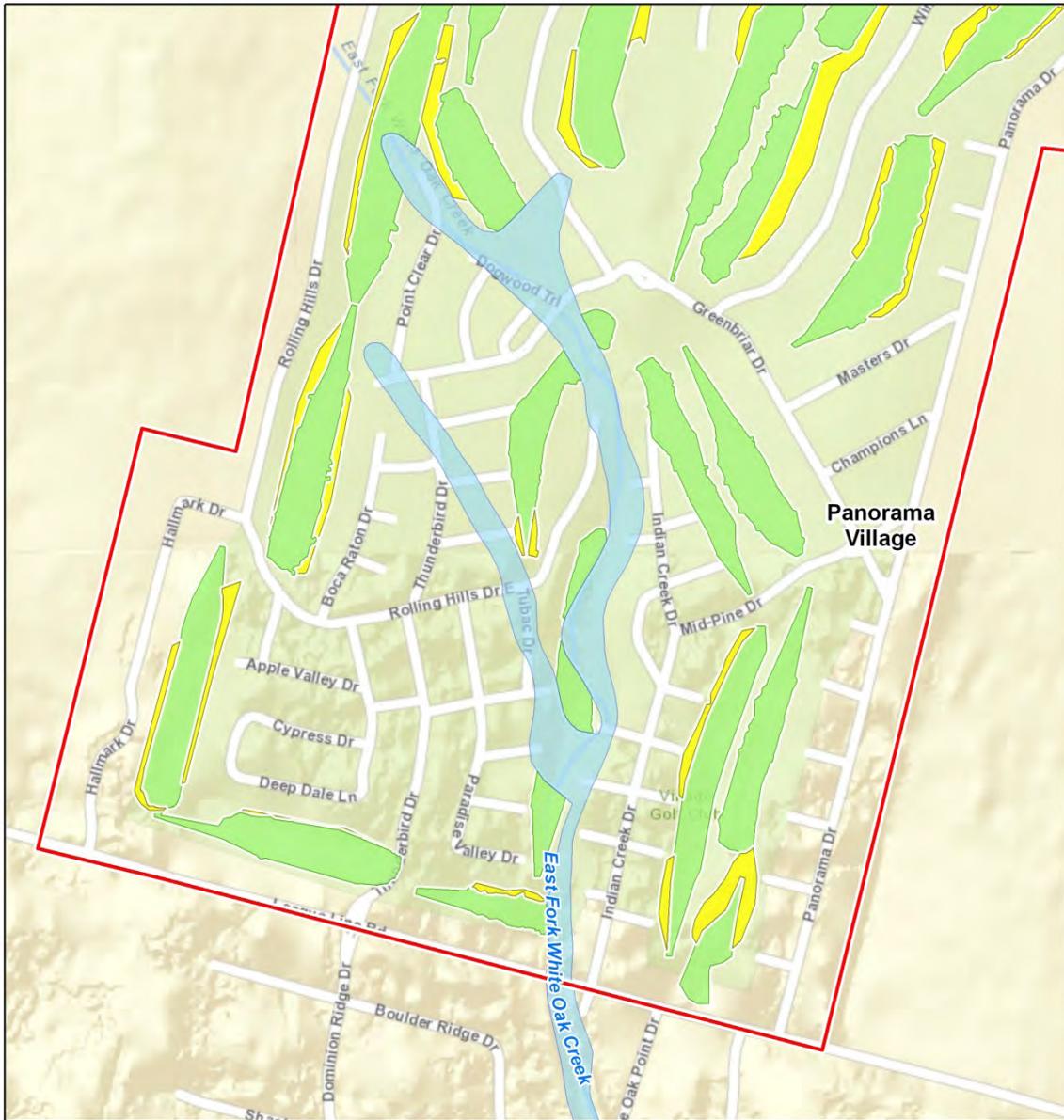
Sole Source Aquifers

Legend

- Sole Source Aquifer
- Montgomery County

0 50 100 Miles

Data Sources: EPA; TNRIS
Service Layer Credits: Copyright © 2013 Esri, DeLorme, NAVTEQ, TomTom



**Panorama Village
Hazardous Fuels Reduction**
Project # 1999-0004

**Floodplains
East Fork White Oak Creek**

Legend

Project Area	Proposed Tree Thinning and Understory Removal
100-Year Floodplain	Fairways and Previous Vegetation Removal

Data Sources: FEMA FIRM Panel: 46339C0376F; Published 12/19/1996
Service Layer Credits: Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, IPC, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom.



**Panorama Village
Hazardous Fuels Reduction**
Project # 1999-0004

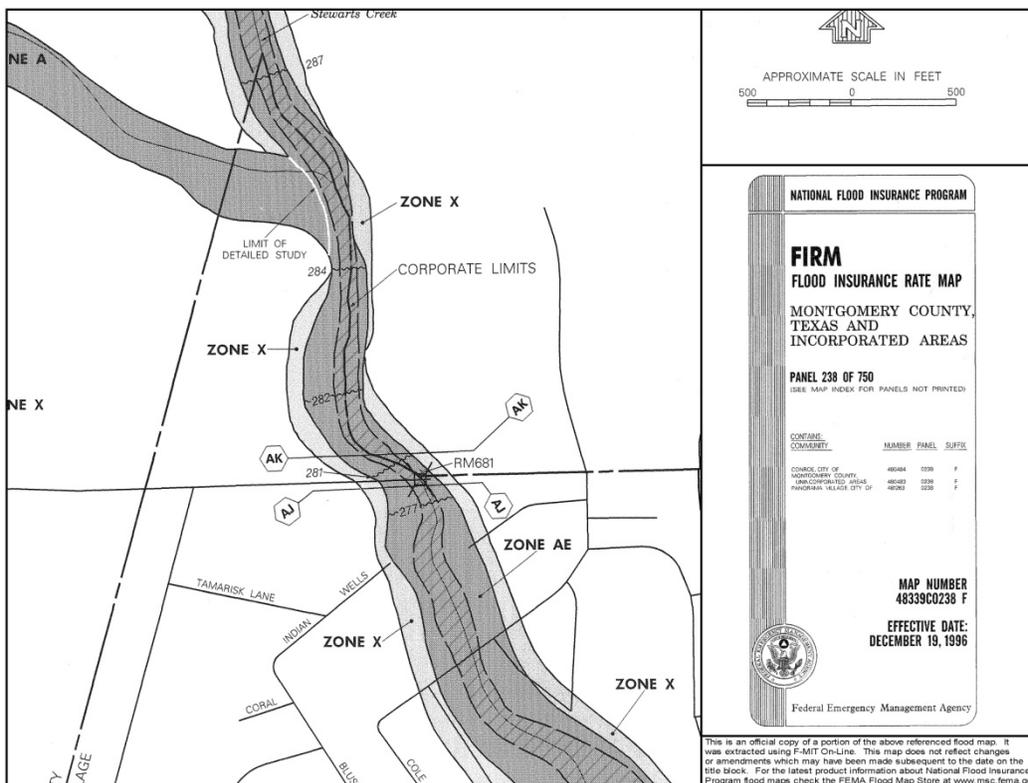
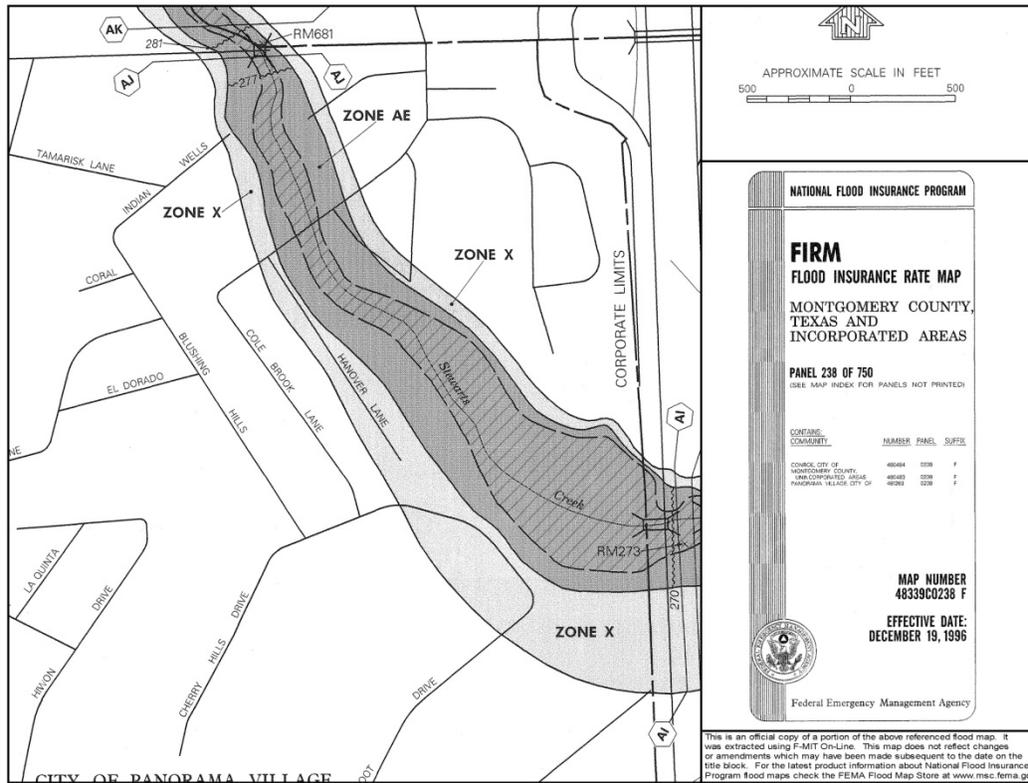
**Floodplains
Stewarts Creek**

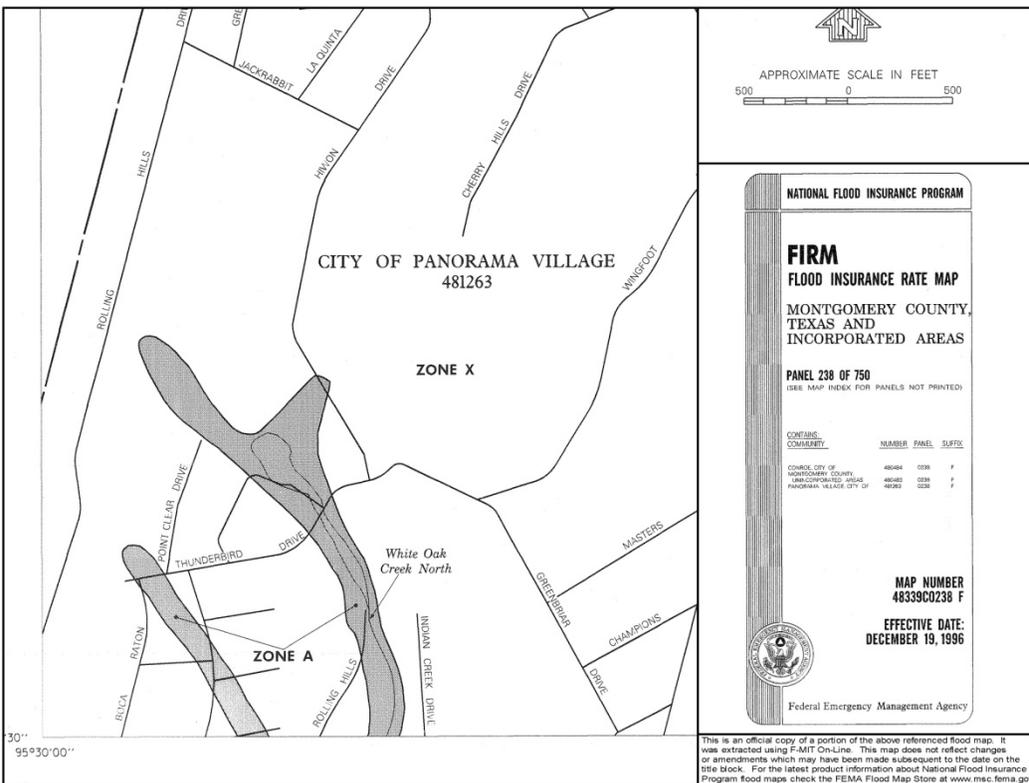
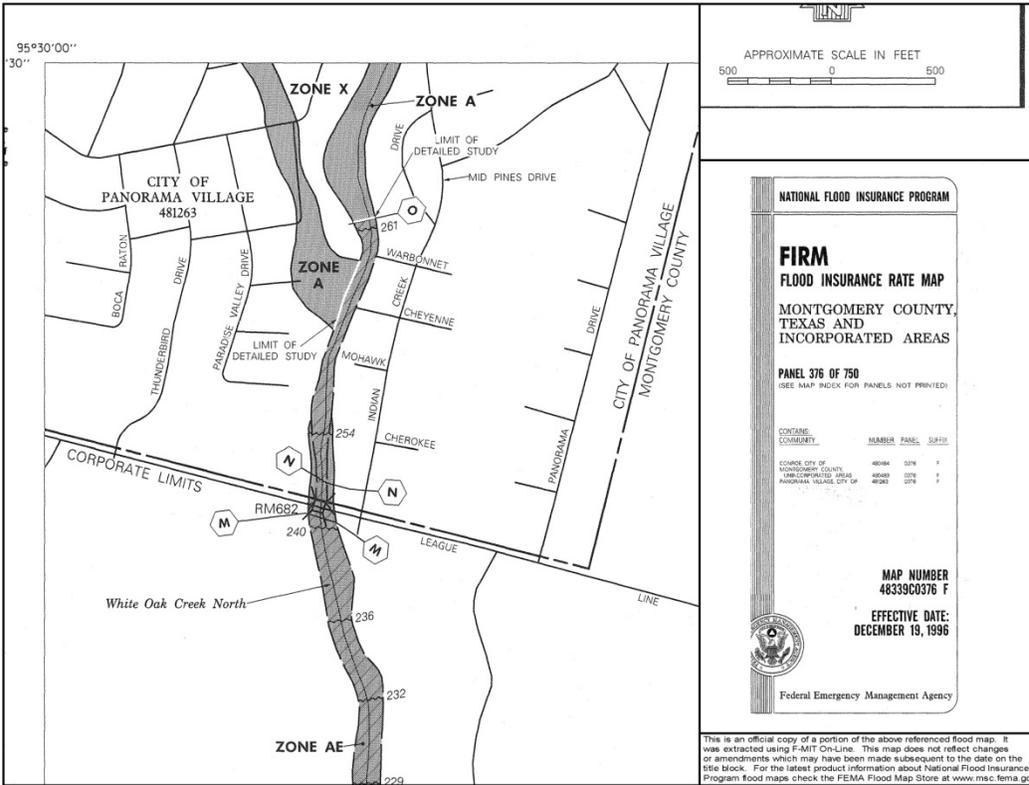
Legend

Project Area	Proposed Tree Thinning and Understory Removal
100-Year Floodplain	Fairways and Previous Vegetation Removal

0 250 500 Feet

Data Sources: FEMA FIRM Panel: 46339C0238F; Published 12/19/1996
Service Layer Credits: Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, iPC, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom.





Appendix A-2
Habitat Information

Habitat Type Summary FEMA HMTAP Panorama Village		
Habitat Type	Dominant Plant Species	Survey Areas
Mixed Hardwood \rightarrow 50% Pine	Pinus Taeda (loblolly), Sweetgum, Southern Red Oak, Water Oak	10, 27b
Mixed Hardwood $<$ 50% Pine	Southern Red Oak, White oak, Southern Magnolia, Sweetgum, loblolly pine live oak	12, 13a, 13b, 15, 18a 18b 19a, 19b, 20b, 20c 22a, 22b, 23, 24a, 24b 27a

Habitat Type Summary FEMA HMTAP Panorama Village		
Habitat Type	Dominant Plant Species	Survey Areas
Hardwood Flats < 10% Pine 15% 15%	Southern Red oak, winged Elm, White oak Sweetgum, Red Mulberry, Water oak Post oak	14a, 14b, 15a, 15b, 1, 2b, 3/4, 8b, 14a, 14b, 15a, 15b, 23
Hardwood Flats	White oak, Water oak, Southern Red oak, Post oak, live oak	16, 2a, 8a, Lot 7

Listed Species Summary FEMA HMTAP Panorama Village					
Species (Common) ¹	Species	Federal Status	State Status	Habitat Description	Habitat Present in Survey Areas
Birds					
American Peregrine Falcon	<i>Falco peregrinus anatum</i>	DL	T	Year-round resident and local breeder in west Texas, nests in tall cliff eyries; also, migrant across state from more northern breeding areas in US and Canada, winters along coast and farther south; occupies wide range of habitats during migration, including urban, concentrations along coast and barrier islands; low-altitude migrant, stopovers at leading landscape edges such as lake shores, coastlines, and barrier islands.	Stopover only/ No Habitat present.
Arctic Peregrine Falcon	<i>Falco peregrinus tundrius</i>	DL	--	Migrant throughout state from subspecies' far northern breeding range, winters along coast and farther south; occupies wide range of habitats during migration, including urban, concentrations along coast and barrier islands; low-altitude migrant, stopovers at leading landscape edges such as lake shores, coastlines, and barrier islands.	Same as above
Bald Eagle	<i>Haliaeetus leucocephalus</i>	DL	T	Found primarily near rivers and large lakes; nests in tall trees or on cliffs near water; communally roosts, especially in winter; hunts live prey, scavenges, and pirates food from other birds	Potential nesting Habitat present / large Pines. No nests observed
Henslow's Sparrow	<i>Ammodramus henslowii</i>	--	--	Wintering individuals (not flocks) found in weedy fields or cut-over areas where lots of bunch grasses occur along with vines and brambles; a key component is bare ground for running/walking	None
Peregrine Falcon	<i>Falco peregrinus</i>	DL	T	Both subspecies migrate across the state from more northern breeding areas in US and Canada to winter along coast and farther south; subspecies (F. p. anatum) is also a resident breeder in west Texas; the two subspecies' listing statuses differ, F.p. tundrius is no longer listed in Texas; but because the subspecies are not easily distinguishable at a distance, reference is generally made only to the species level; see subspecies for habitat.	None
Piping Plover	<i>Charadrius melodus</i>	LT	T	Wintering migrant along the Texas Gulf Coast; beaches and bayside mud or salt flats	No wetlands or waterbodies present in Survey Areas
Red-cockaded Woodpecker	<i>Picoides borealis</i>	LE	E	Cavity nests in older pine (60+ years); forages in younger pine (30+ years); prefers longleaf, shortleaf, and loblolly	Low quality foraging Habitat present.

Listed Species Summary FEMA HMTAP Panorama Village					
Species (Common) ¹	Species	Federal Status	State Status	Habitat Description	Habitat Present in Survey Areas
Sprague's Pipit	<i>Anthus spragueii</i>	C	--	Only in Texas during migration and winter, mid September to early April; short to medium distance, diurnal migrant; strongly tied to native upland prairie, can be locally common in coastal grasslands, uncommon to rare further west; sensitive to patch size and avoids edges.	None
White-faced Ibis	<i>Plegadis chihi</i>	--	T	Potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties	None
Whooping Crane	<i>Grus americana</i>	LE	E	Potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties	None
Wood Stork	<i>Mycteria americana</i>	--	T	Forages in prairie ponds, flooded pastures or fields, ditches, and other shallow standing water, including salt-water; usually roosts communally in tall snags, sometimes in association with other wading birds (i.e. active heronries); breeds in Mexico and birds move into Gulf States in search of mud flats and other wetlands, even those associated with forested areas; formerly nested in Texas, but no breeding records since 1960	None
Fishes					
Creek chubsucker	<i>Erimyzon oblongus</i>	--	T	Tributaries of the Red, Sabine, Neches, Trinity, and San Jacinto rivers; small rivers and creeks of various types; seldom in impoundments; prefers headwaters, but seldom occurs in springs; young typically in headwater rivulets or marshes; spawns in river mouths or pools, riffles, lake outlets, upstream creeks	No wetlands or waterbodies present in Survey Areas
Paddlefish	<i>Polyodon spathula</i>	--	T	Prefers large, free-flowing rivers, but will frequent impoundments with access to spawning sites; spawns in fast, shallow water over gravel bars; larvae may drift from reservoir to reservoir	No wetlands or waterbodies present in Survey Areas
Insects					
A mayfly	<i>Tricorythodes curvatus</i>	--	--	AR, OK, TX; mayflies distinguished by aquatic larval stage; adult stage generally found in bankside vegetation	None
A mayfly	<i>Picoditus gloveri</i>	--	--	NY, SC, TX; mayflies distinguished by aquatic larval stage; adult stage generally found in bankside vegetation	None

Listed Species Summary FEMA HMTAP Panorama Village					
Species (Common) ¹	Species	Federal Status	State Status	Habitat Description	Habitat Present in Survey Areas
Gulf Coast clubtail	<i>Gomphus modestus</i>	--	--	medium river, moderate gradient, and streams with silty sand or rocky bottoms; adults forage in trees, males perch near riffles to wait for females, larvae overwinter; flight season late Apr - late Jun	None
Texas emerald dragonfly	<i>Somatochlora margarita</i>	--	--	East Texas pineywoods; springfed creeks and bogs; small sandy forested streams with moderate current	None
Mammals					
Louisiana black bear	<i>Ursus americanus luteolus</i>	LT	T	Possible as transient; bottomland hardwoods and large tracts of inaccessible forested areas	None
Plains spotted skunk	<i>Spilogale putorius interrupta</i>	--	--	Catholic; open fields, prairies, croplands, fence rows, farmyards, forest edges, and woodlands; prefers wooded, brushy areas and tallgrass prairie	low quality, No brushy habitat along edges
Rafinesque's big-eared bat	<i>Corynorhinus rafinesquii</i>	--	T	Roosts in cavity trees of bottomland hardwoods, concrete culverts, and abandoned man-made structures	None
Red wolf	<i>Canis rufus</i>	LE	E	Extirpated; formerly known throughout eastern half of Texas in brushy and forested areas, as well as coastal prairies	None
Southeastern myotis bat	<i>Myotis austroriparius</i>	--	--	Roosts in cavity trees of bottomland hardwoods, concrete culverts, and abandoned man-made structures	None
Mollusks					
Creeper (squawfoot)	<i>Strophitus undulatus</i>	--	--	Small to large streams, prefers gravel or gravel and mud in flowing water; Colorado, Guadalupe, San Antonio, Neches (historic), and Trinity (historic) River basins	No wetlands or waterbodies present in Survey Areas
Fawnsfoot	<i>Truncilla donaciformis</i>	--	--	Small and large rivers especially on sand, mud, rocky mud, and sand and gravel, also silt and cobble bottoms in still to swiftly flowing waters; Red (historic), Cypress (historic), Sabine (historic), Neches, Trinity, and San Jacinto River basins.	No wetlands or waterbodies present in Survey Areas

Listed Species Summary FEMA HMTAP Panorama Village					
Species (Common) ¹	Species	Federal Status	State Status	Habitat Description	Habitat Present in Survey Areas
Little spectaclecase	<i>Villosa lienosa</i>	--	--	Creeks, rivers, and reservoirs, sandy substrates in slight to moderate current, usually along the banks in slower currents; east Texas, Cypress through San Jacinto River basins	No wetlands or waterbodies present in Survey Areas
Louisiana pigtoe	<i>Pleurobema riddellii</i>	--	T	Streams and moderate-size rivers, usually flowing water on substrates of mud, sand, and gravel; not generally known from impoundments; Sabine, Neches, and Trinity (historic) River basins	No wetlands or waterbodies present in Survey Areas
Sandbank pocketbook	<i>Lampsilis satura</i>	--	T	Small to large rivers with moderate flows and swift current on gravel, gravel-sand, and sand bottoms; east Texas, Sulfur south through San Jacinto River basins; Neches River	No wetlands or waterbodies present in Survey Areas
Texas pigtoe	<i>Fusconaia askewi</i>	--	T	Rivers with mixed mud, sand, and fine gravel in protected areas associated with fallen trees or other structures; east Texas River basins, Sabine through Trinity rivers as well as San Jacinto River	No wetlands or waterbodies present in Survey Areas
Wabash pigtoe	<i>Fusconaia flava</i>	--	--	Creeks to large rivers on mud, sand, and gravel from all habitats except deep shifting sands; found in moderate to swift current velocities; east Texas River basins, Red through San Jacinto River basins; elsewhere occurs in reservoirs and lakes with no flow	No wetlands or waterbodies present in Survey Areas
Reptiles					
Alligator snapping turtle	<i>Macrochelys temminckii</i>	--	T	Perennial water bodies; deep water of rivers, canals, lakes, and oxbows; also swamps, bayous, and ponds near deep running water; sometimes enters brackish coastal waters; usually in water with mud bottom and abundant aquatic vegetation; may migrate several miles along rivers; active March-October; breeds April-October	No wetland or water bodies present in Survey area
Louisiana pine snake	<i>Pituophis ruthveni</i>	C	T	Mixed deciduous-longleaf pine woodlands; breeds April-September	None / no longleaf pine
Texas horned lizard	<i>Phrynosoma cornutum</i>	--	T	Open, arid and semi-arid regions with sparse vegetation, including grass, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive; breeds March-September	None

Listed Species Summary FEMA HMTAP Panorama Village					
Species (Common) ¹	Species	Federal Status	State Status	Habitat Description	Habitat Present in Survey Areas
Timber/Canebrake rattlesnake	<i>Crotalus horridus</i>	—	T	Swamps, floodplains, upland pine and deciduous woodlands, riparian zones, abandoned farmland; limestone bluffs, sandy soil or black clay; prefers dense ground cover, i.e. grapevines or palmetto	low quality/no dense ground cover
Plants					
Bristle nailwort	<i>Paronychia setacea</i>	—	—	Flowering vascular plant endemic to eastern southcentral Texas, occurring in sandy soils	loamy soils present/ None
Correll's false dragon-head	<i>Physostegia correllii</i>	—	—	Wet, silty clay loams on streambanks, in creek beds, irrigation channels and roadside drainage ditches; or seepy, mucky, sometimes gravelly soils along riverbanks or small islands in the Rio Grande; or underlain by Austin Chalk limestone along gently flowing spring-fed creek in central Texas; flowering May-September	None All Survey areas in upland localities None
¹ -Based on information provided at http://www.tpwd.state.tx.us/gis/ris/es/SpeciesList.aspx?parm=Montgomery					