ENVIRONMENTAL CONCERNS

Southwest Florida is experiencing rapid growth with an increase in population and urban development. This has led to concerns over the potential impacts of the growth on the environmental resources of the region. The study area contains a wide range of native vegetation communities, ranging from mangrove forests along the coast, to scrub oak communities along the ridges, and to cypress forests and mixed hardwood wetland forests in the interior of the study area. A vegetation map indicating the wide range of vegetation communities present in the study area is included as Figure 35. Southwest Florida also has an array of listed species that occupy habitat in the study area. These species include such widespread species as the Florida Panther (*Puma concolor coryi*) to species with very specific habitat requirements, such as the Red-cockaded woodpecker (*Picoides borealis*). A table indicating the potential listed species present in the study area is included as Table 22.

Table 22
Listed Faunal Species Occurring In Lee & Collier Counties, Florida (USFWS & FFWCC, 1998)

Scientific Name	Common Name	Federal Status	State Status
AMPHIBIANS			
Rana capito	Gopher frog		SSC
Reptiles			
Alligator mississippiensis	American alligator	T (S/A)	SSC
Caretta caretta	Loggerhead sea turtle	T	T
Chelonia mydas	Green sea turtle	E	E
Crocodylus acutus	American crocodile	E	E
Dermochelys coriacea	Leatherback sea turtle	E	E
Drymarchon corais couperi	Eastern indigo snake	T	T
Eretmochelys imbricata	Hawksbill sea turtle	E	E
Gopherus polyphemus	Gopher tortoise		SSC
Lepidochelys kempii	Kemp's ridley sea turtle	E	E
Pituophis melanoleucus mugitus	Florida pine snake		SSC
BIRDS			
Ajaia ajaja	Roseate spoonbill		SSC
Aphelocoma coerulescens	Florida scrub jay	T	T
Aramus guarauna	Limpkin		SSC
Caracara plancus	Audubon's crested caracara	T	T
Charadrius alexandrinus tenuirostris	Southeastern snowy plover		T
Charadrius melodus	Piping plover	T	T
Egretta caerulea	Little blue heron		SSC
Egretta thula	Snowy egret		SSC
Egretta tricolor	Tricolored heron		SSC
Eudocimus albus	White ibis		SSC
Falco peregrinus tundrius	Arctic peregrine falcon		E

Table 22
Listed Faunal Species Occurring In Lee & Collier Counties, Florida (USFWS & FFWCC, 1998)

Scientific Name	Common Name	Federal Status	State Status
Falco sparverius paulus	Southeastern American kestrel		T
Grus canadensis pratensis	Florida sandhill crane		T
Haematopus palliates	American oystercatcher		SSC
Haliaeetus leucocephalus	Bald eagle	T	T
Mycteria Americana	Wood stork	E	E
Pelecanus occidentalis	Brown pelican		SSC
Picoides (= Dendrocopos) borealis	Red cockaded woodpecker	E	T
Rhyncops niger	Black skimmer		SSC
Rostrhamus sociabilis plumbeus	Everglades snail kite	E	E
Speotyto cunicularia floridana	Florida burrowing owl		SSC
Sterna antilarum	Least tern		T
MAMMALS			
Balaena glacialis	Right whale	E	E
Balaenoptera borealis	Sei whale	E	E
Balaenoptera physalus	Finback whale	E	E
Blanna brevicauda shermanhi	Sherman's short tailed shrew		SSC
Felis concolor coryi	Florida panther	E	E
Feils concolor	Mountain lion	T (S/A)	E
Megapteranovaeangliae	Humpback whale	E	E
Mustela vison evergladensis	Everglades mink		T
Oryzomys palustris sanibelli	Sanibel Island rice rat		SSC
Physeter catodon	Sperm whale	E	E
Podomys floridanus	Florida mouse		SSC
Sciurus niger avicennia	Big Cypress fox squirrel		T
Trichechus manatus	West Indian manatee	E, CH	E
Ursus americanus floridanus	Florida black bear	T	T

E = Endangered

T = Threatened

SSC = Species of Special Concern

T(S/A) = Threatened Due to Similarity of appearance

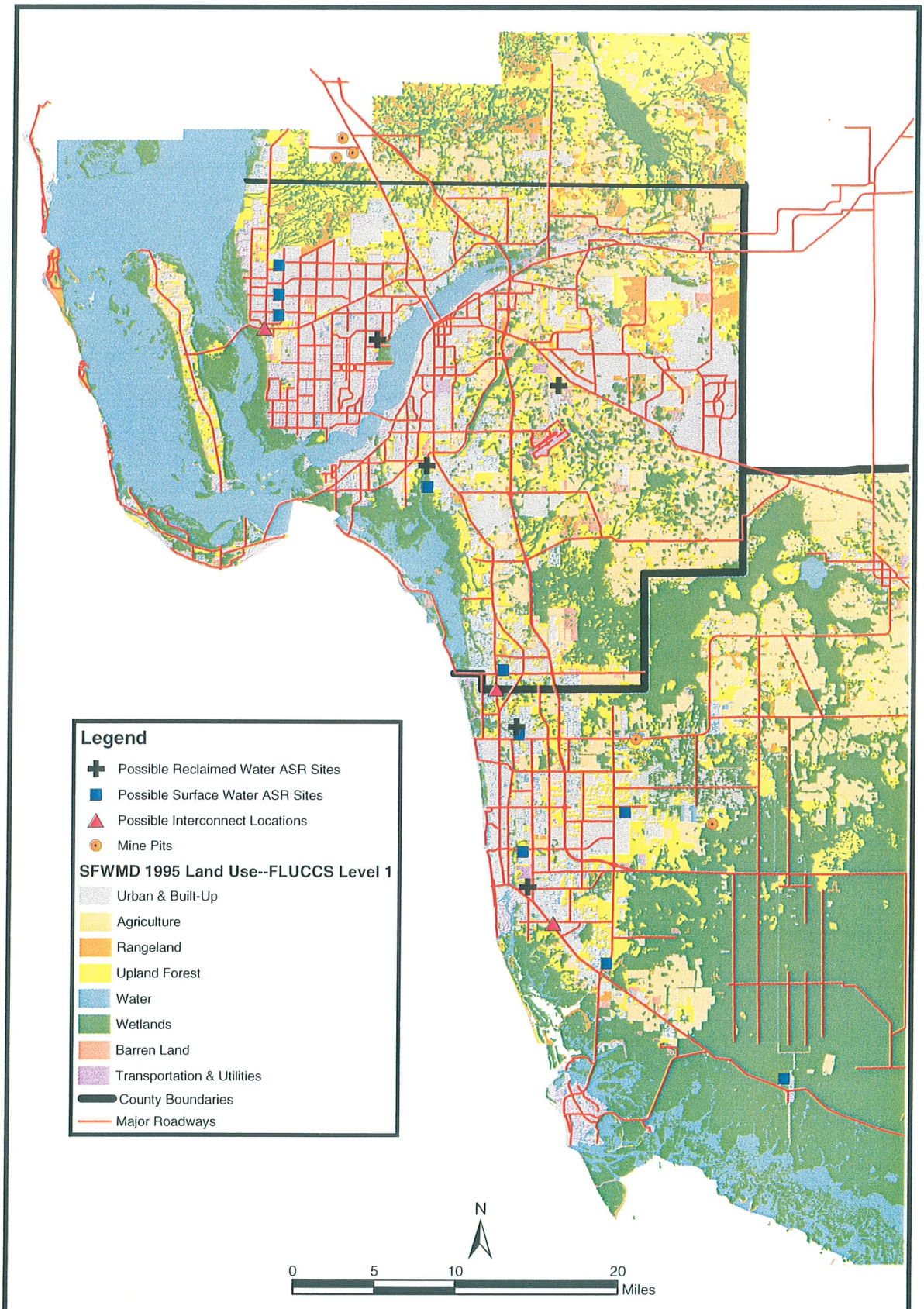
CH = Critical Habitat has been designated

During the site-specific design of the proposed alternatives, the direct and indirect wetland impacts associated with the alternatives should be assessed. Direct impacts could include effects on wetlands during the construction of the facilities or during the construction of the access to the site. Indirect impacts could include the potential drawdown of wetlands located adjacent or in proximity to the surface water withdrawal locations. Wherever possible, the design should be modified to minimize these potential wetland impacts. Mitigation efforts must be provided for all unavoidable wetland impacts. This process typically includes the enhancement or restoration of impacted wetlands.

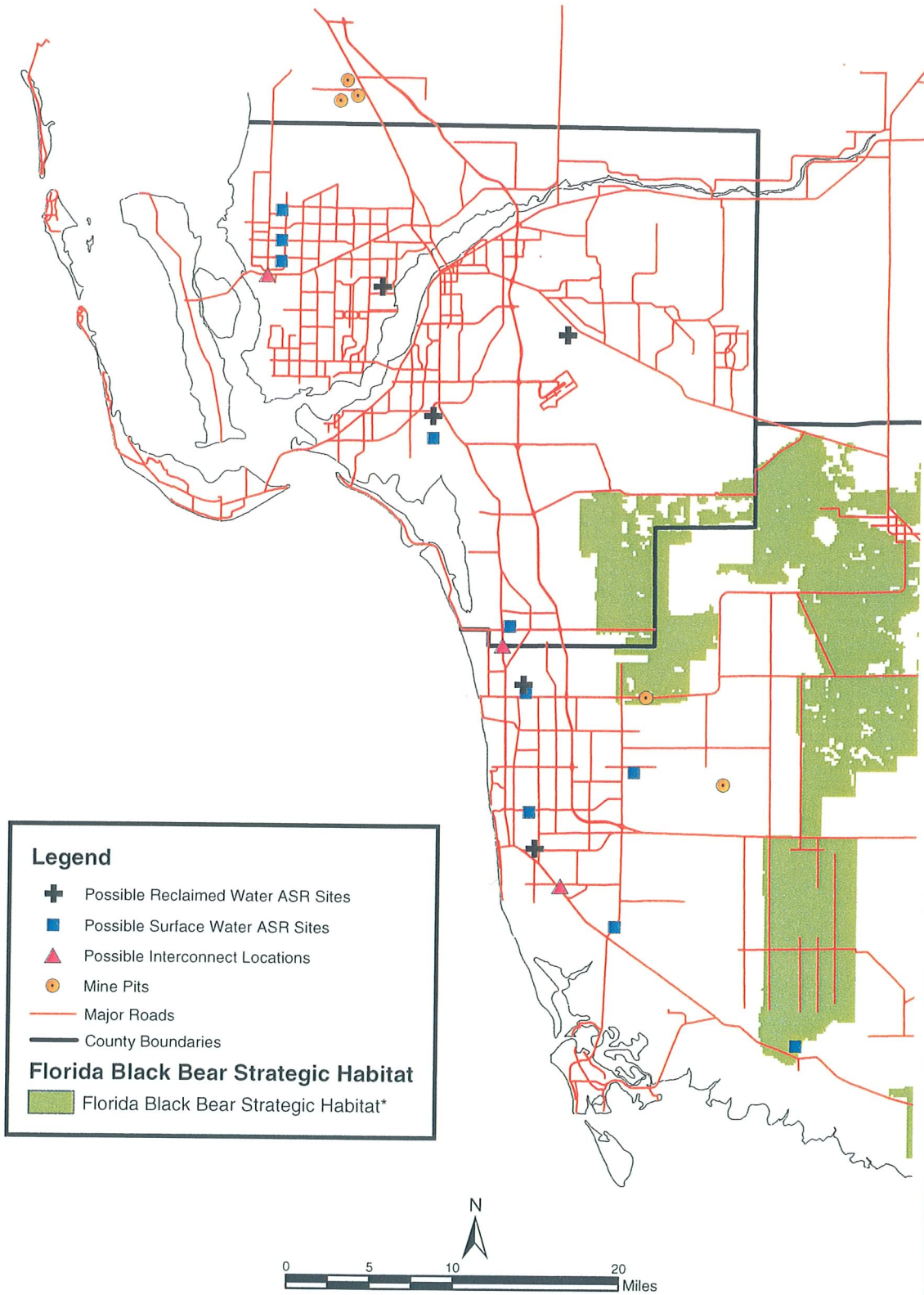
Mitigation can then be provided through participation in a permitted mitigation bank or by having the applicants undertake the mitigation work themselves.

The potential impacts to the listed species must be assessed during the site-specific design process. Included as Figures 36-39 are maps that show the locations of the proposed facilities in relationship to Florida black bear strategic habitat, Florida panther strategic habitat, wood stork foraging habitat, and focal species hot spots. Direct impacts such as negative effects on nesting habitat, as well as indirect impacts such as effects on foraging habitat, should also be addressed on a site-specific basis. Where possible, the proposed facilities should be located in already disturbed habitat to minimize impacts to listed species. Another indirect impact that has received much discussion in recent years is the alteration of discharges to estuaries. During design, the effect on the surface water withdrawals on the downstream receiving waters will need to be reviewed for potential alterations to the timing and quantity of discharges to the estuaries.

Attached as Figure 40, is a map that shows the public lands within the study area. A majority of the public lands are lands that are set aside for conservation purposes. Any proposed facilities within or adjacent to the public lands should be reviewed for potential impacts to these conservation lands. It is noted that the Faka Union Canal possible surface water ASR site and the Golden Gate mine site appear to be located within Conservation and Recreation Lands (CARL) in Collier County. The Fiesta Village/Fort Myers Beach GES possible reclaimed water ASR site and the Ten Mile Canal possible surface water ASR site appear to be located within boundaries of CARL lands in Lee County.

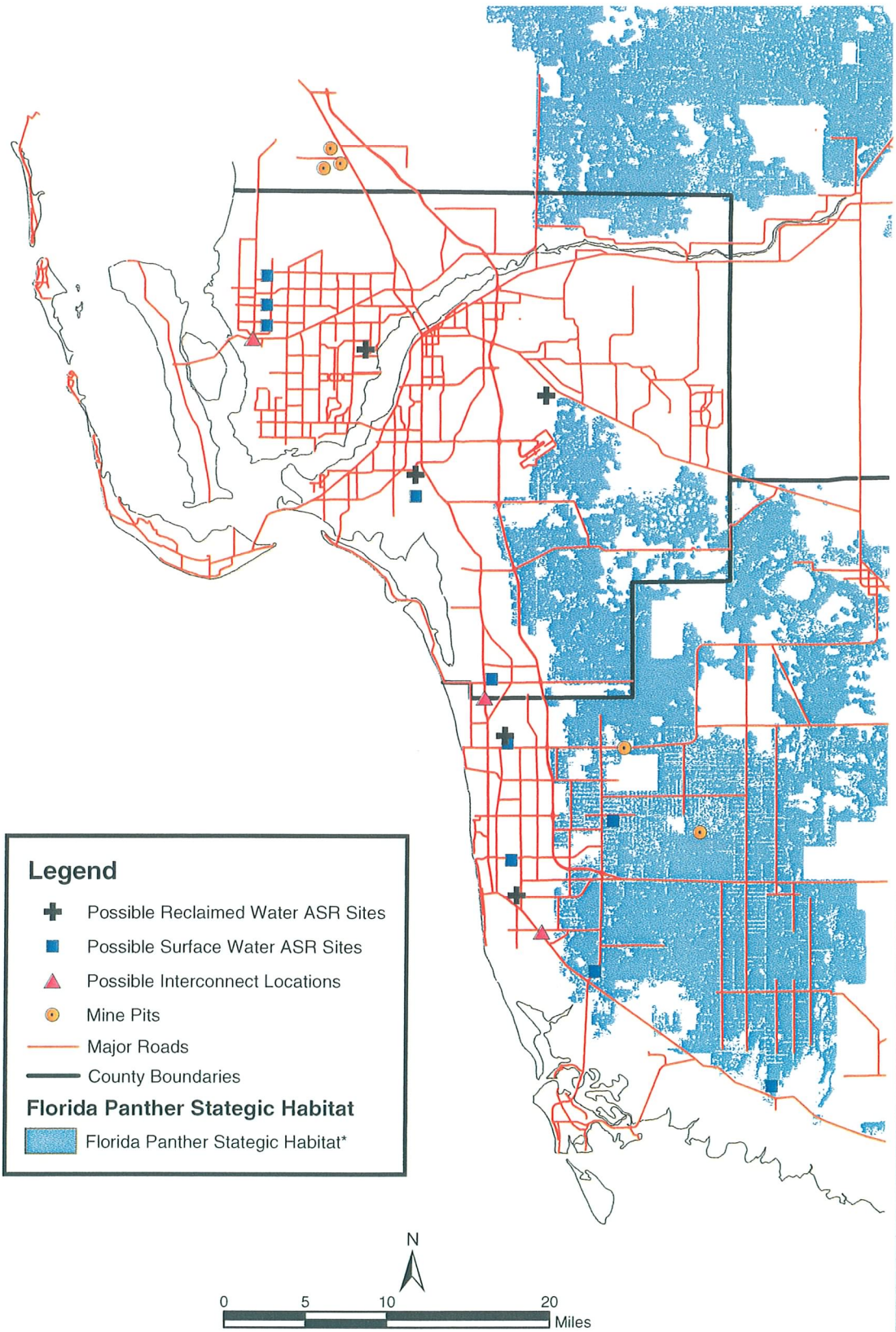


Master Plan for the Regional Irrigation Distribution System (RIDS) for the Lower West Coast Region	BOYLE	South Florida Water Management District	Potential Storage Locations FLUCCS Mapping Overlay	Figure 35



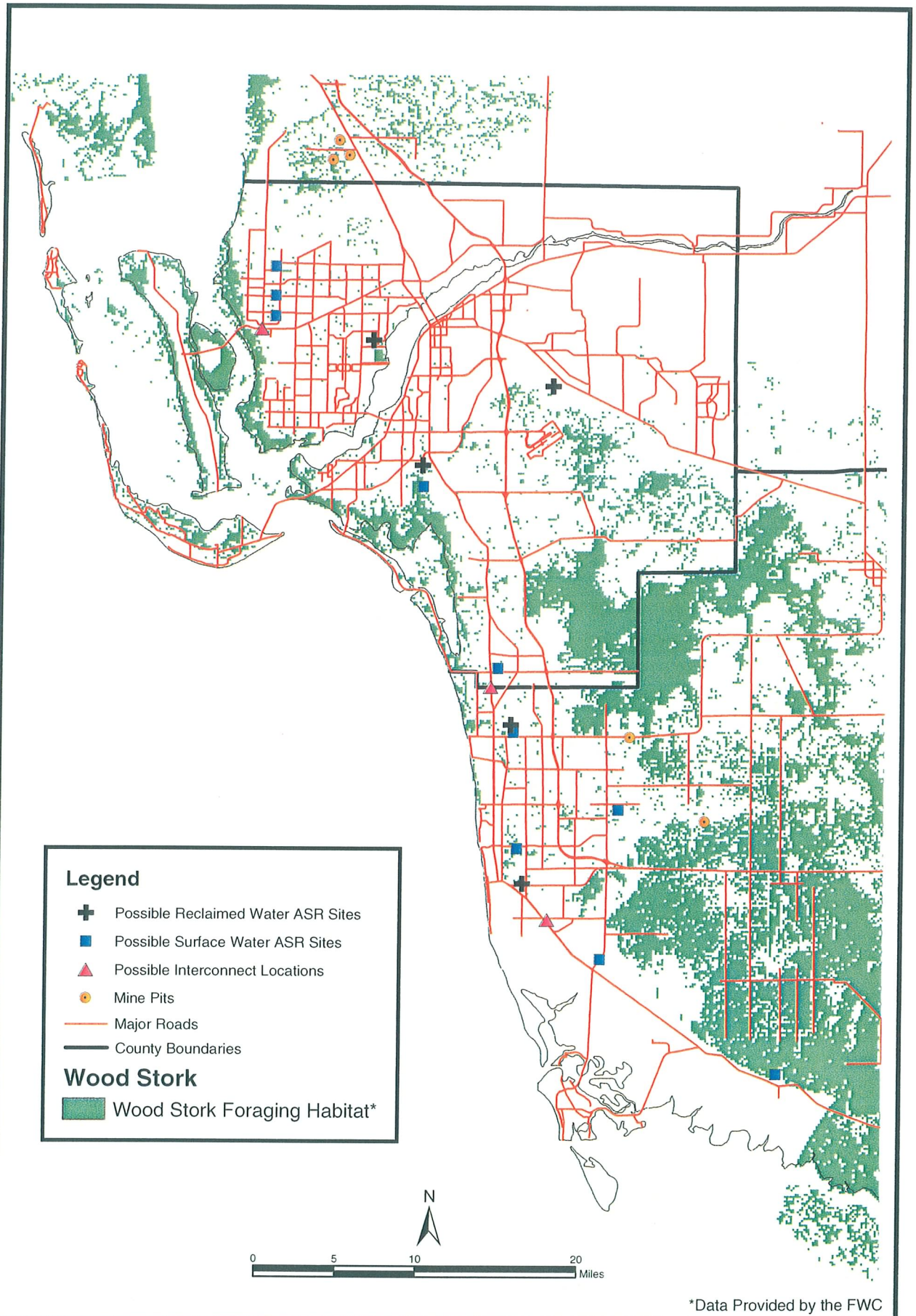
*Data Provided by the FWC

Master Plan for the Regional Irrigation Distribution System (RIDS) for the Lower West Coast Region	BOYLE	South Florida Water Management District	Potential Storage Locations Florida Black Bear Strategic Habitat Overlay	Figure 36



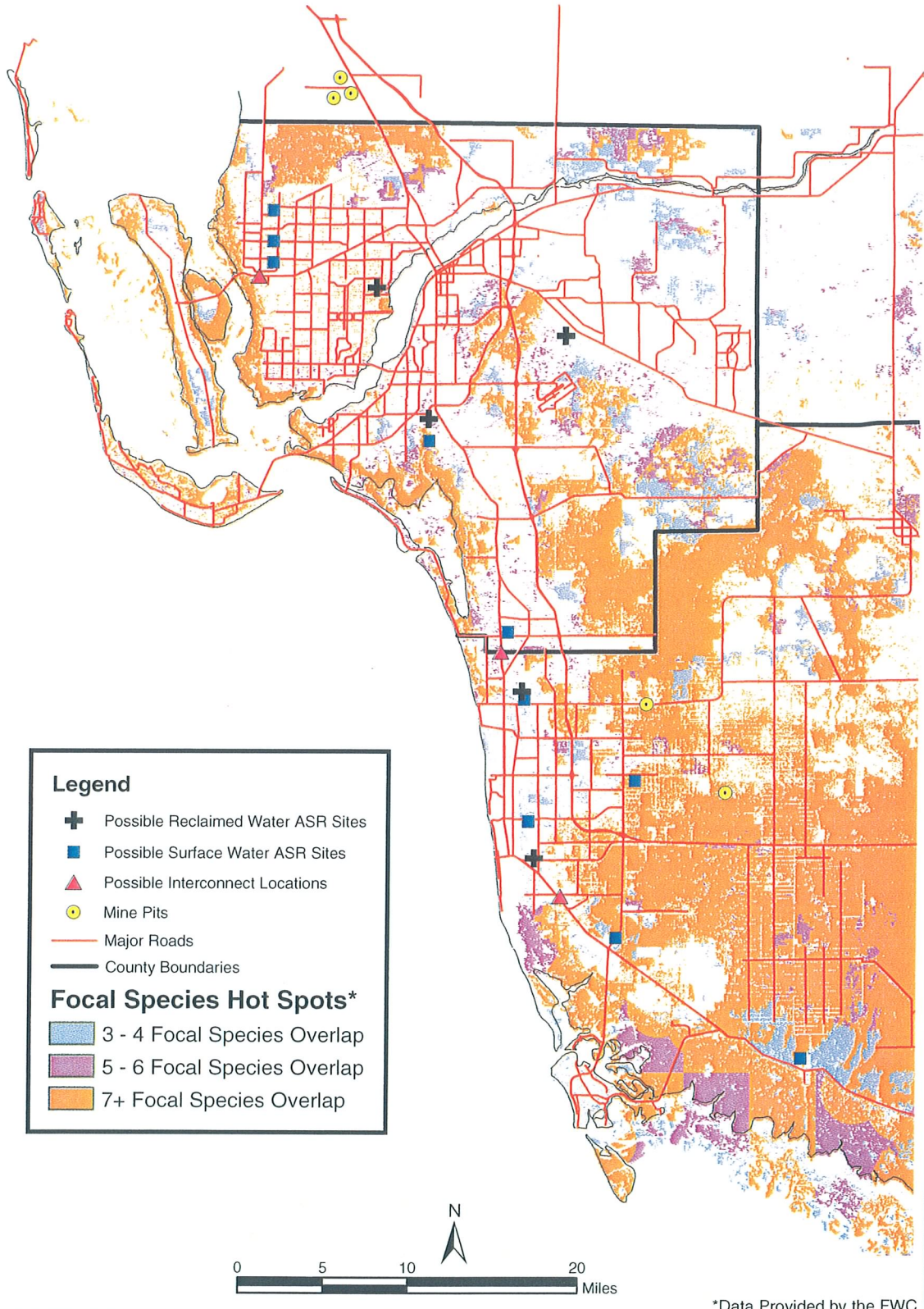
*Data Provided by the FWC

Master Plan for the Regional Irrigation Distribution System (RIDS) for the Lower West Coast Region	BOYLE	South Florida Water Management District	Potential Storage Locations Panther Strategic Habitat Overlay	Figure 37



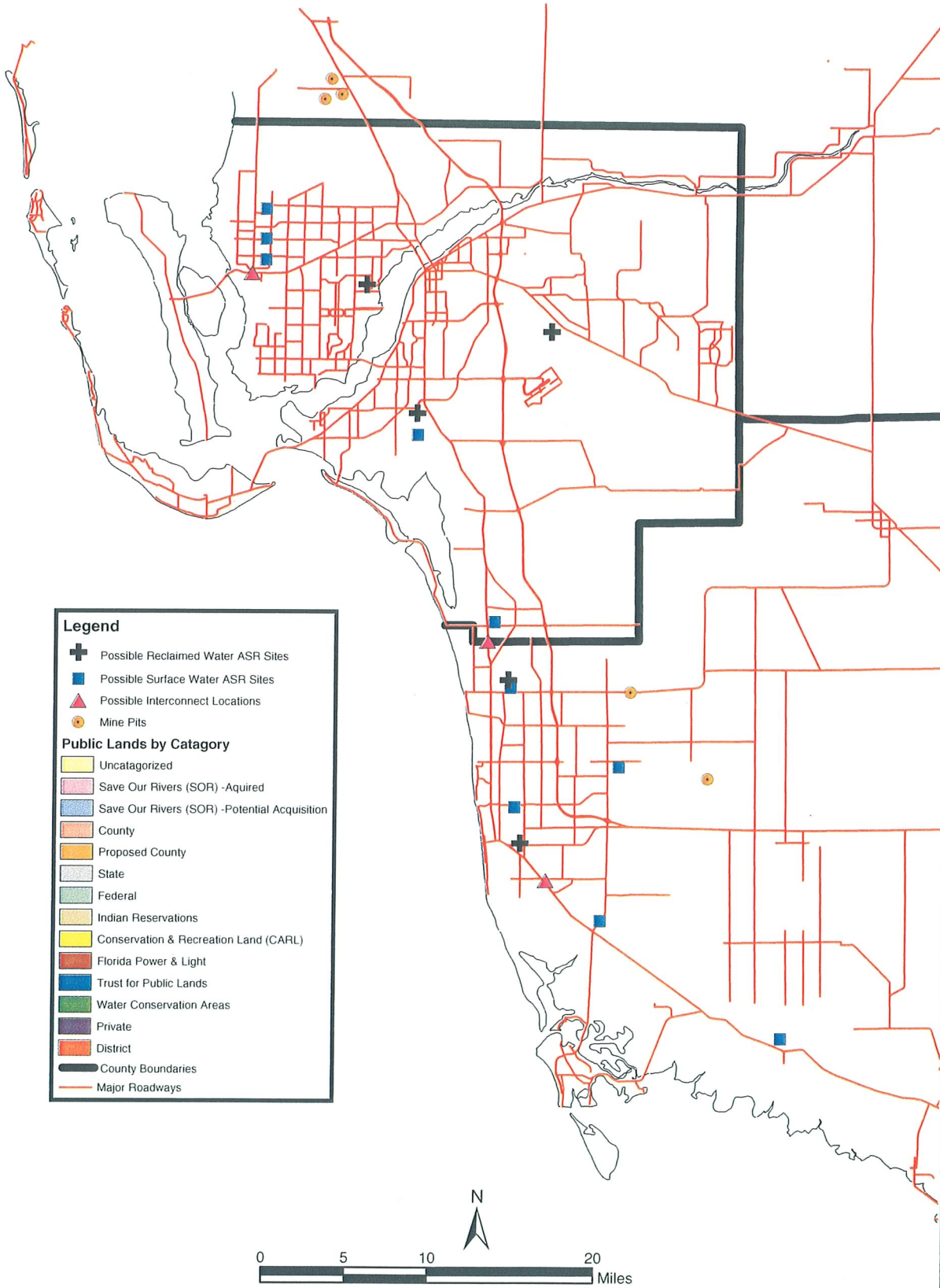
*Data Provided by the FWC

Master Plan for the Regional Irrigation Distribution System (RIDS) for the Lower West Coast Region	BOYLE	South Florida Water Management District	Potential Storage Locations Wood Stork Foraging Habitat Overlay	Figure 38



*Data Provided by the FWC

Master Plan for the Regional Irrigation Distribution System (RIDS) for the Lower West Coast Region	BOYLE	South Florida Water Management District	Potential Storage Locations Focal Species Hot Spots	Figure 39



Master Plan for the Regional Irrigation Distribution System (RIDS) for the Lower West Coast Region	BOYLE	South Florida Water Management District	Potential Storage Locations Public Lands Overlay	Figure 40