

## Pacific Lowlands Region Chapter

### BCRs 43 and 44

Ulises T. Angulo, Marco Antonio Gonzalez-Bernal, Erick Gonzalez, Miguel Ángel Guevara, Cecilia Hernandez, Xico Vega-Picos

#### Location:

This Region extends south from northeastern Sonora between the Sonoran Desert and the Sierra Madre Occidental to the coast of northern Sinaloa and continues along the coast to the border of Nayarit. On the eastern boundary it parallels the Pacific slope of the Sierra Madre Occidental at approximately 775 m above sea level. For purposes of this Plan, the Pacific Lowlands Region includes parts of two Bird Conservation Regions: the portion of Planicie Costera, Lomerios y Caniones del Occidente-43 that is in Sinaloa and Sonora and the small portion of Marismas Nacionales-44 that is in Sinaloa (Figure 5). This combination of BCRs was used in the regional Species Assessment for Northwest Mexico with the exception that Nayarit was included in the assessment.



Figure 5. Map of the Pacific Lowlands Region.

#### Description:

The terrestrial plant communities in this Region are primarily thorn scrubland, tropical deciduous forest, and pine-oak forests, crossed by ribbons of riparian vegetation. Mangroves, coastal marine wetlands, shoreline, and other marine habitats are found on the coast. Important breeding bird islands and foraging waters are found offshore.

At higher elevations various pine and oak species are abundant. At lower elevations dominant plants in Tropical Deciduous Forest are: Mauto (*Lysiloma divaricata*), Amapa (*Tabebuia palmerii*), Palo Blanco (*Ipomoea arborecens*), Higuera (*Ficus mexicana*), Mesquite (*Prosopis juliflora*), Binolo (*Acacia farnesiana*), Binorama (*A. cochliacantha*), and Cardón (*Pachycereus pecten-aborigenus*). Riparian plant species include: Sauce (*Salix bonplandian*), Fresno (*Fraxinus uhdei*), Alamo (*Alnus glabrata*), Garra de León (*Clethra lanata*), *Dendropanax arboreus*, Madroño (*Arbutus xalapensis*), Guamuchil (*Pitecellobium dulce*), Alamo (*Populus dimorpha*), Ejotón (*Canavalia villosa*), Manto (*Ipomoea purpurea*), and Camote Amargo (*Dioscorea* spp.). Wetland related species, include: Red Mangrove (*Rhizophora mangle*), Black Mangrove (*Avicenia germinans*), White Mangrove (*Laguncularia racemosa*), and *Conocarpus erecta*. (Scientific names are used for readers unfamiliar with Spanish plant names.)

The area hosts important ecosystems (tropical deciduous forests, coastal lagoons, mangroves, and riparian corridors) that support an impressive and diverse flora and fauna. Tropical deciduous forests are one of the most endangered communities in the western hemisphere. The region is rich in endemic species, some of which have legal conservation status (NOM 059 ECOL 2001). Important bird species include: Bare-throated Tiger Heron, Peregrine Falcon, West Mexican Chachalaca, Yellow-Breasted Crane, Military Macaw, Sinaloa Martin, Elegant Trogon, Pale-billed Woodpecker, Purplish-backed Jay, Black-capped Vireo, Western Sandpiper, and Snowy Plover.

The region is used for a variety of activities including: agriculture, shrimp aquaculture, cattle ranching, logging, and mining, among others. Destruction of habitat is severe, especially in coastal areas. Cattle ranching, mining, agriculture, and logging cause soil erosion and habitat loss and degradation. Agricultural activities also use excessive agrochemicals and other pollutants.

Private land conservation programs are important conservation tools that currently are being used in different critical areas. However, there is also a need to increase the number of research, monitoring, and environmental education programs. Ornithological studies are desperately needed to document the area's biodiversity. They are also important in order to inform the implementation of conservation measurements. The primary conservation actions needed include increasing the amount of land in conservation programs and Natural Protected Areas, promoting ecotourism, and diversifying local economy in rural areas.

### **Avifaunal Analysis—Species Assessment and Prioritization:**

In order to guide the expenditure of resources, the SJV and its partners have assessed the vulnerability of the bird species and responsibility of the SJV to conserve bird species found in the SJV area. Priority species for the Pacific Lowlands Region are presented in three different lists: (1) Continental Concern Species (Table 2); (2) Regional Concern Species (Table 3); and (3) Stewardship Species (Table 4). Species assessments were done using the Partners in Flight methodology (<http://www.rmbo.org/pubs/downloads/Handbook.pdf>). Entry onto the Continental Concern list uses the same criteria that the North American PIF Landbird Plan used for landbirds breeding in the U.S./Canada (PIF Watch List). These same criteria, as adopted by the Mexican North American Bird Conservation Initiative, were used to determine the Continental Concern species for species breeding entirely in Mexico. Also used were the U.S. Shorebird Conservation Plan (Imperiled and High Concern North American populations), the North American Waterbird Plan (Imperiled), and the North American Waterfowl Management Plan (2005) (see Appendix C for a decision matrix for waterfowl entry to the lists and a comparison of designations).

The following table lists the Continental Concern Species found in the Pacific Lowlands Region (Table 2). These species are recognized as vulnerable in either the breeding or nonbreeding season by at least one of the National or International Bird Conservation Initiatives. This analysis was done for the entire area of BCR 43 and 44 within the Pacific Lowlands Region of Sinaloa and Nayarit including portions that are outside of the SJV. Conservationists working in those locations may find this information helpful in their work. The highest priority species tend to have distributions restricted or nearly restricted to the combination of BCRs represented in Arid Borderlands and they tend to face similar threats. Species whose ranges cross political boundaries will benefit if all states involved coordinate conservation efforts.

The “Plan” column in the tables below indicates which species assessment process or which bird initiative(s) was used to include the species on the Concern Species Lists. The North American Waterfowl Management Plan’s (NAWMP) “Combined Prioritization of Breeding and Nonbreeding Ducks” meeting the criteria in Appendix C appear in the Concern Species Lists below. The U. S. Shorebird Conservation Plan’s (USSCP) highly imperiled and high concern species appear in the Concern Species Lists (see Appendix D. for a comparison of designations). The North American Waterbird Conservation Plan’s (NAWCP) imperiled and high concern species appear on Concern Species List (see Appendix E. for a comparison of designations). Partners in Flight (PIF; US/Canada landbirds and gamebirds) and Mexican Species Assessment Process (MX-PIF; all birds) denote the species assessment process that was used. An “SJV” designation indicates that the species or subspecies was scored by the SJV Technical Committee because the species was not scored by the above bird initiatives. For example, subspecies are not scored by most initiatives.

The “Season of Occurrence” column lists the season in which the species occurs in the SJV area (R= Resident, B=Breeding, W=Nonbreeding). A resident score is given for species that are essentially nonmigratory in Region. Breeding and nonbreeding (B/W) scores are given for species that are migratory but have individuals that are present during both seasons or may be considered resident but have various numbers of individuals moving in or out of the area seasonally. “B” or “W” scores are given for species that breed or winter only respectively.

The “RD” (Relative Density) column shows this value in the season of occurrence. Relative Density scores reflect the mean density of a species within a given BCR relative to the density in the single BCR in which the species occurs in its highest density (5 being the highest value, indicated by bold type). Scores relate to the season of occurrence given in the previous column (e.g., 5/3 signifies an RD of 5 in the breeding season and 3 in the nonbreeding season). Species with an RD score of 1 are not presented because they occur peripherally and/or in such low densities that it is wise to conserve them in other locations.

The “Habitat” column shows the primary habitat(s) that the species uses in this Region. In some cases, there is a designation for the season in which the species uses the listed habitat (B=Breeding, NB=Nonbreeding). The reader can use the habitats listed here for each species to find more information in the Habitat Discussion Sections. Habitats are not listed in order of importance. The habitat nomenclature is the same as Table 1, with the following exceptions: Grassland=Desert Grassland; Pine-Oak=Pine Oak Forest; Off-Shore=Off-Shore/Pelagic.

The species in each of the following tables are sorted by RD score first and then arranged in taxonomic order. This order reflects the magnitude of “Stewardship Responsibility” for species in the SJV area (most Responsibility (5) to the least Responsibility (2)). In other words, the SJV has large numbers of the entire world’s population of these RD=5 species and those species have high vulnerability scores. However, one should remember that all species on these tables meet the combined score criteria for vulnerability either continentally or regionally and are worthy of conservation attention. There are two ways that the Continental and Regional Concern Species tables can be used. First if the SJV or a partner is initiating a conservation project they should consider the higher RD species first. The tables can also be used to determine what Concern Species are in a particular habitat so project can be designed for their benefit.

Table 14. Continental Concern Species in the Pacific Lowlands Region.

1.	Scientific Name	2.	Common English Name	3.	Plan	4.	Season of Occurrence	5.	R	6.	( B / W )	7.	Habitat
8.	<i>Limosa fedoa</i>	9.	Marbled	10.	USS	11.	W	12.	5	13.			Coastal

1.	Scientific Name	2.	Common English Name	3.	Plan	4.	Season of Occurrence	5.	R	7.	Habitat
										6. ( B / W )	
			Godwit		CP, PIF						Wetlands
14.	<i>Sterna antillarum</i>	15.	Least Tern	16.	MX-PIF	17.	B/W	18.	5	19.	Coastal Wetlands
20.	<i>Coccyzus minor</i>	21.	Mangrove Cuckoo	22.	MX-PIF, PIF	23.	R	24.	5	25.	Tropical Deciduous Forest, Coastal Wetlands
26.	<i>Forpus cyanopygius</i>	27.	Mexican Parrotlet	28.	MX-PIF	29.	B/W	30.	5	31.	Riparian, Tropical Deciduous Forest, Urban
32.	<i>Amazona finschi</i>	33.	Lilac-crowned Parrot	34.	MX-PIF	35.	R	36.	5	37.	Tropical Deciduous Forest, Pine-Oak, Coastal Wetlands
38.	<i>Trogon elegans</i>	39.	Elegant Trogon	40.	MX-PIF, PIF	41.	R	42.	5	43.	Pine-Oak, Riparian, Tropical Deciduous Forest
44.	<i>Vireo bellii</i>	45.	Bell's Vireo	46.	PIF	47.	W	48.	5	49.	Tropical Deciduous Forest
50.	<i>Calocitta colliei</i>	51.	Black-throated Magpie-Jay	52.	MX-PIF	53.	R	54.	5	55.	Riparian, Tropical Deciduous Forest
56.	<i>Cyanocorax beecheii</i>	57.	Purplish-backed Jay	58.	MX-PIF	59.	R	60.	5	61.	Riparian, Tropical Deciduous Forest, Coastal Wetlands
62.	<i>Polioptila nigriceps</i>	63.	Black-capped Gnatcatcher	64.	MX-PIF, PIF	65.	R	66.	5	67.	Riparian, Tropical Deciduous Forest
68.	<i>Aimophila quinquestrata</i>	69.	Five-striped Sparrow	70.	MX-PIF, PIF	71.	R	72.	5	73.	Tropical Deciduous Forest, Grassland, Cliff/Rock
74.	<i>Pheucticus chrysopleus</i>	75.	Yellow Grosbeak	76.	MX-PIF	77.	B/W	78.	5	79.	Pine-Oak, Tropical Deciduous Forest
81.	<i>Passerina versicolor</i>	82.	Varied Bunting	83.	MX-PIF, PIF	84.	W	85.	5	86.	Riparian, Tropical Deciduous Forest
88.		89.		90.		91.		92.		93.	

1.	Scientific Name	2.	Common English Name	3.	Plan	4.	Season of Occurrence	5.	R D ( B / W )	6.	7.	Habitat
94.	<i>Sula neboxii</i>	95.	Blue-footed Booby	96.	PIF	97.	B/W	98.	¾	99.		Coastal Wetlands, Islands
100.	<i>Sula leucogaster</i>	101.	Brown Booby	102.	PIF	103.	B/W	104.	4 / 4	105.		Islands
106.	<i>Porzana flaviventer</i>	107.	Yellow-breasted Crane	108.	MX-PIF	109.	R	110.	4	111.		Freshwater Wetlands, Coastal Wetlands
112.	<i>Haematopus palliatus</i>	114.	American Oystercatcher	115.	USSCP, PIF	116.	B/W	117.	¾	118.		Islands, Coastal Wetlands
113.												
119.	<i>Recurvirostra americana</i>	120.	American Avocet	121.	PIF	122.	W	123.	4	124.		Coastal Wetlands, Freshwater Wetlands
125.	<i>Larus heermanni</i>	126.	Heermann's Gull	127.	MX-PIF, PIF	128.	B/W	129.	2 / 4	130.		Islands, Coastal Wetlands
131.	<i>Sterna anaethetus</i>	132.	Bridled Tern	133.	PIF	134.	B	135.	4	136.		Islands, Off-Shore, Coastal Wetlands
137.	<i>Aratinga canicularis</i>	138.	Orange-fronted Parakeet	139.	MX-PIF	140.	R	141.	4	142.		Tropical Deciduous Forest, Coastal Wetlands
143.	<i>Streptoprocne semicollaris</i>	144.	White-naped Swift	145.	MX-PIF	146.	R	147.	4	148.		Pine-Oak, Cliff/Rock, Tropical Deciduous Forest
149.												
150.	<i>Chlorostilbon auriceps</i>	151.	Golden-crowned Emerald	152.	MX-PIF	153.	R	154.	4	155.		Riparian, Tropical Deciduous Forest
156.												
157.	<i>Tilmature dupontii</i>	158.	Sparkling-tailed Hummingbird	159.	MX-PIF	160.	R	161.	4	162.		Riparian, Tropical Deciduous Forest
163.												
164.	<i>Trogon citreolus</i>	165.	Citreoline Trogon	166.	MX-PIF	167.	R	168.	4	169.		Riparian, Tropical Deciduous Forest
170.												
171.	<i>Piculus auricularis</i>	172.	Gray-crowned Woodpecker	173.	MX-PIF	174.	R	175.	4	176.		Pine-Oak, Tropical Deciduous Forest
177.												
178.	<i>Tyrannus crassirostris</i>	179.	Thick-billed Kingbird	180.	MX-PIF, PIF	181.	B/W	182.	4 / 2	183.		Riparian, Tropical Deciduous Forest
184.												
185.	<i>Vireo atricapillus</i>	186.	Black-capped Vireo	187.	MX-PIF, PIF	188.	W	189.	- / 4	190.		Tropical Deciduous Forest, Riparian
189.												
191.	<i>Vermivora</i>	192.	Lucy's	193.	PIF	194.	W	195.	-	196.		Tropical

1.	Scientific Name	2.	Common English Name	3.	Plan	4.	Season of Occurrence	5.	R	6.	D ( B / W )	7.	Habitat
	<i>luciae</i>		Warbler								/		Deciduous Forest, Riparian
197.	<i>Granatellus venustus</i>	198.	Red-breasted Chat	199.	MX-PIF	200.	R	201.	4	202.	4	203.	Riparian, Tropical Deciduous Forest
204.	<i>Aimophila carpalis</i>	205.	Rufous-winged Sparrow	206.	MX-PIF, PIF	207.	B/W	208.	4	209.	/	210.	Grassland, Tropical Deciduous Forest
211.	<i>Euphonia elegantissima</i>	212.	Elegant Euphonia	213.	MX-PIF	214.	B/W	215.	¾	216.	¾	216.	Pine-Oak
217.		218.		219.		220.		221.		222.			
223.	<i>Anas acuta</i>	224.	Northern Pintail	225.	NA WM P	226.	W	227.	-	228.	/	3	Freshwater Wetlands, Coastal Wetlands
229.	<i>Aythya affinis</i>	230.	Lesser Scaup	231.	PIF	232.	W	233.	-	234.	/	3	Freshwater Wetlands, Coastal Wetlands
235.	<i>Aechmophorus clarkii</i>	236.	Clark's Grebe	237.	MX-PIF, PIF	238.	W	239.	-	240.	/	3	Freshwater Wetlands, Coastal Wetlands
241.	<i>Fregata magnificens</i>	242.	Magnificent Frigatebird	243.	PIF	244.	B/W	245.	3	246.	/	3	Coastal Wetlands, Island
247.	<i>Charadrius alexandrinus</i>	248.	Snowy Plover	249.	USS CP, PIF	250.	B/W	251.	3	252.	/	3	Coastal Wetlands
253.	<i>Charadrius wilsonia</i>	254.	Wilson's Plover	255.	USS CP, PIF	256.	R	257.	3	258.			Coastal Wetlands
259.	<i>Numenius phaeopus</i>	260.	Whimbrel	261.	USS CP, PIF	262.	W	263.	-	264.	/	3	Coastal Wetlands, Agriculture
265.	<i>Numenius americanus</i>	266.	Long-billed Curlew	267.	USS CP, PIF	268.	W	269.	-	270.	/	3	Coastal Wetlands, Agriculture
271.	<i>Calidris mauri</i>	272.	Western Sandpiper	273.	USS CP, PIF	274.	W	275.	-	276.	/	3	Coastal Wetlands, Freshwater Wetlands
277.	<i>Calidris alpina</i>	278.	Dunlin	279.	USS CP, PIF	280.	W	281.	-	282.	/	3	Coastal Wetlands
283.	<i>Calidris himantopus</i>	284.	Stilt Sandpiper	285.	PIF	286.	W	287.	-	288.	/	3	Coastal Wetlands, Freshwater Wetlands
289.	<i>Limnodromus griseus</i>	290.	Short-billed Dowitcher	291.	USS CP, PIF	292.	W	293.	-	294.	/	3	Coastal Wetlands
295.	<i>Sterna nilotica</i>	296.	Gull-	297.	PIF	298.	B/W	299.	2	300.			Coastal Wetlands

1.	Scientific Name	2.	Common English Name	3.	Plan	4.	Season of Occurrence	5.	R	6.	D ( B / W )	7.	Habitat
301.	<i>Ara militaris</i>	302.	billed Tern Military Macaw	303.	MX-PIF	304.	R	305.	3	306.	3	306.	Pine-Oak, Riparian, Cliff/Rock, Tropical Deciduous Forest
307.	<i>Campephilus guatemalensis</i>	308.	Pale-billed Woodpecker	309.	MX-PIF	310.	R	311.	3	312.	3	312.	Pine-Oak, Riparian, Tropical Deciduous Forest
313.	<i>Deltarhynchus flammulateus</i>	314.	Flammulated Flycatcher	315.	MX-PIF	316.	R	317.	3	318.	3	318.	Riparian, Tropical Deciduous Forest
319.	<i>Vireo hypochryseus</i>	320.	Golden Vireo	321.	MX-PIF	322.	B/W	323.	3	324.	3	324.	Riparian, Tropical Deciduous Forest
325.	<i>Toxostoma bendirei</i>	326.	Bendire's Thrasher	327.	MX-PIF	328.	B/W	329.	3	330.	3	330.	Tropical Deciduous Forest, Grassland
331.	<i>Euthlypis lachrymose</i>	332.	Fan-tailed Warbler	333.	MX-PIF	334.	B/W	335.	2	336.	2	336.	Riparian, Tropical Deciduous Forest
337.	<i>Rhodinocichla rosea</i>	338.	Rosy Thrush-Tanager	339.	MX-PIF	340.	R	341.	3	342.	3	342.	Riparian, Tropical Deciduous Forest
343.	<i>Piranga erythrocephala</i>	344.	Red-headed Tanager	345.	MX-PIF	346.	B/W	347.	2	348.	2	348.	Pine-Oak
349.	<i>Cyanocompsa parellina</i>	350.	Blue Bunting	351.	MX-PIF	352.	B/W	353.	3	354.	3	354.	Riparian, Tropical Deciduous Forest
355.	<i>Passerina ciris</i>	356.	Painted Bunting	357.	PIF, MX-PIF	358.	W	359.	-	360.	3	360.	Riparian, Tropical Deciduous Forest
361.		362.		363.		364.		365.		366.		366.	
367.	<i>Branta bernicla (Pacific popn)</i>	368.	Brant	369.	NA WM P, SJV	370.	W	371.	-	372.	2	372.	Coastal Wetlands
373.	<i>Anas platyrhynchos</i>	374.	Mallard	375.	NA WM P	376.	B/W	377.	2	378.	1	378.	Coastal Wetlands, Freshwater Wetlands
379.	<i>Cairina moschata</i>	380.	Muscovy Duck	381.	MX-PIF, PIF	382.	R	383.	2	384.	2	384.	Riparian, Coastal Wetlands
385.	<i>Penelope purpurascens</i>	386.	Crested Guan	387.	MX-PIF	388.	R	389.	2	390.	2	390.	Pine-Oak, Tropical Deciduous Forest,

1.	Scientific Name	2.	Common English Name	3.	Plan	4.	Season of Occurrence	5.	R D ( B / W )	6.	7.	Habitat
391.	<i>Puffinus griseus</i>	392.	Sooty Shearwater	393.	MX-PIF	394.	W	395.	-	396.	2	Coastal Wetlands
397.	<i>Puffinus tenuirostris</i>	398.	Short-tailed Shearwater	399.	PIF	400.	W	401.	-	402.	2	Off-Shore
403.	<i>Puffinus opisthomelas</i>	404.	Black-vented Shearwater	405.	PIF, MX-PIF	406.	W	407.	-	408.	2	Off-Shore
409.	<i>Oceanodroma tethys</i>	410.	Wedge-rumped Storm-Petrel	411.	PIF	412.	W	413.	-	414.	2	Off-Shore
415.	<i>Oceanodroma melania</i>	416.	Black Storm-Petrel	417.	MX-PIF, PIF	418.	W	419.	-	420.	2	Off-Shore
421.	<i>Oceanodroma microsoma</i>	422.	Least Storm-Petrel	423.	MX-PIF, PIF	424.	W	425.	-	426.	2	Off-Shore
427.	<i>Phaethon aethereus</i>	428.	Red-billed Tropicbird	429.	PIF	430.	B/W	431.	2	432.	2	Island, Off-Shore
433.	<i>Sula sula</i>	434.	Red-footed Booby	435.	PIF	436.	B	437.	2	438.	2	Off-Shore
439.	<i>Phalacrocorax penicillatus</i>	440.	Brandt's Cormorant	441.	PIF	442.	W	443.	-	444.	2	Off-Shore, Coastal Wetlands
445.	<i>Egretta caerulea</i>	446.	Little Blue Heron	447.	PIF	448.	R	449.	2	450.	2	Coastal Wetlands, Freshwater Wetlands
451.	<i>Egretta rufescens</i>	452.	Reddish Egret	453.	MX-PIF, PIF	454.	R	455.	2	456.	2	Coastal Wetlands, Islands
457.	<i>Sarcoramphus papa</i>	458.	King Vulture	459.	MX-PIF	460.	R-extirpated?	461.	2	462.	2	Pine-Oak, Tropical Deciduous Forest
463.	<i>Aramides axillaries</i>	464.	Rufous-necked Wood-Rail	465.	MX-PIF	466.	R	467.	2	468.	2	Coastal Wetlands
469.	<i>Tringa solitaria</i>	470.	Solitary Sandpiper	471.	USS CP	472.	W	473.	-	474.	2	Freshwater Wetlands, Coastal Wetlands
475.	<i>Arenaria interpres</i>	476.	Ruddy Turnstone	477.	USS CP	478.	W	479.	-	480.	2	Coastal Wetlands

1.	Scientific Name	2.	Common English Name	3.	Plan	4.	Season of Occurrence	5.	R	6.	D ( B / W ) 2	7.	Habitat
481.	<i>Arenaria melanocephala</i>	482.	Black Turnstone	483.	USS	484.	W	485.	-	486.	2	486.	Coastal Wetlands
487.	<i>Aphriza virgata</i>	488.	Surfbird	489.	USS	490.	W	491.	-	492.	2	492.	Coastal Wetlands
493.	<i>Calidris alba</i>	494.	Sanderling	495.	USS	496.	W	497.	-	498.	2	498.	Coastal Wetlands
499.	<i>Rynchops niger</i>	500.	Black Skimmer	501.	PIF	502.	B/W	503.	2	504.	2	504.	Coastal Wetlands
505.	<i>Morococcyx erythropygus</i>	506.	Lesser Ground-Cuckoo	507.	MX-PIF	508.	R	509.	2	510.	2	510.	Tropical Deciduous Forest
512.	<i>Aratinga holochlora</i>	513.	Green Parakeet	514.	MX-PIF, PIF	515.	R	516.	2	517.	2	517.	Tropical Deciduous Forest, Pine-Oak
518.	<i>Micrathene whitneyi</i>	519.	Elf Owl	520.	MX-PIF, PIF	521.	W	522.	-	523.	2	523.	Tropical Deciduous Forest
524.	<i>Asio flammeus</i>	525.	Short-eared Owl	526.	PIF	527.	W	528.	-	529.	2	529.	Grassland, Coastal Wetlands, Freshwater Wetlands
530.	<i>Nyctiphrynus mcleodii</i>	531.	Eared Poorwill	532.	MX-PIF	533.	R	534.	2	535.	2	535.	Pine-Oak
536.	<i>Calypte costae</i>	537.	Costa's Hummingbird	538.	PIF	539.	W	540.	-	541.	2	541.	Tropical Deciduous Forest
542.	<i>Empidonax traillii</i>	543.	Willow Flycatcher	544.	PIF	545.	W	546.	-	547.	2	547.	Tropical Deciduous Forest
548.	<i>Pachyramphus major</i>	549.	Gray-collared Becard	550.	MX-PIF	551.	R	552.	2	553.	2	553.	Riparian, Pine-Oak
554.	<i>Vireo pallens</i>	555.	Mangrove Vireo	556.	MX-PIF	557.	R	558.	2	559.	2	559.	Coastal Wetlands
560.	<i>Myadestes occidentalis</i>	561.	Brown-backed Solitaire	562.	MX-PIF	563.	R	564.	2	565.	2	565.	Riparian, Pine-Oak
566.	<i>Spiza americana</i>	567.	Dickcissel	568.	PIF	569.	W	570.	-	571.	2	571.	Agriculture, Grassland

Species of Regional Concern (Table 15) are species that have a combination of moderately high vulnerability, high regional threats, and declining regional population trends. High scoring subspecies (from the Species Assessment Process) are included in the Species of Regional Concern table. These species have not been scored by a national or international bird initiative but were scored by the SJV Technical Committee. There are a few full species that the SJV Technical Committee has scored higher than either the Mexican or the US/Canada Species Assessment Process (denoted “SJV” in the Plan column). This situation resulted from combining the two sets of scores and the combination resulted in a higher score. In the future, there will not be two sets of scores; they will be reconciled into one set by NABCI, SJV Technical Committee and other experts.

Table 15. Regional Concern Species in the Pacific Lowlands Region.

572.	Scientific Name	573.	Common English Name	574.	Plan	575.	Season of Occurrence	576.	R D /	577.	(B W )	578.		579.	Habitat
580. 581.	<i>Ortalis wagleri</i>	582.	Rufous-bellied Chachalaca	583.	MX-PIF	584.	R	585.	5	586.		587.	5	588.	Tropical Deciduous Forest, Pine-Oak
587.	<i>Aratinga holochlora brewsteri</i>	588.	Green “Cuchajqui” Parakeet	589.	SJV	590.	R	591.	5	592.		593.	5	594.	Pine-Oak, Tropical Deciduous Forest
593.	<i>Myiarchus nuttingi</i>	594.	Nutting’s Flycatcher	595.	MX-PIF	596.	R	597.	5	598.		599.	5	600.	Tropical Deciduous Forest, Grassland
599. 600.	<i>Myiarchus tyrannulus</i>	601.	Brown-crested Flycatcher	602.	MX-PIF	603.	R	604.	5	605.		606.	5	607.	Riparian, Tropical Deciduous Forest, Pine-Oak
606. 607.	<i>Thryothorus sinaloa</i>	608.	Sinaloa Wren	609.	MX-PIF	610.	R	611.	5	612.		613.	5	614.	Tropical Deciduous Forest, Riparian
613. 614.	<i>Thryothorus felix</i>	615.	Happy Wren	616.	MX-PIF	617.	R	618.	5	619.		620.	5	621.	Tropical Deciduous Forest, Riparian
620.		621.		622.		623.		624.		625.		626.		627.	
626.	<i>Charadrius collaris</i>	627.	Collared Plover	628.	MX-PIF	629.	B/W	630.	4/3	631.		632.	4	633.	Coastal Wetlands
632. 633.	<i>Amazilia violiceps</i>	634.	Violet-crowned Hummingbird	635.	MX-PIF	636.	R	637.	4	638.		639.	4	640.	Riparian, Tropical Deciduous Forest
639.	<i>Xiphorhynchus flavigaster</i>	640.	Ivory-billed Woodcreeper	641.	MX-PIF	642.	R	643.	4	644.		645.	4	646.	Tropical Deciduous Forest

572. Scientific Name	573. Common English Name	574. Plan	575. Season of Occurrence	576. R D / W	577. (B / W)	578.	579. Habitat
645. <i>Parula pitiayumi</i>	646. Tropical Parula	647. MX-PIF	648. B/W	649. 4/3	650.	650.	Tropical Deciduous Forest, Coastal Wetlands, Pine-Oak
651. <i>Melospiza kieneri</i>	653. Rusty-crowned Ground-Sparrow	654. MX-PIF	655. B/W	656. 4/2	657.	657.	Riparian, Tropical Deciduous Forest
652.							
658. <i>Aimophila botterii</i>	660. Botteri's Sparrow	661. MX-PIF, PIF	662. B/W	663. 4/2	664.	664.	Tropical Deciduous Forest, Grassland
659.							
665.	666.	667.	668.	669.	670.		
671. <i>Anas strepera</i>	672. Gadwall	673. NA WM P	674. W	675. -/3	676.	676.	Coastal Wetlands, Freshwater Wetlands
677. <i>Anas discors</i>	678. Blue-winged Teal	679. NA WM P	680. W	681. -/3	682.	682.	Coastal Wetlands, Freshwater Wetlands
683. <i>Anas cyanoptera</i>	684. Cinnamon Teal	685. NA WM P	686. W	687. -/3	688.	688.	Coastal Wetlands, Freshwater Wetlands
689. <i>Anas clypeata</i>	690. Northern Shoveler	691. NA WM P	692. W	693. -/3	694.	694.	Coastal Wetlands, Freshwater Wetlands
695. <i>Anas crecca</i>	696. Green-winged Teal	697. NA WM P	698. W	699. -/3	700.	700.	Coastal Wetlands, Freshwater Wetlands
701. <i>Aythya valisineria</i>	702. Canvasback	703. NA WM P	704. W	705. -/3	706.	706.	Coastal Wetlands, Freshwater Wetlands
707. <i>Aythya americana</i>	708. Redhead	709. NA WM P	710. W	711. -/3	712.	712.	Coastal Wetlands, Freshwater Wetlands
713. <i>Meleagris gallopavo</i>	714. Wild Turkey	715. MX-PIF	716. B/W	717. 3/2	718.	718.	Pine-Oak
719. <i>Tigrisoma mexicanum</i>	721. Bare-throated Tiger-Heron	722. MX-PIF	723. B/W	724. 3/2	725.	725.	Freshwater Wetlands, Coastal Wetlands, Riparian
720.							
726. <i>Parabuteo</i>	727. Harris's	728. MX-	729. R	730. 3	731.	731.	Tropical

572.	Scientific Name	573.	Common English Name	574.	Plan	575.	Season of Occurrence	576.	R D / W )	577. (B / W )	578.	579.	Habitat
	<i>unicinctus</i>		Hawk		PIF								Deciduous Forest
732.	<i>Porphyrio martinica</i>	733.	Purple Gallinule	734.	SJV	735.	R	736.	3	737.		737.	Freshwater Wetlands
738.	<i>Columba flavirostris</i>	739.	Red-billed Pigeon	740.	MX-PIF, PIF	741.	R	742.	3	743.		743.	Tropical Deciduous Forest, Pine-Oak, Riparian
744.	<i>Ciccaba virgata</i>	745.	Mottled Owl	746.	MX-PIF	747.	R	748.	3	749.		749.	Tropical Deciduous Forest, Pine-Oak
750.	<i>Caprimulgus ridgwayi</i>	751.	Buff-collared Nightjar	752.	MX-PIF	753.	R	754.	3	755.		755.	Tropical Deciduous Forest
756.	<i>Camptostoma imberbe</i>	758.	Northern Beardless-Tyrannulet	759.	MX-PIF	760.	R	761.	3	762.		762.	Riparian, Tropical Deciduous Forest
763.	<i>Myiodynastes luteiventris</i>	764.	Sulphur-bellied Flycatcher	765.	MX-PIF	766.	B	767.	3/-	768.		768.	Tropical Deciduous Forest, Pine-Oak
769.	<i>Vireo flavoviridis</i>	770.	Yellow-green Vireo	771.	MX-PIF	772.	B	773.	3/-	774.		774.	Riparian, Tropical Deciduous Forest
775.	<i>Turdus assimilis</i>	777.	White-throated Robin	778.	MX-PIF	779.	B/W	780.	2/3	781.		781.	Tropical Deciduous Forest, Pine-Oak, Riparian
782.	<i>Melanotis caerulescens</i>	784.	Blue Mockingbird	785.	MX-PIF	786.	R	787.	3	788.		788.	Pine-Oak, Riparian, Tropical Deciduous Forest
789.	<i>Arremonops rufivirgatus</i>	791.	Olive Sparrow	792.	MX-PIF	793.	R	794.	3	795.		795.	Riparian, Tropical Deciduous Forest
796.		797.		798.		799.		800.		801.			
802.	<i>Crypturellus cinnamomeus</i>	803.	Thicket Tinamou	804.	MX-PIF	805.	R	806.	2	807.		807.	Tropical Deciduous Forest
808.	<i>Chen caerulescens</i>	809.	Snow Goose – Lesser (Western Central Flyway)	810.	NA WM P	811.	W	812.	-/2	813.		813.	Coastal Wetlands, Freshwater Wetlands
814.	<i>Aythya collaris</i>	815.	Ring-	816.	NA	817.	W	818.	-/2	819.		819.	Freshwater

572. Scientific Name	573. Common English Name	574. Plan	575. Season of Occurrence	576. R D / W	577. (B / W)	578.	579. Habitat
	necked Duck	WM P					Wetlands
820. <i>Chondrohierax uncinatus</i>	821. Hook-billed Kite	822. MX-PIF	823. R	824. 2	825.		Tropical Deciduous Forest, Coastal Wetlands
826. <i>Busarellus nigricollis</i>	827. Black-collared Hawk	828. MX-PIF	829. R	830. 2	831.		Freshwater Wetlands, Riparian, Coastal Wetlands
832. <i>Micrastur semitorquatus</i>	833. Collared Forest-Falcon	834. MX-PIF	835. R	836. 2	837.		Tropical Deciduous Forest
838. <i>Herpetotheres cachinnans</i>	839. Laughing Falcon	840. MX-PIF	841. R	842. 2	843.		Tropical Deciduous Forest
844. <i>Falco ruficularis</i>	845. Bat Falcon	846. MX-PIF	847. R	848. 2	849.		Tropical Deciduous Forest, Pine-Oak
850. <i>Arenaria interpres</i>	851. Ruddy Turnstone	852. USS CP	853. W	854. -/2	855.		Coastal Wetlands
856. <i>Coccyzus americanus</i> (Western popn.)	857. Yellow-billed "Western" Cuckoo	858. SJV	859. B	860. 2/-	861.		Riparian
862. <i>Megascops guatemalae</i>	863. Vermiculated Screech-Owl	864. MX-PIF	865. B/W	866. 2/2	867.		Tropical Deciduous Forest, Pine-Oak
868. <i>Trogon mexicanus</i>	869. Mountain Trogon	870. MX-PIF	871. R	872. 2	873.		Pine-Oak
874. <i>Mitrephanes phaeocercus</i>	875. Tufted Flycatcher	876. MX-PIF	877. R	878. 2	879.		Riparian, Pine-Oak
880. <i>Empidonax occidentalis</i>	882. Cordillera Flycatcher	883. MX-PIF	884. B/W	885. 2/1	886.		Riparian, Pine-Oak
881. 887. <i>Attila spadiceus</i>	888. Bright-rumped Attila	889. MX-PIF	890. R	891. 2	892.		Tropical Deciduous Forest, Pine-Oak
893. <i>Pachyramphus aglaiae</i>	894. Rose-throated Becard	895. MX-PIF	896. R	897. 2	898.		Pine-Oak, Riparian, Tropical Deciduous Forest
899. <i>Myioborus pictus</i>	901. Painted Redstart	902. MX-PIF	903. R	904. 2	905.		Pine-Oak, Riparian, Tropical Deciduous Forest
900.							

572. Scientific Name	573. Common English Name	574. Plan	575. Season of Occurrence	576. RD	577. (B / W)	578.	579. Habitat
906. <i>Myioborus miniatus</i>	907. Slate-throated Redstart	908. MX-PIF	909. R	910. 2	911. 2	911. Pine-Oak	
912. <i>Piranga bidentata</i>	914. Flame-colored Tanager	915. MX-PIF	916. R	917. 2	918. 2	918. Pine-Oak, Riparian	
913. <i>Melospiza melodia</i>	920. Song Sparrow	921. MX-PIF	922. R	923. 2	924. 2	924. Freshwater Wetlands, Riparian	

The following Stewardship Responsibility Species (Table 16) for the Pacific Lowlands Region are those species that have an RD of 5 in either the U.S. or Mexican database that are in addition to those RD=5 species on the Continental Concern or Regional Concern species lists above. RD is being used as a substitute for percent of population until these can be calculated for all species. These are species for which the SJV has “stewardship responsibility”. They are species in which a large percentage of the population inhabits this Region during either the breeding or nonbreeding portion of their annual cycle. Concern level (due to threats, population declines, etc.) for them is not high at present, but it is the SJV’s responsibility to ensure that they do not slip into the “concern” category. This usually means that monitoring is an action and these species and their habitats need to be maintained and considered in long-term planning.

Table 16. Additional Stewardship Responsibility Species for the Pacific Lowlands Region.

925. Scientific Name	926. Common English Name	927. Season of Occurrence	928. RD	929. (B / W)	930. Habitat
931. <i>Callipepla</i>	933. Elegant Quail	934. R	935. 5	936. 5	936. Tropical Deciduous

	<i>douglasii</i>						Forest
<b>932.</b>							
937.	<i>Dendrocygna bicolor</i>	938.	Fulvous Whistling-Duck	939.	R	940. 5	941. Riparian, Coastal Wetlands, Freshwater Wetlands
942.	<i>Amazilia rutila</i>	944.	Cinnamon Hummingbird	945.	R	946. 5	947. Tropical Deciduous Forest, Riparian
<b>943.</b>							
948.	<i>Heliomaster constantii</i>	950.	Plain-capped Starthroat	951.	R	952. 5	953. Tropical Deciduous Forest, Riparian
<b>949.</b>							
954.	<i>Melanerpes uropygialis</i>	955.	Gila Woodpecker	956.	R	957. 5	958. Tropical Deciduous Forest, Islands, Pine-Oak
959.	<i>Lanius ludovicianus</i>	960.	Loggerhead Shrike	961.	B	962. 4	963. Tropical Deciduous Forest, Agriculture, Grasslands
					/	/	
					W	5	
964.	<i>Turdus rufopalliatu</i>	966.	Rufous-backed Robin	967.	R	<b>968.</b> 5	969. Tropical Deciduous Forest, Riparian, Pine-Oak
	965.						
970.	<i>Toxostoma curvirostre</i>	971.	Curve-billed Thrasher	972.	R	973. 5	974. Tropical Deciduous Forest
975.	<i>Icterus pustulatus</i>	976.	Streak-backed Oriole	977.	B	978. 5	979. Tropical Deciduous Forest, Pine-Oak, Riparian
					/	/	
					W	4	
980.	<i>Saltator coerulescens</i>	981.	Grayish Saltator	982.	R	983. 5	984. Tropical Deciduous Forest Pine-Oak, Riparian
985.	<i>Cacicus melanicterus</i>	987.	Yellow-winged Cacique	988.	R	989. 5	990. Tropical Deciduous Forest, Agriculture
986.							

The total number of species in the Continental (88) and Regional (51) Concern Species lists is second only to the Arid Borderlands total number of species (88 and 83 respectively). The percentage of Continental Concern Species is the highest of all of the Regions in the SJV area. The total number of Stewardship Responsibility Species is second lowest of the SJV's Regions. This is possibly due to the fact that many of the Tropical Deciduous Forest species' ranges continue south and east along the Mexican coast line and the SJV has part of their entire ranges.

Table 17. Total and percentage of Concern Species and Stewardship Responsibility Species in the SJV and the Pacific Lowlands Region.

Concern Category	Total Number of Concern Species in the Category	Concern Species as a % of the regularly occurring SJV (667) species	Concern Species as a % of the regularly occurring Pacific Lowlands (384) species
Continental Concern Species (Table 14)	88	13.2%	22.9%
Continental Concern Species also with RD = 5	13	1.9%	3.4%

Regional Concern Species (Table 15)	51	7.6%	13.3%
Regional Concern Species also with RD =5	6	0.9%	1.6%
Stewardship-Only * (Table 16)	11	1.6%	2.9%
Total Stewardship species **	30	4.5%	7.8%

\* Species with RD =5 that are not included as Continental or Region Concern Species.

\*\* A total of all Stewardship Species from Continental and Regional Concern, and Stewardship/Responsibility lists.

## **Pacific Lowlands Habitat Sections**

### **Habitat Discussions:**

The following sections describe the major habitats found in the Pacific Lowlands Region. Land managers, landowners, conservationists, and others can use this feature of the plan to focus on the habitats in their area and thus the birds and recommendations of interest. The habitat descriptions given are intended to be a general picture of the landscape. Detailed habitat descriptions of these major habitat types can be found in many other sources (see Literature Cited for references). Bird species from the Pacific Lowlands Continental and Regional Concern Tables are sorted into their habitat(s) of primary use and are shown in the following habitat tables. Some birds use more than one primary habitat and thus will appear in more than one habitat section. Continental (CC) and Regional (RC) Concern categories are explained above. If a species is included in the habitat table as needing attention, all subspecies present in the Region are included by listing the full species. However, if a subspecies or population is of Concern, the full species may also be listed in the Habitat Tables if there are other possible subspecies or populations needing attention in the Region.

The habitat tables that follow also include, Conservation Action, Habitat Needs, and Population Objectives. The “Conservation Action” category column (Cons. Action) indicates the urgency and level of need for conservation efforts for that species. The SJV Technical Committee assigned each species to a Conservation Action category based on their knowledge and expertise. The Immediate Action (IM) category indicates that action is urgently needed to reverse or stabilize significant, long-term population declines of species with small populations or to protect species with small populations for which trends are poorly known. Populations of these species are at risk of extirpation over portions of their range and immediate and focused attention to their needs represent the highest conservation priority. Management Attention (MA) indicates that recommended management is needed to reverse significant long-term population declines or sustain vulnerable populations.

Although many of these species are still relatively widespread, actions are necessary to prevent these species from becoming in danger of regional or range-wide extirpation in the future. Planning and Responsibility (PR) indicates species with relatively stable populations, regardless of population size or relatively abundant species for which population trends are poorly known. Many species in this category are also Stewardship Responsibility species. Often the action needed is long term planning and monitoring. Although this is considered a lower conservation category, action is still needed to protect vulnerable species while they have relatively healthy populations.

Conservation Actions categories are an important aspect of the Plan for land managers and conservation planners. The “IM” category provides a quick look at the species in the most need (usually critical need) of conservation action. As projects are planned in the various habitats, the “IM” species should be the first to be considered for beneficial habitat and population actions followed by the “MA” species. “PR” species are often species with less exacting habitat requirements than “IM” or “MA” species and will be benefited by actions for “IM” and “MA” species. If “PR” species are present in a project area their populations should be maintained. Concern categories are also a feature of the Plan that will direct research and monitoring projects. “IM” species often need intense, immediate research to determine the cause(s) of their declines. “MA” species usually need work on habitat relationships in order to better manage their habitat. All three categories must have long-term population trend monitoring.

Specific “Habitat Needs” are given for species that have habitat requirements or characteristics that define where they successfully breed or winter. This information can be used to find suitable habitat in order to manage it or to survey for the species of interest. The information may also be used to restore or enhance those habitat components necessary for a species to breed or winter successfully. If a species generally uses the habitat described in the habitat section and has no specific habitat needs other than well-developed habitat, then “generalist” is shown in this column. In addition, if the habitat needs for a species are not well known, then “specifics unknown (?)” is shown.

Species population objectives fall into one of four possible categories: Maintain, Maintain/Determine Status, Increase by 50%, or Double. For breeding or resident species, the objectives, described above under “Format of Plan” section, are based on regional population trend or expert opinion of trend when actual trend has not been measured reliably. Population objectives given for species only present during the nonbreeding seasons are based on the continental population trend. They should be interpreted as “a nonbreeding population that supports the breeding population objective of (whichever objective is given) the current population”. Population objectives may relate directly to habitat objectives (for instance, a doubling of a population may only be accomplished by a doubling of habitat area). However, increasing the population may be accomplished by other actions, such as improving the condition of existing habitat, preventing capture for the pet trade, or a combination of several actions.

Habitat tables are sorted first by Conservation Action (Immediate Action, Management Attention, and Planning and Responsibility), then by Population Objective (Double, Increase by 50%, Maintain/Determine Status, Maintain), and finally by taxonomic order. Species that are high responsibility due to a large portion of their population (RD=5) residing in this Region are shown in bold.

For further descriptions and reading regarding the following habitats, the reader may refer to:

Brown (1994), and Ybarra (2004; Gulf of California).

Abbreviations for sources for Habitat Needs are as follows:

Howell and Webb (1995) = (H&W)

Russell and Monson (1998) = (R&M)

Pronatura-Sinaloa expert group, pers. comm. = (PS)

## **Habitat: Tropical Deciduous Forest**

**Location:** Western slope and canyons of Sierra Madre Occidental parallel with the coastline.

**Dominant plant species:** Mauto (*Lysiloma divaricata*), Kapok/Pochote (*Ceiba acuminata*), Copal/Torote (*Bursera laxiflora*), Hecho/Cardón (*Pachycereus pecten-aboriginum*).

**Physical/biological descriptions:** Semi-arid, drought deciduous, hot with monsoon rain patterns; canopy up to 20m; includes thornscrub of central Sonora.

**Threats:** Erosion, unsustainable grazing, land conversion/development, catastrophic fires, invasive/nonnative species; capture and sale of parrots (psittacines) and Painted Buntings; unsustainable timber harvesting, habitat conversion due to agriculture, mining.

**Opportunities for cooperation on conservation actions:** Work with private landowners and ejidos; coordinate with current efforts on Painted Bunting protection.

**Primary Conservation Needs/Actions:** Timber harvest management, sustainable harvest of Vara Blanca (*Croton fragilis*), grazing management, erosion control, planned development, fire management, nonnative species control (grasses); educate about the unsustainable capture and sale of psittacines, Painted Buntings, and other species; promote education of the importance of tropical deciduous forest; protect various examples of intact TDF, protect tall trees within TDF, protect cavity trees and trees used for foraging.

### **Priority Species for Tropical Deciduous Forest**

<b>Species</b>	<b>Concern Category*</b>	<b>Cons. Action**</b>	<b>Habitat Need</b>	<b>30-Year Population Objective</b>
King Vulture	CC	IM	Former resident breeder, humid and semi-humid forest (H&W); extirpated?	<i>Double/Determine Presence</i>
<b>Green “Cuchajaqui” Parakeet</b>	CC	IM	<b>Nest in tree cavities, termitaries, and colonially in rock crevices (H&amp;W); <i>A.h.brewsteri</i> only</b>	<i>Double</i>
Military Macaw	CC	IM	Semi-deciduous forests in foothills, nests in tree cavities and rock crevices (H&W)	<i>Double</i>
<b>Lilac-crowned Parrot</b>	CC	IM	<b>Semi-deciduous forest and edge, cavity nester (H&amp;W)</b>	<i>Double</i>
Painted Bunting	CC	IM	Arid thorn forest (nonbreeding) (H&W)	<i>Double</i>
Crested Guan	CC	IM	Tall trees in canyons (PS)	<i>Increase by 50%</i>
<b>Mexican Parrotlet</b>	CC	IM	<b>Semi-deciduous to deciduous forest, cavity nester (H&amp;W)</b>	<i>Increase by 50%</i>
Vermiculated	RC	MA	Semi-deciduous forest, dense	<i>Double</i>

<b>Species</b>	<b>Concern Category*</b>	<b>Cons. Action**</b>	<b>Habitat Need</b>	<b>30-Year Population Objective</b>
Screech-Owl			scrubby woodland (H&W)	
<b>Bell's Vireo</b>	<b>CC</b>	<b>MA</b>	<b>Brushy woodland, semi-open areas with bushes, scrub, and hedges (H&amp;W)</b>	<b>Double</b>
Hook-billed Kite	RC	MA	Thorn forest, land snails (H&W)	<i>Increase by 50%</i>
Collared Forest-Falcon	RC	MA	Deciduous forest (H&W)	<i>Increase by 50%</i>
<b>Mangrove Cuckoo</b>	<b>CC</b>	<b>MA</b>	<b>Woodland and edge (H&amp;W)</b>	<b><i>Increase by 50%</i></b>
Buff-collared Nightjar	RC	MA	Brushy woodland, scrub, thorn forest (H&W)	<i>Increase by 50%</i>
Gray-crowned Woodpecker	CC	MA	Specifics unknown (?)	<i>Increase by 50%</i>
Ivory-billed Woodcreeper	RC	MA	Forest and edge, specifics unknown (H&W)	<i>Increase by 50%</i>
Black-capped Vireo	CC	MA	Brushy second growth and forest edge (nonbreeding) (H&W)	<i>Increase by 50%</i>
<b>Purplish-backed Jay</b>	<b>CC</b>	<b>MA</b>	<b>Arid to semi-arid forest and edge (H&amp;W)</b>	<b><i>Increase by 50%</i></b>
Red-breasted Chat	CC	MA	Arid to semi-arid thorn forest, scrubby woodland (H&W)	<i>Increase by 50%</i>
Botteri's Sparrow	RC	MA	Thorn forest with grassy clearings (H&W); tall, coarse grass with associated scattered shrubs (R&M)	<i>Increase by 50%</i>
Bat Falcon	RC	PR	Forest edge and clearings with scattered trees, cavity nester (H&W)	<i>Double</i>
Rosy Thrush-Tanager	CC	PR	Dense understory of brushy woodland (H&W)	<i>Double</i>
Thicket Tinamou	RC	PR	Second growth woodland, thickets, and edge (H&W)	<i>Increase by 50%</i>
Laughing Falcon	RC	PR	Forest, edge, open areas with scattered trees, cavity nester (H&W)	<i>Increase by 50%</i>
<b>Rufous-bellied Chachalaca</b>	<b>RC</b>	<b>PR</b>	<b>Arid to semi-humid woodland, thorn forest, and second growth (H&amp;W)</b>	<b><i>Increase by 50%</i></b>
Red-billed Pigeon	RC	PR	Large fruiting trees especially along streams and around clearings (R&M)	<i>Increase by 50%</i>
Lesser Ground-Cuckoo	CC	PR	Thorn forest, brushy scrub, and forest patches (H&W)	<i>Increase by 50%</i>
Mottled Owl	RC	PR	Forest edges and semi-open areas, cavity nester (H&W); near riparian areas with large trees (R&M)	<i>Increase by 50%</i>
Sparkling-tailed Hummingbird	CC	PR	Forest edge, brushy second growth (H&W)	<i>Increase by 50%</i>
Citreoline Trogon	CC	PR	Nests in termitaries and cavities (H&W)	<i>Increase by 50%</i>

<b>Species</b>	<b>Concern Category*</b>	<b>Cons. Action**</b>	<b>Habitat Need</b>	<b>30-Year Population Objective</b>
<b>Elegant Trogon</b>	CC	PR	<b>Cavity nester (H&amp;W)</b>	<b>Increase by 50%</b>
Pale-billed Woodpecker	CC	PR	Forest and edge, cavity nester (H&W)	Increase by 50%
Northern Beardless-Tyrannulet	RC	PR	Arid to semi-humid woodland, second growth, semi-open areas with scrub and scattered trees (H&W); with some trees >8m tall, near water (R&M)	Increase by 50%
Willow Flycatcher	CC	PR	Humid to semi-arid scrubby fields with hedges, fences, woodland and edge (nonbreeding) (H&W)	Increase by 50%/Determine Breeding Status in NE Sonora
Bright-rumped Attila	RC	PR	Humid to semi-arid forest and edge, scrubby woodland (H&W)	Increase by 50%
<b>Nutting's Flycatcher</b>	<b>RC</b>	<b>PR</b>	<b>Arid to semi-arid scrubby woodland, thorn forest, semi-open areas with scrub and small trees, cavity nester (H&amp;W)</b>	<b>Increase by 50%</b>
<b>Brown-crested Flycatcher</b>	<b>RC</b>	<b>PR</b>	<b>Arid to semi-humid forest and edge, scrubby woodland, open areas with hedges, scattered trees, cavity nester (H&amp;W)</b>	<b>Increase by 50%</b>
Flammulated Flycatcher	CC	PR	Arid to semi-arid thorn forest and scrubby woodland, cavity nester (H&W)	Increase by 50%
Sulphur-bellied Flycatcher	RC	PR	Humid to semi-arid forest, edge and clearings, cavity nester (H&W)	Increase by 50%
Thick-billed Kingbird	CC	PR	Woodland and edge, semi-open areas with trees, hedges, scrub (H&W)	Increase by 50%
Rose-throated Becard	RC	PR	Near riparian (R&M)	Increase by 50%
Golden Vireo	CC	PR	Arid to semi-humid scrub, thorn forest, woodland, forest edge (H&W)	Increase by 50%
Yellow-green Vireo	RC	PR	Forest and woodland, scrubby forest edge (H&W)	Increase by 50%
<b>Black-throated Magpie-Jay</b>	<b>CC</b>	<b>PR</b>	<b>Arid to semi-humid woodland, semi-open areas with scattered trees (H&amp;W)</b>	<b>Increase by 50%</b>
<b>Sinaloa Wren</b>	<b>RC</b>	<b>PR</b>	<b>Forest, edge, second growth (H&amp;W); large emergent trees, arroyo banks and slopes with undergrowth (R&amp;M)</b>	<b>Increase by 50%</b>
<b>Happy Wren</b>	<b>RC</b>	<b>PR</b>	<b>Forest, edge, second growth (H&amp;W); dense thickets, near water and large trees (R&amp;M)</b>	<b>Increase by 50%</b>
<b>Black-capped Gnatcatcher</b>	<b>CC</b>	<b>PR</b>	<b>Arid to semi-arid scrub, thorn forest (H&amp;W); dense vegetation along washes (R&amp;M)</b>	<b>Increase by 50%</b>

<b>Species</b>	<b>Concern Category*</b>	<b>Cons. Action**</b>	<b>Habitat Need</b>	<b>30-Year Population Objective</b>
White-throated Robin	RC	PR	Forest and edge, arid deciduous forest (at least seasonally) (H&W)	<i>Increase by 50%</i>
Blue Mockingbird	RC	PR	Scrubby woodland and understory (H&W)	<i>Increase by 50%</i>
Tropical Parula	RC	PR	Large trees with Spanish moss (H&W)	<i>Increase by 50%</i>
Fan-tailed Warbler	CC	PR	Open, rocky understory (H&W)	<i>Increase by 50%</i>
<b>Yellow Grosbeak</b>	<b>CC</b>	<b>PR</b>	<b>Large trees, near well-wooded watercourses (R&amp;M); Edge, scrubby woodland, thorn forest (H&amp;W)</b>	<b><i>Increase by 50%</i></b>
Blue Bunting	CC	PR	Brushy forest, woodland, and edge, scrubby thickets (H&W)	<i>Increase by 50%</i>
<b>Varied Bunting</b>	<b>CC</b>	<b>PR</b>	<b>Thorn forest, edge, scrubby woodland, overgrown clearings (H&amp;W); also scrub near riparian (R&amp;M)</b>	<b><i>Increase by 50%</i></b>
Rusty-crowned Ground-Sparrow	RC	PR	Brushy woodlands and thorn forest, hedges and thickets (H&W)	<i>Increase by 50%</i>
Olive Sparrow	RC	PR	Arid to semi-humid, deciduous forest, woodland, thorn forest (H&W)	<i>Increase by 50%</i>
Rufous-winged Sparrow	CC	PR	Arid to semi-arid thorn forest and brushy scrub (H&W); thornscrub with tall tobosa grasses to short false grama grass (R&M)	<i>Increase by 50%</i>
<b>Five-striped Sparrow</b>	<b>CC</b>	<b>PR</b>	<b>Arid to semiarid brushy scrub and thorn forest, typically on rocky slopes, more open scrub and grassy areas in winter (H&amp;W); rocky well-vegetated hillsides and canyon slopes (R&amp;M)</b>	<b><i>Increase by 50%</i></b>
Elf Owl	CC	PR	Arid to semi-arid wooded canyons, thorn forest, semi-open areas with scrub and scattered trees, cavity nester (H&W); nest in cavities large cacti or trees (R&M)	<i>Maintain/Determine Status</i>
Costa's Hummingbird	CC	PR	Arid to semi-arid scrub, open areas with scattered bushes and trees (H&W); nonbreeding? (R&M)	<i>Maintain/Determine Status</i>
Bendire's Thrasher	CC	PR	Arid to semi-arid, open and semi-open areas, with scattered scrub, cacti, hedges (H&W); nonbreeding? (R&M)	<i>Maintain/Determine Status</i>
Harris's Hawk	RC	PR	Arid to semi-arid areas with brush, large cacti, thorn scrub, nests in large cacti or tree (H&W);	<i>Maintain</i>

<b>Species</b>	<b>Concern Category*</b>	<b>Cons. Action**</b>	<b>Habitat Need</b>	<b>30-Year Population Objective</b>
			nest in large saguaro, cardón, or hecho (R&M)	
Orange-fronted Parakeet	CC	PR	Arid to semi humid forest, scattered forest patches and trees, nest in termitaries, or cavities (H&W)	<i>Maintain</i>
White-naped Swift	CC	PR	Cavity nester (PS); aerial and wide-ranging, arid highlands (H&W)	<i>Maintain</i>
Golden-crowned Emerald	CC	PR	Brushy woodland and scrub, overgrown clearings, forest edge (H&W)	<i>Maintain</i>
Violet-crowned Hummingbird	RC	PR	Arid to semi-arid scrub, thorn forest (H&W); near riparian (R&M)	<i>Maintain</i>
<i>Lucy's Warbler</i>	<i>CC</i>	<i>PR</i>	<i>Arid scrub, mesquite, (H&amp;W); nests behind loose bark or in cavity, breeds northern part of region only, winters southern part (R&amp;M)</i>	<i>Maintain</i>

\* CC=Continental Concern Species; RC=Regional Concern Species

\*\*IM=Immediate Action; MA=Management Attention; PR=Long-term Planning and Responsibility

## **Habitat: Pine-Oak Forest**

**Location:** This habitat type extends from the north central part of Sonora and Chihuahua to the northern part of the state of Jalisco along the Sierra Madre Occidental; the Pine-Oak zone is located from 800 m to the highest peaks of the Sierra.

**Dominant plant species:** The two most dominant groups are pines (*Pinus* spp.) and oaks (*Quercus* spp.), other species found include madrone (*Arbutus* spp.).

**Physical/biological descriptions:** From savannah-like woodlands to forest; includes mixed conifer forests in mountains with appropriate elevation.

**Threats:** Unsustainable logging, unsustainable grazing, erosion, and conversion to other uses.

Opportunities for cooperation on conservation actions: Work with ejidos, local communities, CONANP.

**Primary Conservation Needs/Actions:** Protection of large trees, cavity trees, and extensive forested landscapes; augment protection zones; prevent loss and reduction of quality habitat areas.

### **Priority Species in Pine-Oak Forest**

<b>Species</b>	<b>Concern Category</b>	<b>Cons. Action</b>	<b>Habitat Need</b>	<b>Population Objective</b>
King Vulture	CC	IM	Humid and semi-humid forest (H&W)	<i>Determine status</i>
<b>Green “Cuchajaqui” Parakeet</b>	CC	<b>IM</b>	<b>Nests in tree cavities, termitaries, and colonially in rock crevices (H&amp;W); <i>A.h.brewsteri</i> only</b>	<b><i>Double</i></b>
Military Macaw	CC	IM	Large snags, tree cavities, rock crevices (H&W)	<i>Double</i>
<b>Lilac-crowned Parrot</b>	<b>CC</b>	<b>IM</b>	<b>Cavity nester (H&amp;W)</b>	<b><i>Double</i></b>
Crested Guan	CC	IM	Tall trees in canyons (PS)	<i>Increase by 50%</i>
Bat Falcon	RC	MA	Nest in tree cavities, edges and clearings, scattered trees (H&W)	<i>Double</i>
<b>Rufous-bellied Chachalaca</b>	<b>RC</b>	<b>PR</b>	<b>Arid to semi-humid woodland, and second growth (H&amp;W)</b>	<b><i>Increase by 50%</i></b>
Wild Turkey	RC	MA	Grassy understory with some shrubs	<i>Increase by 50%</i>
Gray-crowned Woodpecker	CC	MA	Cavity trees, specifics unknown (?)	<i>Increase by 50%</i>
Elegant Euphonia	CC	MA	Tall trees in canyons; mistletoe (PS)	<i>Maintain/Determine Status</i>
Red-billed Pigeon	RC	PR	Riparian vegetation (PS)	<i>Increase by 50%</i>
Vermiculated Screech-Owl	RC	PR	Dense woods and shrubs (H&W)	<i>Increase by 50%</i>

<b>Species</b>	<b>Concern Category</b>	<b>Cons. Action</b>	<b>Habitat Need</b>	<b>Population Objective</b>
Mottled Owl	RC	PR	Nest in tree cavities, old nests of other birds (H&W)	<i>Increase by 50%</i>
Mountain Trogon	RC	PR	Nest in tree cavities/rotten stumps (H&W)	<i>Increase by 50%</i>
<b>Elegant Trogon</b>	<b>CC</b>	<b>PR</b>	<b>Nest in tree cavities (H&amp;W)</b>	<b><i>Increase by 50%</i></b>
Pale-billed Woodpecker	CC	PR	Large trees for cavities, open gallery forest (R&M)	<i>Increase by 50%</i>
Tufted Flycatcher	RC	PR	Humid to semi-humid forest and edge (H&W)	<i>Increase by 50%</i>
Cordilleran Flycatcher	RC	PR	Shady arroyos (H&W)	<i>Increase by 50%</i>
Bright-rumped Attila	RC	PR	Nest in epiphytes, tree cavities, banks (H&W)	<i>Increase by 50%</i>
<b>Brown-crested Flycatcher</b>	<b>RC</b>	<b>PR</b>	<b>Near riparian, extensive large trees with a closed canopy (R&amp;M)</b>	<b><i>Increase by 50%</i></b>
Sulphur-bellied Flycatcher	RC	PR	Nest in tree cavities, natural or woodpecker-made (R&M)	<i>Increase by 50%</i>
Gray-collared Becard	CC	PR	Oak-dominated (R&M)	<i>Increase by 50%</i>
Rose-throated Becard	RC	PR	Near riparian (R&M)	<i>Increase by 50%</i>
Brown-backed Solitaire	CC	PR	Specifics unknown (?)	<i>Increase by 50%</i>
White-throated Robin	RC	PR	Deep canyon bottoms, near water (R&M)	<i>Increase by 50%</i>
Blue Mockingbird	RC	PR	Dense understory (H&W)	<i>Increase by 50%</i>
Tropical Parula	RC	PR	Humid to semi-arid forest and edge (H&W)	<i>Increase by 50%</i>
Painted Redstart	RC	PR	Nest in bank or on slope (H&W)	<i>Increase by 50%</i>
Slate-throated Redstart	RC	PR	Semi-humid forest and woodland (H&W)	
Flame-colored Tanager	RC	PR	Pines and Arizona cypresses (R&M)	<i>Increase by 50%</i>
Red-headed Tanager	CC	PR	Specifics unknown?	<i>Increase by 50%</i>
<b>Yellow Grosbeak</b>	<b>CC</b>	<b>PR</b>	<b>Often in fruiting trees (H&amp;W)</b>	<b><i>Increase by 50%</i></b>
Eared Poorwill	CC	PR	Specifics unknown (?)	<i>Maintain/Determine Status</i>
<i>White-naped Swift</i>	<i>CC</i>	<i>PR</i>	<i>Cavity nester; specifics unknown (?)</i>	<i>Maintain/Determine Status</i>

\* CC=Continental Concern Species; RC=Regional Concern Species

\*\*IM=Immediate Action; MA=Management Attention; PR=Long-term Planning and Responsibility

## **Habitat: Desert Grassland**

**Location:** In the northern portion of the Region; in valleys at lower elevations.

**Dominant plant species:** Originally perennial bunch grasses, continuous grazing has shifted to low growing sod grasses; dry-tropic shrubs and small trees such as mesquite were natural elements but now found in greater abundance.

**Physical/biological descriptions:** Temperate, dry climate, monsoon rain patterns.

**Threats:** Unsustainable grazing, erosion, woody shrub encroachment, nonnative/invasive species.

**Opportunities for cooperation on conservation actions:** Importance as wintering grounds for migratory birds from the Great Plains, work with landowners to improve habitat in partnership with northern states and provinces.

**Primary Conservation Needs/Actions:** Grazing management, erosion control, nonnative/invasive species control, woody shrub control, proper fire management.

### **Priority Species for Desert Grassland**

<b>Species</b>	<b>Concern Category*</b>	<b>Cons. Action**</b>	<b>Habitat Need</b>	<b>30-Year Population Objective</b>
Short-eared Owl	CC	MA	Open areas, with abundant prey (nonbreeding) (ABBA)	<i>Double</i>
Botteri's Sparrow	RC	MA	Sacaton or other native bunch grass (ABBA); tall, coarse grass with scattered shrubs (R&M);	<i>Increase by 50%</i>
<b>Five-striped Sparrow</b>	CC	PR	<b>Rocky hillsides, scrub, scattered grass and forbs (ABBA)</b>	<b><i>Increase by 50%/Determine presence</i></b>
<b>Nutting's Flycatcher</b>	RC	PR	<b>Cavity nester (R&amp;M)</b>	<b><i>Increase by 50%</i></b>
Dickcissel	CC	PR	Overgrown, weedy fields (nonbreeding) (H&W)	<i>Increase by 50%</i>
Bendire's Thrasher	CC	PR	Open country and grassy area with scattered scrub, cacti, hedges (H&W); scattered mesquite, acacia, yucca (ABBA)	<i>Maintain/Determine Status</i>
<i>Rufous-winged Sparrow</i>	CC	PR	<i>Scattered shrub, trees, with grass cover (ABBA); tall tobosa grass to short false grama (R&amp;M)</i>	<i>Maintain</i>

\* CC=Continental Concern Species; RC=Regional Concern Species

\*\*IM=Immediate Action; MA=Management Attention; PR=Long-term Planning and Responsibility

## **Habitat: Riparian Wetland**

**Location:** Along water courses, throughout Pacific Lowlands Region, all elevations.

**Dominant plant species:** Cottonwoods (*Populus* spp.), willows (*Salix* spp.), sycamores (*Plantanus* spp.).

**Physical/biological descriptions:** Water present at least during a part of the year.

**Threats:** Groundwater pumping, erosion, nonnative/invasive species, pollution, disturbance due to recreation; unsustainable timber harvest, habitat loss due to urban and agricultural expansion.

**Opportunities for cooperation on conservation actions:** Work with local people to improve habitat.

**Primary Conservation Needs/Actions:** Water conservation, watershed management, grazing management, fencing, erosion control, nonnative/invasive species control; sustainable hunting of Muscovy Duck and sustainable capture of macaws, parrots, and parrotlets; protection of riparian habitat.

### **Priority Species in Riparian Wetland**

<b>Species</b>	<b>Concern Category*</b>	<b>Cons. Action**</b>	<b>Habitat Need</b>	<b>30-Year Population Objective</b>
Military Macaw	CC	IM	Cavity nester	<i>Double</i>
Painted Bunting	CC	IM	Winter and in migration (R&M, H&W)	<i>Double</i>
Muscovy Duck	CC	MA	Cavity nester; wooded rivers; locally extirpated by hunting (H&W)	<i>Double</i>
Rosy Thrush-Tanager	CC	MA	Specifics unknown (?)	<i>Double</i>
<b>Mexican Parrotlet</b>	<b>CC</b>	<b>MA</b>	<b>Cavity nester, protection from capture (PS)</b>	<b><i>Increase by 50%</i></b>
Yellow-billed "Western" Cuckoo	RC	MA	Densely wooded, multi-structured, native vegetation (ABBA)	<i>Increase by 50%</i>
Citreoline Trogon	CC	MA	Cavity nester (PS)	<i>Increase by 50%</i>
<b>Elegant Trogon</b>	<b>CC</b>	<b>MA</b>	<b>Cavity nester (PS)</b>	<b><i>Increase by 50%</i></b>
Black-capped Vireo	CC	MA	Humid brushy second growth and edge (H&W)	<i>Increase by 50%</i>
<b>Purplish-backed Jay</b>	<b>CC</b>	<b>MA</b>	<b>Forest and edge (H&amp;W); near water</b>	<b><i>Increase by 50%</i></b>
Red-breasted Chat	CC	MA	Shrubby areas (PS)	<i>Increase by 50%</i>
Song Sparrow	RC	MA	Flowing streams or ciénegas with thickets of <i>Senecio salignus</i> , batamote, and willow (R&M)	<i>Increase by 50%</i>
Black-collared Hawk	RC	PR	Slow moving rivers (H&W); tall trees (PS), specifics unknown (?)	<i>Double</i>
Bare-throated Tiger-Heron	RC	PR	Wooded edges or trees but not in heavy forest (H&W)	<i>Increase by 50%</i>
Red-billed Pigeon	RC	PR	Tall trees and canyons (PS)	<i>Increase by 50%</i>
Sparkling-tailed	CC	PR	Nectar sources and nearby perches	<i>Increase by 50%</i>

<b>Species</b>	<b>Concern Category*</b>	<b>Cons. Action**</b>	<b>Habitat Need</b>	<b>30-Year Population Objective</b>
Hummingbird			(PS)	
Pale-billed Woodpecker	CC	PR	Specifics unknown (?)	<i>Increase by 50%</i>
Northern Beardless-Tyrannulet	RC	PR	Shrubby, with some trees at least 8m tall, flowing water often present (R&M)	<i>Increase by 50%</i>
Tufted Flycatcher	RC	PR	Humid to semi-humid forest and edge, riparian in winter (H&W)	<i>Increase by 50%</i>
Willow Flycatcher	CC	PR	Mesic riparian in winter (nonbreeding) (PS)	<i>Increase by 50%</i>
Cordilleran Flycatcher	RC	PR	Specifics unknown in winter (?)	<i>Increase by 50%</i>
<b>Brown-crested Flycatcher</b>	<b>RC</b>	<b>PR</b>	<b>Extensive large trees with a closed canopy (R&amp;M)</b>	<b><i>Increase by 50%</i></b>
Flammulated Flycatcher	CC	PR	Cavity nester (H&W)	<i>Increase by 50%</i>
Thick-billed Kingbird	CC	PR	Edges and semi-open areas (H&W)	<i>Increase by 50%</i>
Gray-collared Becard	CC	PR	Specifics unknown (?)	<i>Increase by 50%</i>
Rose-throated Becard	RC	PR	Edges, open areas, and groves (H&W)	<i>Increase by 50%</i>
Golden Vireo	CC	PR	Scrub and edges (H&W)	<i>Increase by 50%</i>
Yellow-green Vireo	RC	PR	Not in heavy forest (H&W)	<i>Increase by 50%</i>
<b>Black-throated Magpie-Jay</b>	<b>CC</b>	<b>PR</b>	<b>Specifics unknown (?)</b>	<b><i>Increase by 50%</i></b>
<b>Sinaloa Wren</b>	<b>RC</b>	<b>PR</b>	<b>Shrubby edge and second growth (H&amp;W)</b>	<b><i>Increase by 50%</i></b>
<b>Happy Wren</b>	<b>RC</b>	<b>PR</b>	<b>Shrubby edge and second growth (H&amp;W)</b>	<b><i>Increase by 50%</i></b>
<b>Black-capped Gnatcatcher</b>	<b>CC</b>	<b>PR</b>	<b>Dense vegetation along water courses (R&amp;M)</b>	<b><i>Increase by 50%</i></b>
Brown-backed Solitaire	CC	PR	Use riparian in northern part of range? (R&M)	<i>Increase by 50%</i>
White-throated Robin	RC	PR	Deep canyon bottoms (H&W)	<i>Increase by 50%</i>
Blue Mockingbird	RC	PR	Mountain streams, floodplain thickets (R&M)	<i>Increase by 50%</i>
Painted Redstart	RC	PR	Wintering in riparian woodlands (R&M)	<i>Increase by 50%</i>
Fan-tailed Warbler	CC	PR	Sycamores in Sonora (R&M)	<i>Increase by 50%</i>
Flame-colored Tanager	RC	PR	High elevation riparian (?) (R&M)	<i>Increase by 50%</i>
Blue Bunting	CC	PR	Specifics unknown (?)	<i>Increase by 50%</i>
<b>Varied Bunting</b>	<b>CC</b>	<b>PR</b>	<b>Scrub adjacent to riparian (R&amp;M)</b>	<b><i>Increase by 50%</i></b>
Olive Sparrow	RC	PR	Shrubby areas (PS); specifics unknown (?)	<i>Increase by 50%</i>
Rusty-crowned Ground-Sparrow	RC	PR	Shrubby areas (PS); specifics unknown (?)	<i>Increase by 50%</i>
Golden-crowned Emerald	CC	PR	Brushy woodland, scrub and edge (H&W)	<i>Maintain/Determine Status</i>
Violet-crowned Hummingbird	RC	PR	Riparian woodland (H&W); gallery riparian woodland in northern range, riparian within thornscrub and deciduous forest in southern range (R&M)	<i>Maintain</i>
<i>Lucy's Warbler</i>	<i>CC</i>	<i>PR</i>	<i>Mesquite bosques, washes with ironwoods, mesquites, palo verde and chinos, at low elevation in willows,</i>	<i>Maintain</i>

<b>Species</b>	<b>Concern Category*</b>	<b>Cons. Action**</b>	<b>Habitat Need</b>	<b>30-Year Population Objective</b>
			<i>sycamores and oaks (R&amp;M); cavity nester or nests behind bark shred; winters only south of Hermosillo</i>	

\* CC=Continental Concern Species; RC=Regional Concern Species

\*\*IM=Immediate Action; MA=Management Attention; PR=Long-term Planning and Responsibility

## **Habitat: Freshwater Wetlands**

**Location:** Widely scattered throughout the Region.

**Dominant plant species:** Mixture of aquatic emergent vegetation, dominated by cattails (*Typha* spp.) and rushes (*Scirpus* spp.).

**Physical/biological descriptions:** Freshwater, from small seeps (<1 ha) to large reservoirs including cienegas, marshes, backwaters, oxbows, and along minor and major rivers especially lower portions of basins.

**Threats:** Groundwater pumping, water diversions/water extraction, land conversion to urban and agriculture, draining, nonnative/invasive species (e.g., fish, bullfrogs, crayfish, aquatic plants), and unsustainable grazing.

**Opportunities for cooperation on conservation actions:** North American Wetland Conservation Act projects; work with Natural Protected Areas.

**Primary Conservation Needs/Actions:** Promote no net loss, encourage restoration of destroyed or degraded sites, awareness, avoid development near wetlands, manage the hunting season (i.e., bag limits, seasons).

### **Priority Species for Freshwater Wetlands**

<b>Species</b>	<b>Concern Category*</b>	<b>Cons. Action**</b>	<b>Habitat Need</b>	<b>30-Year Population Objective</b>
Muscovy Duck	CC	IM	Wooded marshes, cavity nester (H&W); sustainable hunting	<i>Double</i>
Yellow-breasted Crake	CC	IM	Aquatic vegetation (PS); grassy marshes, floating aquatic vegetation (H&W)	<i>Increase by 50%</i>
Northern Pintail	CC	MA	Marshes (nonbreeding) (H&W)	<i>Double</i>
Short-eared Owl	CC	MA	Marshes (nonbreeding) (H&W)	<i>Double</i>
Song Sparrow	RC	MA	Freshwater marshes (H&W); thickets of Composite spp. ( <i>Senecio salignus</i> ), Batamote ( <i>Baccharis salicifolia</i> ), and Willow spp. (R&M)	<i>Double</i>
Bare-throated Tiger-Heron	RC	MA	Wooded edges or trees nearby, nests in trees (H&W)	<i>Increase by 50%</i>
American Avocet	CC	MA	Lakes and marshes (nonbreeding) (H&W)	<i>Maintain/Determine Status</i>
Lesser Scaup	CC	PR	Lakes and ponds (H&W)	<i>Double</i>
Black-collared Hawk	RC	PR	Marshes and lakes, nests in shrub or tree (H&W)	<i>Double</i>
Clark's Grebe	CC	PR	Freshwater lakes with surrounding	<i>Maintain/Determine</i>

<b>Species</b>	<b>Concern Category*</b>	<b>Cons. Action**</b>	<b>Habitat Need</b>	<b>30-Year Population Objective</b>
			reedy vegetation (nonbreeding) (H&W)	<i>Status</i>
Little Blue Heron	CC	PR	Nests in bushes and trees (H&W)	<i>Maintain/Determine Status</i>
Purple Gallinule	RC	PR	Freshwater marshes with reedbeds and large areas of floating vegetation (H&W)	<i>Maintain/Determine Status</i>
Solitary Sandpiper	CC	PR	Freshwater marshes, lakes, and ponds (nonbreeding) (H&W)	<i>Maintain/Determine Status</i>
Western Sandpiper	CC	PR	Lakes, reservoirs, ponds (R&M)	<i>Maintain/Determine Status</i>
Stilt Sandpiper	CC	PR	Freshwater marshes and lakes (nonbreeding) (H&W)	<i>Maintain/Determine Status</i>
Lesser Snow Goose- western Central Flyway	RC	PR	Extensive marshes (nonbreeding) (H&W)	<i>Maintain</i>
Gadwall	RC	PR	Marshes (nonbreeding) (H&W)	<i>Maintain</i>
Mallard	CC	PR	Marshes (nonbreeding) (H&W)	<i>Maintain</i>
Blue-winged Teal	RC	PR	Marshes (nonbreeding) (H&W)	<i>Maintain</i>
Cinnamon Teal	RC	PR	Marshes (nonbreeding) (H&W)	<i>Maintain</i>
Northern Shoveler	RC	PR	Marshes (nonbreeding) (H&W)	<i>Maintain</i>
Green-winged Teal	RC	PR	Marshes (nonbreeding) (H&W)	<i>Maintain</i>
Canvasback	RC	PR	Lakes (nonbreeding) (H&W)	<i>Maintain</i>
Redhead	RC	PR	Lakes and marshes with emergent vegetation (nonbreeding) (H&W)	<i>Maintain</i>
<i>Ring-necked Duck</i>	<i>RC</i>	<i>PR</i>	<i>Wooded ponds, lakes, and marshes (nonbreeding) (H&amp;W)</i>	<i>Maintain</i>

\* CC=Continental Concern Species; RC=Regional Concern Species

\*\*IM=Immediate Action; MA=Management Attention; PR=Long-term Planning and Responsibility

## **Habitat: Coastal Wetlands**

**Location:** Occurring along the coast of Sinaloa.

**Dominant plant species:** Iodine Bush (*Allenrolfea occidentalis*) saltbushes (*Atriplex spp.*), Batis (*Batis maritima*), saltgrass (*Distichlis spp.*) and seagrasses/eelgrass (*Zostera spp.*); includes red (*Rhizophora mangle*), white (*Laguncularia racemosa*), and black (*Avicennia germinans*) mangroves.

**Physical/biological descriptions:** Salt water and brackish, tide-flooded estuaries, protected bays, lagoons; little freshwater input; in-shore waters; includes sand, shell, rock shores, beaches, mudflats in the intertidal zone or strand.

**Threats:** Land conversion for aquaculture/tourism/agriculture/urban, wood extraction (mangroves), silting, sewage and other pollutants, unsustainable fishing, disturbance due to off-road vehicles, human disturbance particularly during nesting, and excessive take during hunting.

**Opportunities for cooperation on conservation actions:** Existing heightened awareness of coastal concerns; presence of charismatic species (sea turtles, whales) to bring awareness to ecosystem; work with the Esteros Working Group from the Gulf of California, also the initiative to protect mangrove estuaries; develop local groups to protect nesting colonies; use nesting colonies as an educational opportunity.

**Primary Conservation Needs/Actions:** Protect nesting areas and colonies from disturbance and development; promote sustainable fisheries; protect eelgrass beds from pollution, dredging, and other damage; manage sustainable waterfowl hunting, manage hunting of Muscovy Ducks, and reduce hunting of Brown and Blue-footed boobies; conserve and protect existing coastal wetlands; environmental education; modify Norma Oficial 022 in order to prevent further mangrove deforestation, protect existing mangroves; improve awareness and education; and reduce pet trade of parrots.

### **Priority Species in Coastal Wetlands**

<b>Species</b>	<b>Concern Category*</b>	<b>Cons. Action**</b>	<b>Habitat Need</b>	<b>30-Year Population Objective</b>
Muscovy Duck	CC	IM	Mangroves, nests in tree cavities (PS; H&W)	Double
Lilac-crowned Parrot	CC	IM	Mangroves, cavity nester (PS)	Double
Gull-billed Tern	CC	IM	Beaches, salt marshes, coastal lagoons, rarely off-shore; nests in scrapes (H&W)	Increase by 50%
Collared Plover	RC	IM	Sandy beaches, coastal lagoons (H&W); nests in scrapes	Maintain/Determine Status
Snowy Plover	CC	IM	Sandy beaches, salt ponds, salt flats (H&W); nests in scrapes	Maintain/Determine Status

<b>Species</b>	<b>Concern Category*</b>	<b>Cons. Action**</b>	<b>Habitat Need</b>	<b>30-Year Population Objective</b>
<b>Least Tern</b>	CC	IM	<b>Sandy beaches and islets, coastal bays and lagoons, estuaries; nests colonially on beaches (H&amp;W)</b>	<i>Maintain/Determine Status</i>
Northern Pintail	CC	MA	Estuaries (nonbreeding)(H&W)	<i>Double</i>
Short-eared Owl	CC	MA	Marshes (nonbreeding) (H&W)	<i>Double</i>
Bare-throated Tiger-Heron	RC	MA	Mangroves, nests in trees (H&W)	<i>Increase by 50%</i>
Hook-billed Kite	RC	MA	Mangroves (H&W)	<i>Increase by 50%</i>
Crested Guan	CC	MA	Mangroves (PS)	<i>Increase by 50%</i>
Yellow-breasted Crake	CC	MA	Aquatic vegetation (PS); grassy marshes, floating aquatic vegetation (H&W)	<i>Increase by 50%</i>
<b>Mangrove Cuckoo</b>	CC	MA	<b>In mangroves only in southern part of region (R&amp;M)</b>	<i>Increase by 50%</i>
<b>Purplish-backed Jay</b>	CC	MA	<b>Mangroves (H&amp;W)</b>	<i>Increase by 50%</i>
Blue-footed Booby	CC	MA	Inshore waters often feeds in shallow water off beaches (H&W)	<i>Maintain/Determine Status</i>
Magnificent Frigatebird	CC	MA	Roosts on trees and cliffs; nests in bushes or low trees (H&W)	<i>Maintain/Determine Status</i>
Little Blue Heron	CC	MA	Variety of brackish habitats; nests in bushes and trees (H&W)	<i>Maintain/Determine Status</i>
Reddish Egret	CC	MA	Coastal lagoons, beaches, estuaries, rarely away from salt water; nests in bushes or ground (H&W); mangroves (PS)	<i>Maintain/Determine Status</i>
Rufous-necked Wood-Rail	CC	MA	Mangroves (H&W); specifics unknown (?)	<i>Maintain/Determine Status</i>
Wilson's Plover	CC	MA	Sandy beaches, coastal lagoons, salt ponds (H&W); nests in scrapes	<i>Maintain/Determine Status</i>
American Oystercatcher	CC	MA	Sandy and rocky coasts, rarely estuaries; nest scrape on ground (H&W)	<i>Maintain/Determine Status</i>
Bridled Tern	CC	MA	Rocky islets, adjacent beaches, and headlands; nests in crevice or rather hidden (H&W)	<i>Maintain/Determine Status</i>
Black Skimmer	CC	MA	Coastal lagoons, estuaries, beaches; nest scrape on ground (H&W)	<i>Maintain</i>
Orange-fronted Parakeet	CC	MA	Mnagroves (PS) nest in termitaries, or cavities (H&W)	<i>Maintain</i>
Brant	CC	PR	Coastal bays and estuaries (nonbreeding) (H&W)	<i>Double</i>
Lesser Scaup	CC	PR	Coastal lagoons, estuaries, rarely open ocean (nonbreeding)(H&W)	<i>Double</i>
Black-collared	RC	PR	Mangroves; nests in bush or tree	<i>Double</i>

<b>Species</b>	<b>Concern Category*</b>	<b>Cons. Action**</b>	<b>Habitat Need</b>	<b>30-Year Population Objective</b>
Hawk			near water (H&W); specifics unknown (?)	
Whimbrel	CC	PR	Estuaries, sandy beaches, lagoons (nonbreeding)(H&W)	<i>Double</i>
Sanderling	CC	PR	Sandy beaches, salt lagoons, less often estuaries, rocky coasts (H&W)	<i>Double</i>
Dunlin	CC	PR	Estuaries, coastal lagoons, beaches (nonbreeding)(H&W)	<i>Double</i>
Short-billed Dowitcher	CC	PR	Estuaries, coastal lagoons, beaches (nonbreeding)(H&W)	<i>Double</i>
Long-billed Curlew	CC	PR	Estuaries, salt marshes, lagoons (nonbreeding)(H&W)	<i>Increase by 50%</i>
<b>Marbled Godwit</b>	<b>CC</b>	<b>PR</b>	Estuaries, salt marshes, lagoons, beaches (nonbreeding)(H&W)	<b><i>Increase by 50%</i></b>
Surfbird	CC	PR	Rocky coasts (nonbreeding) (H&W)	<i>Increase by 50%</i>
Mangrove Vireo	CC	PR	Mangroves (H&W); specifics unknown (?)	<i>Increase by 50%</i>
Tropical Parula	RC	PR	Mangroves (H&W); specifics unknown (?)	<i>Increase by 50%</i>
Clark's Grebe	CC	PR	Coastal bays and estuaries (nonbreeding)(H&W)	<i>Maintain/Determine Status</i>
Brandt's Cormorant	CC	PR	Sea coasts, large bays (nonbreeding)(H&W)	<i>Maintain/Determine Status</i>
American Avocet	CC	PR	Estuaries, lagoons (nonbreeding)(H&W)	<i>Maintain/Determine Status</i>
Solitary Sandpiper	CC	PR	Marshes (nonbreeding) (PS)	<i>Maintain/Determine Status</i>
Ruddy Turnstone	RC	PR	Beaches	<i>Maintain/Determine Status</i>
Black Turnstone	CC	PR	Rocky coasts, estuaries, beaches (nonbreeding)(H&W)	<i>Maintain/Determine Status</i>
Western Sandpiper	CC	PR	Coastal lagoons, estuaries, beaches, salt ponds (nonbreeding)(H&W)	<i>Maintain/Determine Status</i>
Stilt Sandpiper	CC	PR	Coastal lagoons, less often estuaries, beaches (nonbreeding)(H&W)	<i>Maintain/Determine Status</i>
Lesser Snow Goose- western central flyway	RC	PR	Estuaries (nonbreeding)(H&W)	<i>Maintain</i>
Gadwall	RC	PR	Coastal lagoons (nonbreeding)(H&W)	<i>Maintain</i>
Mallard	CC	PR	Estuaries (nonbreeding)(H&W)	<i>Maintain</i>
Blue-winged Teal	RC	PR	Coastal lagoons (nonbreeding)(H&W)	<i>Maintain</i>
Cinnamon Teal	RC	PR	Coastal lagoons (nonbreeding)(H&W)	<i>Maintain</i>
Northern Shoveler	RC	PR	Estuaries (nonbreeding)(H&W)	<i>Maintain</i>

<b>Species</b>	<b>Concern Category*</b>	<b>Cons. Action**</b>	<b>Habitat Need</b>	<b>30-Year Population Objective</b>
Green-winged Teal	RC	PR	Estuaries (nonbreeding)(H&W)	<i>Maintain</i>
Canvasback	RC	PR	Coastal bays and lagoons (nonbreeding)(H&W)	<i>Maintain</i>
Redhead	RC	PR	Coastal bays and lagoons (nonbreeding)(H&W)	<i>Maintain</i>
<i>Heermann's Gull</i>	<i>CC</i>	<i>PR</i>	<i>Rocky sea coasts, beaches, harbors, estuaries; nests colonially on ground (H&amp;W)</i>	<i>Maintain</i>

\* CC=Continental Concern Species; RC=Regional Concern Species

\*\*IM=Immediate Action; MA=Management Attention; PR=Long-term Planning and Responsibility

## **Habitat: Islands**

**Location:** Along the coast of Sinaloa.

**Dominant plant species:** Species from mainland desertscrub, cliff/rock, mangroves, and coastal wetlands.

**Physical/biological descriptions:** Often desertic and predominantly rocky, however some of the larger islands have shrublands.

**Threats:** Introduced nonnative species (e.g., cats, rodents, goats, other livestock) that prey on young at nest, human disturbance of breeding colonies, overuse of resources, egg collection, pollution, unsustainable fishing of prey species.

**Opportunities for cooperation on conservation actions:** The islands form a Natural Protected Area in the Gulf of California (Refugio de Vida Silvestre de las Islas del Golfo de California); several institutions work toward the conservation of these islands: Grupo de Ecología y Conservación de Islas (GECI, [www.islandconservation.org](http://www.islandconservation.org)), Comunidad y Biodiversidad, AC (COBI), Conservación de Territorio Isular (ISLA), Secretaria de Marina, CONANP, and the National Institute of Ecology (INE); work with local fishermen. All of the species or subspecies below breed on islands, some only breed on islands, several nest only on islands in the SJV area, bestowing a high level of responsibility on the JV.

**Primary Conservation Needs/Actions:** Remove exotic species, exclude livestock from nesting colonies, protect colonies from disturbance, initiate an education program for fishermen and other groups; reduce threats from pollution, oil spills, overfishing of prey species, and entanglement in fishing nets and lines.

### **Priority Species for Islands**

<b>Species</b>	<b>Concern Category*</b>	<b>Cons. Action**</b>	<b>Habitat Need</b>	<b>30-Year Population Objective</b>
Brown Booby	CC	MA	Nests on steeper and more broken ground than other boobies (H&W); Nayarit breeding	<i>Increase by 50%</i>
Bridled Tern	CC	MA	Rocky islets, Nest in crevice or rather hidden (H&W); Nayarit	<i>Increase by 50%</i>
Red-billed Tropicbird	CC	MA	Nests on islands with steep cliffs; nest in crevices, burrows, shady places on rocky islands (H&W)	<i>Maintain/Determine Status</i>
Blue-footed Booby	CC	MA	Nests on fairly flat ground (H&W)	<i>Maintain/Determine Status</i>
Red-footed Booby	CC	MA	Nests in trees and bushes (H&W); Nayarit breeding	<i>Maintain/Determine Status</i>
Magnificent Frigatebird	CC	MA	Roosts on trees, cliffs; nests in bushes or low trees (H&W)	<i>Maintain/Determine Status</i>

<b>Species</b>	<b>Concern Category*</b>	<b>Cons. Action**</b>	<b>Habitat Need</b>	<b>30-Year Population Objective</b>
Reddish Egret	CC	MA	Nests in bushes or ground (H&W)	<i>Maintain/Determine Status</i>
American Oystercatcher	CC	MA	Sandy and rocky coasts, nest scrape on ground (H&W)	<i>Maintain/Determine Status</i>
<i>Heermann's Gull</i>	<i>CC</i>	<i>PR</i>	<i>Rocky sea coasts, beaches; nests colonially on ground (H&amp;W)</i>	<i>Maintain</i>

\* CC=Continental Concern Species; RC=Regional Concern Species

\*\*IM=Immediate Action; MA=Management Attention; PR=Long-term Planning and Responsibility

## **Habitat: Off Shore/Pelagic**

**Location:** Off the coast of Sinaloa and the interior of the Sea of Cortez.

**Dominant plant species:** None.

**Physical/biological descriptions:** Open water supplied by various currents; waters enriched by the up-welling of nutrient rich deep, cold water.

**Threats:** Depletion of sardines and other fish stocks, fishing lines, pollution, oil spills.

**Opportunities for cooperation on conservation actions:** CONANP, Gulf of California/Sea of Cortez initiatives.

**Primary Conservation Needs/Actions:** There are a large number of species using the open ocean primarily for foraging for fish during the non-breeding months. Needs are protection from entanglement in fishing lines and nets, and protection of fish stocks. The “Objective” given is based on global population trend. The objective is given to indicate the trend and the magnitude of the losses both on the breeding and nonbreeding habitats and provide a target for the restoration of these species. This “habitat type” more than others can only be conserved by wide-scale, national and international policy, and cultural shifts that are for the most part beyond the capacity of the SJV. SJV partners working off-shore can use this information to increase awareness and devise solutions to entanglement problems and over-fishing of certain stocks. This information is provided to show a complete picture of the diversity of the JV. Some of these birds breed on islands off the coast of Sinaloa; others only winter here, breeding elsewhere. The SJV has Planning and Responsibility for their Conservation Action in this habitat. They may have other Conservation Actions in other habitats that they use, especially species that breed in the SJV area.

### **Priority Species for Off Shore/Pelagic Habitats**

<b>Species</b>	<b>Concern Category*</b>	<b>Cons. Action**</b>	<b>Habitat Need</b>	<b>30-Year Population Objective</b>
Sooty Shearwater	CC	PR	Open sea, free from entanglement in fishing lines and nets, and with adequate fish stocks	<i>Increase by 50%</i>
Black-vented Shearwater	CC	PR	“	<i>Increase by 50%</i>
Black Storm-Petrel	CC	PR	“	<i>Increase by 50%</i>
Least Storm-Petrel	CC	PR	“	<i>Increase by 50%</i>
Bridled Tern	CC	PR	“	<i>Increase by 50%</i>
Short-tailed Shearwater	CC	PR	“	<i>Maintain/Determine Status</i>
Wedge-rumped Storm-Petrel	CC	PR	“	<i>Maintain/Determine Status</i>
Red-billed	CC	PR	“	<i>Maintain/Determine</i>

<b>Species</b>	<b>Concern Category*</b>	<b>Cons. Action**</b>	<b>Habitat Need</b>	<b>30-Year Population Objective</b>
Tropicbird				<i>Status</i>
Red-footed Booby	CC	PR	“	<i>Maintain/Determine Status</i>
<i>Brandt's Cormorant</i>	CC	PR	“	<i>Maintain/Determine Status</i>

\* CC=Continental Concern Species; RC=Regional Concern Species

\*\*IM=Immediate Action; MA=Management Attention; PR=Long-term Planning and Responsibility

## **Habitat: Cliff-Rock**

**Location:** Canyons, mountains, outcrops throughout the Region especially in canyons and mountainous areas.

**Dominant plant species:** Lichens, agave (*Agave* spp.), yucca (*Yucca* spp.); scattered and sparse vegetation of the immediate area.

**Physical/biological descriptions:** Natural ledges and crevices in cliff faces, natural caves and overhangs, rocky slopes, rock outcrops, and open rocky ridges and hillsides; bare ground, thin soil.

**Threats:** Disturbance of nesting sites.

**Opportunities for cooperation on conservation actions:** Work with landowners to protect sensitive sites.

**Primary Conservation Needs/Actions:** Identify and protect important sites; education/awareness; prevent disturbance to nests.

### **Priority Species for Cliff-Rock Habitat**

<b>Species</b>	<b>Concern Category*</b>	<b>Cons. Action**</b>	<b>Habitat Need</b>	<b>30-Year Population Objective</b>
Military Macaw	CC	IM	Nests in rock crevices (H&W)	<i>Double</i>
Five-striped Sparrow	CC	PR	Rocky slopes with scrub and thorn forest (H&W)	<i>Increase by 50%</i>
<i>White-naped Swift</i>	<i>CC</i>	<i>PR</i>	<i>Nests colonially in caves, sinkholes, limestone regions, also near waterfalls (H&amp;W)</i>	<i>Maintain</i>

\* CC=Continental Concern Species; RC=Regional Concern Species

\*\*IM=Immediate Action; MA=Management Attention; PR=Long-term Planning and Responsibility

## **Habitat: Urban**

**Location:** Cities and towns throughout the Region.

**Dominant plant species:** Diversity of native and nonnative species, including mesquite (*Prosopis* spp.), eucalyptus (*Eucalyptus* spp.), palms (*Washingtonia* spp. and others), and olive trees (*Elaeagnus* spp.).

**Physical/biological descriptions:** Heavily altered, impervious surface (pavement, etc.); artificial lights, low vegetation cover, water sources (e.g., pools, ponds).

**Threats:** Fragmentation, predation by feral animals (e.g., cats), wildlife diseases, power lines, harassment by people, vehicle and building collisions, invasive/nonnative plants, competition from avian escapees (e.g., parrots).

**Opportunities for cooperation on conservation actions:** Most environmental organizations are located within urban areas, opportunity for environmental education and citizen science projects, working with planners to create wildlife-friendly development, habitat restoration, and tourism.

**Primary Conservation Needs/Actions:** Planned development; water conservation; greenbelts; raptor-friendly power poles; public outreach/education; native landscaping.

### **Priority Species for Urban Habitats**

<b>Species</b>	<b>Concern Category*</b>	<b>Cons. Action*</b>	<b>Habitat Need</b>	<b>30-Year Population Objective</b>
<i>Mexican Parrotlet</i>	<i>CC</i>	<i>MA</i>	<i>Protection from harassment and capture</i>	<i>Increase by 50%</i>

\* CC=Continental Concern Species; RC=Regional Concern Species

\*\*IM=Immediate Action; MA=Management Attention; PR=Long-term Planning and Responsibility

## **Habitat: Agriculture**

**Location:** Valleys and flat topography throughout Region.

**Dominant plant species:** Corn, cotton, grasses (pasture), vineyards, orchards.

**Physical/biological descriptions:** Monoculture, low-diversity, crop fields, pastures, disturbed fields, irrigated fields, fallow fields, and shelter belts.

**Threats:** Pesticides, urban encroachment, water scarcity, abandonment, wildlife conflicts.

**Opportunities for cooperation on conservation actions:** Cooperating with ranchers/farmers on various projects (wildlife-friendly, value-added projects); to use agriculture to increase shorebirds, waterfowl, and winter raptors.

**Primary Conservation Needs/Actions:** Increase collaborative efforts, reduce pesticide use, promote organic farming, water conservation.

### **Priority Species for Agricultural Habitats**

<b>Species</b>	<b>Concern Category*</b>	<b>Cons. Action**</b>	<b>Habitat Need</b>	<b>30-Year Population Objective</b>
Whimbrel	CC	PR	Meadows, fields (Skeel and Mallory 1996)	<i>Double</i>
Long-billed Curlew	CC	PR	Wet pastures, flooded agricultural fields (Dugger and Dugger 2002)	<i>Increase by 50%</i>
<i>Dickcissel</i>	<i>CC</i>	<i>PR</i>	<i>Overgrown weedy fields (H&amp;W)</i>	<i>Increase by 50%</i>

\* CC=Continental Concern Species; RC=Regional Concern Species

\*\*IM=Immediate Action; MA=Management Attention; PR=Long-term Planning and Responsibility

## **Focus Areas for the Pacific Lowlands Region**

Focus Areas are considered important tools for conserving species of concern. A Focus Area is a location that has been identified as having significant bird populations and habitat values, and/or the potential to be restored to a condition that supports bird populations. These places on the landscape can be used to concentrate conservation activities and mobilize action. Conservation activities such as acquisition, restoration, and education can be supported and encouraged, and accomplishments can be showcased.

The Focus Area list is dynamic and will be changed based on objectives of concern species and their habitat needs. These lists will be augmented with areas that might not currently have priority birds but have high restoration potential. Additional Focus Areas will undoubtedly be needed because the habitat contained in all the listed Focus Areas will not likely meet the population objectives of all of the priority species.

The following is a list of the 26 Focus Areas in the Pacific Lowlands Region. They are the Important Bird Areas as designated by the Áreas de Importancia para la Conservación de las Aves en México. Descriptions of these Focus Areas can be found at <http://conabioweb.conabio.gob.mx/aicas/doctos/aicas.html>. A map of the combined SJV Focus Areas will be produced at a later date and included on the SJV website and subsequent versions of the Conservation Plan.

### **Focus Areas in Sonora**

PL-Son-1 Cuenca del Río Yaqui - AICA127

PL-Son-2 Alamos-Rio Mayo - AICA128

PL-Son-3 Sistema de Sierras de la Sierra Madre Occidental - AICA 126

### **Focus Areas in Sinaloa**

PL-Sin-1 Bahía Santa Maria - AICA 228

PL-Sin-2 Ensenada de Pabellones - AICA 146

PL-Sin-3 Sistema Lagunario Huizache-Caimanero - AICA 147

PL-Sin-4 Marismas Nacionales - AICA47

PL-Sin-5 Pericos - AICA 237

PL-Sin-6 Parte Alta del Rio Humaya - AICA 138

PL-Sin-7 San Juan de Camarones - AICA 74

PL-Sin-8 Las Bufas - AICA 76

PL-Sin-9 Río Presidio-Pueblo Nuevo - AICA 77

PL-Sin-10 Río Choix - S1

PL-Sin-11 Imala - S2

PL-Sin-12 Río Tamazula - S3

PL-Sin-13 El Tule - S4

PL-Sin-14 El Mineral de Nuestra Señora - S5

PL-Sin-15 Ciénega de Casán - S6

PL-Sin-16 Bahía de Cueta- S7

PL-Sin-17 Sierra de Tacuichamona - S8

PL-Sin-18 Meseta de Cacaxtla - S9

PL-Sin-19 El Palmito - S10  
PL-Sin-20 Sierra del Ocote - S11  
PL-Sin-21 Surutato - S12  
PL-Sin-22 Panuco - S13  
PL-Sin-23 Plomosas - S14

The AICA number following some of the Mexican Focus Areas refers to the numbering system found in the book *Áreas de Importancia para la Conservación de las Aves en México*. S# refers to an ad hoc numbering system devised by SJV partners in Sinaloa for the additional Focus Areas.