

Pass Creek—No Willow Flycatchers were observed along Pass Creek (Table 1 and Appendix I). Very few dense patches of Willow were found along Pass Creek (Digital Appendix C. 12-15); however, one section of Pass Creek West may provide potential future habitat (Digital Appendix C.16-17).

Saguache Creek—One Willow Flycatcher was observed during the first survey period (Fig. 15); however, no flycatchers were observed during subsequent visits (Table 1 and Appendices I and J). Because the bird was detected only during the first survey period, it was likely a migrant. The Saguache Creek survey area contains dense patches of willow with running water nearby and therefore, could provide future habitat.

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Alamosa National Wildlife Refuge South—We detected 15 Willow Flycatchers at Alamosa National Wildlife Refuge South during the first survey period (Table 1 and Appendices K, L). During the second survey period, 10 flycatchers were observed in the same vicinity as the previous visit and 11 were observed in new locations (Fig. 16). Twenty-four Willow Flycatchers were detected during the final survey in close proximity to areas in which they were detected during periods one and two (Fig. 16). More Willow Flycatchers were detected in 2003 than in 2002 (Table 2).

Lil' Pop—We detected one Willow Flycatcher near the sewage disposal pond in the Lil' Pop survey area during the first survey period (Fig. 17); however, no Willow Flycatchers were detected in subsequent visits (Table 1 and Appendices K, L). Although detections only in the first survey period suggest migrant status, Lil' Pop may provide potential suitable habitat for breeding birds in the future.

DISCUSSION

We detected resident Willow Flycatchers in five riparian areas in the San Luis Valley. Resident or territorial status is assumed because flycatchers were detected in both the second and third survey periods. Breeding or territorial status can only be verified if a Willow Flycatcher is detected during the third survey period or if breeding behavior is observed (e.g., nest building) (Sogge et al. 1997). Additional Willow Flycatchers were observed in three different riparian areas during either the first or second survey period, which suggests that these birds are migrants. Areas where resident Willow Flycatchers were detected contained dense riparian vegetation greater than 10 m wide and were usually in close proximity to water or saturated soil (Digital Appendix E). Migrant Willow Flycatchers also were detected in areas with dense patches of willow; however, many of these willow patches were relatively small (Digital Appendix A.17-19 and C.18).

Compared to surveys conducted in 2002, numbers of Willow Flycatchers increased at Alamosa National Wildlife Refuge South and Higel State Wildlife Area. In particular, significantly more Willow Flycatchers were detected at Higel State Wildlife Area. Increases in detections may be due to increased survey effort or due to maturation of willow patches and/or increased water levels in 2003.

Because Southwestern Willow Flycatchers are riparian obligate species they are particularly sensitive to changes in riparian habitat. In fact, one of the primary causes for population decline is the loss and alteration of riparian habitat on the breeding grounds (Sogge et al 1997). Alteration of waterways, grazing, and brood parasitism by Brown-headed Cowbirds also have contributed to population declines (Sogge et al. 1997, Marshall and Stoleson 2000). In the San Luis Valley, damming and diversions have altered many of

the waterways, which often reduces the amount of water in riparian habitats (Marshall and Stoleson 2000). For example, Conejos and Poso Creek both contained dense patches of willow that appeared to be appropriate Willow Flycatcher habitat; however, these areas lacked surface water and saturated soil (Digital Appendix A.8-10 and B.1-3). Overgrazing also can significantly alter riparian vegetation (Kauffman and Krueger 1984) making it unsuitable habitat for Southwestern Willow Flycatchers. One of our study areas showed signs of grazing (Digital Appendix D.5-7). The willow patches at Lil' Pop were severely browsed and much of the riparian vegetation was trampled. However, several studies have shown that with the removal of cattle, riparian vegetation can regenerate (Taylor 1986). Willow Flycatcher numbers also have been shown to increase in areas where cattle have been excluded (Taylor 1986, Taylor and Littlefield 1986). Other areas that we surveyed lacked dense riparian vegetation and saturated soils perhaps due to a combination of grazing and water diversions.

Brood parasitism by Brown-headed Cowbirds also threatens Southwestern Willow Flycatcher populations (Sogge et al. 1997). Parasitism by Brown-headed Cowbirds reduces host bird nest success by causing nest abandonment, removing of host eggs and/or young, and reducing fledgling survivorship (Marshall and Stoleson 2000). We detected several Brown-headed Cowbirds in areas with territorial Willow Flycatchers. For example, large numbers of Brown-headed Cowbirds were detected at Alamosa NWR South and Higel State Wildlife Area. Although these areas had the highest detection rates, many of these flycatchers may not be successfully reproducing due to nest parasitism. Brown-headed Cowbirds also were detected at Rio Grande State Wildlife Area, Sego Springs, Lil' Pop, Saguache Creek, Four Mile Creek, La Garita, Graveyard Gulch East, and Pass Creek.

While all the Willow Flycatchers detected in the San Luis Valley exhibited the distinctive “fitz-bew” song, we cannot be certain that they were all Southwestern Willow Flycatchers. Because arrival dates of all subspecies of flycatchers vary spatially and temporally, such that migrating Willow Flycatchers (*E. t. adastus* or *E. t. campestris*) can overlap with breeding Southwestern Willow Flycatchers, confusion often exists regarding subspecies identification and breeding and/or migrating status (Finch et al. 2000, U.S. Fish and Wildlife Service 2002). Thus, it is unclear whether the species present were *E. t. extimus*, *E. t. adastus*, or *E. t. campestris*. Although there are subtle differences in song between the different subspecies, it is extremely difficult to accurately distinguish vocalizations in the field and no official protocol exists for subspecies determination.

Intergradations between subspecies also may exist along the northern range limits for the Southwestern Willow Flycatcher (U.S. Fish and Wildlife Service 2002). For example, presence of *E. t. extimus* was confirmed at Alamosa National Wildlife Refuge, but no southwestern characteristics were detected in Beaver Creek (Eagle County) or Clear Creek (Clear Creek County) (Andrews and Righter 1992, Owen and Sogge 1997). Moreover, the genetic structure of Willow Flycatchers may vary with elevation, such that at higher elevations flycatchers show characteristics of *E. t. adastus*. Although recent work by Paxton (2002) suggests that *E. t. extimus* is present in the San Luis Valley, he did not evaluate genetic differences along elevational gradients, thus it is unclear if the flycatchers detected at high elevations in the San Luis Valley are *E. t. extimus*.

RECOMMENDATIONS

We recommend that Willow Flycatcher monitoring in the San Luis Valley continue (1) because absence of flycatchers in a single year does not indicate that the habitat is unsuitable and long-term monitoring must occur to ensure occupancy (Sogge et al. 1997) and (2) because loss of breeding riparian habitat is the primary cause of endangerment, it is crucial that potential future habitat be identified (U.S. Fish and Wildlife Service 2002). Potential future habitat includes areas that lack some components of prime Southwestern Willow Flycatcher habitat but, if effectively managed could be restored (Sogge and Marshall 2000, U.S. Fish and Wildlife Service 2002). Moreover, because the Willow Flycatcher population in the San Luis Valley may vary genetically, additional research needs to be conducted in this area.

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Appendix A. Universal Transverse Mercator coordinates for Southwestern Willow Flycatcher Survey routes in the San Luis Valley, 2003.

Site	Location	Easting	Northing
Alamosa South	Start	428949	4143815
Alamosa South	Middle 1	430838	4140432
Alamosa South	Middle 2	431742	4136723
Alamosa South	End	433870	4134044
Conejos	Start	375337	4110987
Conejos	Middle	375212	4110993
Conejos	End	375065	4111257
Four Mile Creek	Start	364206	4215999
Four Mile Creek	Middle	363087	4216088
Four Mile Creek	End	361598	4216075
La Garita	Start	387326	4185924
La Garita	Middle	386332	4185866
La Garita	End	385211	4185849
Graveyard Gulch	Start	405677	4228743
Graveyard Gulch	End	405508	4227971
Graveyard Gulch Eastern Fork	Start	406115	4227920
Graveyard Gulch Eastern Fork	End	406262	4229151
Graveyard Gulch Western Fork	Start	404861	4228338
Graveyard Gulch Western Fork	End	404988	4227968
Higel SWA	Start	414422	4156795
Higel SWA	Middle 1	413393	4157212
Higel SWA	Middle 2	411549	4157120
Higel SWA	End	411549	4157349
La Jara SWA	Start	392634	4115455
La Jara SWA	Middle	392534	4114932
La Jara SWA	End	392645	411043
Lil' Pop	Start	427415	4143884
Lil' Pop	Middle	426230	4144731
Lil' Pop	End	424736	4146714
La Manga Creek	Start	375411	4105363
La Manga Creek	Middle	376354	4105129
La Manga Creek	End	377365	4105804
Pass Creek East	Start	371747	4225483
Pass Creek East	Middle	370759	4226134
Pass Creek East	End	370100	4226838
Pass Creek West	Start	369592	4227282
Pass Creek West	Middle	367875	4227641
Pass Creek West	End	366270	4228212
Poso Creek	Start	390071	4124954
Poso Creek	Middle	389733	4124977
Poso Creek	End	389200	4124715
Rio Grande SWA Section 1	Start	403453	4159830
Rio Grande SWA Section 1	Middle	404548	4159689

Appendix A. Cont.

Site	Location	Easting	Northing
Rio Grande SWA Section 1	End	405282	4159199
Rio Grande SWA Section 2	Start	408290	4158771
Rio Grande SWA Section 2	Middle	406996	4159014
Rio Grande SWA Section 2	End	405483	4159571
Rio Grande SWA Section 3	Start	405776	4158638
Rio Grande SWA Section 3	Middle	406678	4158628
Rio Grande SWA Section 3	End	408137	4157998
Saguache Creek	Start	387667	4223449
Saguache Creek	Middle	388096	4223541
Saguache Creek	End	387975	4223239
Sego Springs SWA	Start	421309	4116226
Sego Springs SWA	Middle	421608	4116679
Sego Springs SWA	End	422000	4117221
Wolf Creek Section 1	Start	370160	4097539
Wolf Creek Section 1	Middle	370072	4097580
Wolf Creek Section 1	End	370093	4097735
Wolf Creek Section 2	Start	370172	4097379
Wolf Creek Section 2	Middle	370202	4097423
Wolf Creek Section 2	End	370075	4097395
Wolf Creek Section 3	Start	370089	4097238
Wolf Creek Section 3	Middle	370148	4097179
Wolf Creek Section 3	End	370171	4097153

Appendix B. Species list for Southwestern Willow Flycatcher surveys in areas managed by the Colorado Division of Wildlife.

Common name	Scientific name
Pied-billed Grebe	<i>Podilymbus podiceps</i>
Double-crested Cormorant	<i>Phalacrocorax auritus</i>
American Bittern	<i>Botaurus lentiginosus</i>
Snowy Egret	<i>Egretta thula</i>
Black-crowned Night-Heron	<i>Nycticorax nycticorax</i>
Canada Goose	<i>Branta canadensis</i>
Mallard	<i>Anas platyrhynchos</i>
Gadwall	<i>Anas strepera</i>
Cinnamon Teal	<i>Anas cyanoptera</i>
Redhead	<i>Aythya americana</i>
Ruddy Duck	<i>Oxyura jamaicensis</i>
Swainson's Hawk	<i>Buteo swainsoni</i>
Red-tailed Hawk	<i>Buteo jamaicensis</i>
Wild Turkey	<i>Meleagris gallopavo</i>
American Coot	<i>Fulica americana</i>
Sora	<i>Porzana carolina</i>
Killdeer	<i>Charadrius vociferus</i>
American Avocet	<i>Recurvirostra americana</i>
Common Snipe	<i>Gallinago gallinago</i>
Mourning Dove	<i>Zenaida macroura</i>
Great-Horned Owl	<i>Bubo virginianus</i>
Belted Kingfisher	<i>Ceryle alcyon</i>
Hairy Woodpecker	<i>Picoides villosus</i>
Northern Flicker	<i>Colaptes auratus</i>
Olive-sided Flycatcher	<i>Contopus cooperi</i>
Western Wood-Pewee	<i>Contopus sordidulus</i>
Willow Flycatcher	<i>Empidonax traillii</i>
Black-billed Magpie	<i>Pica hudsonia</i>
Common Raven	<i>Corvus corax</i>
Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>
Violet-green Swallow	<i>Tachycineta thalassina</i>
Tree Swallow	<i>Tachycineta bicolor</i>
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>
Barn Swallow	<i>Hirundo rustica</i>
Black-capped Chickadee	<i>Poecile atricapilla</i>
Mountain Chickadee	<i>Poecile gambeli</i>
White-breasted Nuthatch	<i>Sitta carolinensis</i>
House Wren	<i>Troglodytes aedon</i>
Marsh Wren	<i>Cistothorus palustris</i>
Townsend's Solitaire	<i>Myadestes townsendi</i>
Mountain Bluebird	<i>Sialia currucoides</i>
Western Bluebird	<i>Sialia mexicana</i>
American Robin	<i>Turdus migratorius</i>

Appendix B. Cont.

Common name	Scientific name
European Starling	<i>Sturnus vulgaris</i>
Yellow Warbler	<i>Dendroica petechia</i>
Wilson's Warbler	<i>Wilsonia pusilla</i>
Western Tanager	<i>Piranga ludoviciana</i>
Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>
Spotted Towhee	<i>Pipilo maculatus</i>
Green-tailed Towhee	<i>Pipilo chlorurus</i>
Savannah Sparrow	<i>Passerculus sandwichensis</i>
Vesper Sparrow	<i>Pooecetes gramineus</i>
Song Sparrow	<i>Melospiza melodia</i>
Western Meadowlark	<i>Sturnella neglecta</i>
Brown-headed Cowbird	<i>Molothrus ater</i>
Yellow-headed Blackbird	<i>Xanthocephalus xanthocephalus</i>
Red-winged Blackbird	<i>Agelaius phoeniceus</i>
Brewer's Blackbird	<i>Euphagus cyanocephalus</i>
Bullock's Oriole	<i>Icterus bullockii</i>
House Finch	<i>Carpodacus mexicanus</i>
American Goldfinch	<i>Carduelis tristis</i>

Appendix C. Species list for Southwestern Willow Flycatcher surveys in areas managed by the Rio Grande National Forest.

Common name	Scientific name
Canada Goose	<i>Branta canadensis</i>
Mallard	<i>Anas platyrhynchos</i>
Sharp-shinned Hawk	<i>Accipiter striatus</i>
Red-tailed Hawk	<i>Buteo jamaicensis</i>
American Kestrel	<i>Falco sparverius</i>
Spotted Sandpiper	<i>Actitis macularia</i>
Mourning Dove	<i>Zenaida macroura</i>
White-throated Swift	<i>Aeronautes saxatalis</i>
Black-chinned Hummingbird	<i>Archilochus alexandri</i>
Hairy Woodpecker	<i>Picoides villosus</i>
Northern Flicker	<i>Colaptes auratus</i>
Olive-sided Flycatcher	<i>Contopus cooperi</i>
Western Wood-Pewee	<i>Contopus sordidulus</i>
Cordilleran Flycatcher	<i>Empidonax occidentalis</i>
Dusky Flycatcher	<i>Empidonax oberholseri</i>
Say's Phoebe	<i>Sayornis saya</i>
Warbling Vireo	<i>Vireo gilvus</i>
Steller's Jay	<i>Cyanocitta stelleri</i>
Pinyon Jay	<i>Gymnorhinus cyanocephalus</i>
Black-billed Magpie	<i>Pica hudsonia</i>
Common Raven	<i>Corvus corax</i>
Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>
Violet-green Swallow	<i>Tachycineta thalassina</i>
Tree Swallow	<i>Tachycineta bicolor</i>
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>
Barn Swallow	<i>Hirundo rustica</i>
Mountain Chickadee	<i>Poecile gambeli</i>
Pygmy Nuthatch	<i>Sitta pygmaea</i>
House Wren	<i>Troglodytes aedon</i>
Rock Wren	<i>Salpinctes obsoletus</i>
Ruby-crowned Kinglet	<i>Regulus calendula</i>
Townsend's Solitaire	<i>Myadestes townsendi</i>
Mountain Bluebird	<i>Sialia currucoides</i>
American Robin	<i>Turdus migratorius</i>
Hermit Thrush	<i>Catharus guttatus</i>
Gray Catbird	<i>Dumetella carolinensis</i>
Yellow Warbler	<i>Dendroica petechia</i>
Magnolia Warbler	<i>Dendroica magnolia</i>
Yellow-rumped Warbler	<i>Dendroica coronata</i>
Grace's Warbler	<i>Dendroica graciae</i>
Orange-crowned Warbler	<i>Vermivora celata</i>
MacGillivray's Warbler	<i>Oporornis tolmiei</i>
Wilson's Warbler	<i>Wilsonia pusilla</i>

Appendix C. Cont.

Common name	Scientific name
Western Tanager	<i>Piranga ludoviciana</i>
Scarlet Tanager	<i>Piranga olivacea</i>
Green-tailed Towhee	<i>Pipilo chlorurus</i>
Chipping Sparrow	<i>Spizella passerina</i>
Vesper Sparrow	<i>Pooecetes gramineus</i>
Fox Sparrow	<i>Passerella iliaca</i>
Lincoln's Sparrow	<i>Melospiza lincolni</i>
Song Sparrow	<i>Melospiza melodia</i>
Western Meadowlark	<i>Sturnella neglecta</i>
Brown-headed Cowbird	<i>Molothrus ater</i>
Red-winged Blackbird	<i>Agelaius phoeniceus</i>
Brewer's Blackbird	<i>Euphagus cyanocephalus</i>
Pine Siskin	<i>Carduelis pinus</i>
Lesser Goldfinch	<i>Carduelis psaltria</i>
American Goldfinch	<i>Carduelis tristis</i>

Appendix D. Species list for Southwestern Willow Flycatcher surveys in areas managed by the Saguache Bureau of Land Management.

Common name	Scientific name
Mourning Dove	<i>Zenaida macroura</i>
Black-chinned Hummingbird	<i>Archilochus alexandri</i>
Downy Woodpecker	<i>Picoides pubescens</i>
Hairy Woodpecker	<i>Picoides villosus</i>
Northern Flicker	<i>Colaptes auratus</i>
Western Wood-Pewee	<i>Contopus sordidulus</i>
Dusky Flycatcher	<i>Empidonax oberholseri</i>
Warbling Vireo	<i>Vireo gilvus</i>
Steller's Jay	<i>Cyanocitta stelleri</i>
Pinyon Jay	<i>Gymnorhinus cyanocephalus</i>
Black-billed Magpie	<i>Pica hudsonia</i>
Common Raven	<i>Corvus corax</i>
Violet-green Swallow	<i>Tachycineta thalassina</i>
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>
Bushtit	<i>Psaltriparus minimus</i>
Pygmy Nuthatch	<i>Sitta pygmaea</i>
House Wren	<i>Troglodytes aedon</i>
American Robin	<i>Turdus migratorius</i>
Orange-crowned Warbler	<i>Vermivora celata</i>
Magnolia Warbler	<i>Dendroica magnolia</i>
Yellow-rumped Warbler	<i>Dendroica coronata</i>
Grace's Warbler	<i>Dendroica graciae</i>
Scarlet Tanager	<i>Piranga olivacea</i>
Green-tailed Towhee	<i>Pipilo chlorurus</i>
Song Sparrow	<i>Melospiza melodia</i>
Dark-eyed Junco	<i>Junco hyemalis</i>
Western Meadowlark	<i>Sturnella neglecta</i>
Brown-headed Cowbird	<i>Molothrus ater</i>
Red-winged Blackbird	<i>Agelaius phoeniceus</i>
Brewer's Blackbird	<i>Euphagus cyanocephalus</i>

Appendix E. Species list for Southwestern Willow Flycatcher surveys in areas managed by the U.S. Fish and Wildlife Service.

Common name	Scientific name
Pied-billed Grebe	<i>Podilymbus podiceps</i>
American Bittern	<i>Botaurus lentiginosus</i>
Great Blue Heron	<i>Ardea herodias</i>
Great Egret	<i>Ardea alba</i>
Snowy Egret	<i>Egretta thula</i>
Black-crowned Night-Heron	<i>Nycticorax nycticorax</i>
White-faced Ibis	<i>Eudocimus albus</i>
Canada Goose	<i>Branta canadensis</i>
Mallard	<i>Anas platyrhynchos</i>
Gadwall	<i>Anas strepera</i>
Northern Pintail	<i>Anas acuta</i>
Northern Shoveler	<i>Anas clypeata</i>
Cinnamon Teal	<i>Anas cyanoptera</i>
Blue-winged Teal	<i>Anas discors</i>
Green-winged Teal	<i>Anas crecca</i>
Redhead	<i>Aythya americana</i>
Common Merganser	<i>Mergus merganser</i>
Ruddy Duck	<i>Oxyura jamaicensis</i>
Northern Harrier	<i>Circus cyaneus</i>
Swainson's Hawk	<i>Buteo swainsoni</i>
Red-tailed Hawk	<i>Buteo jamaicensis</i>
American Kestrel	<i>Falco sparverius</i>
Ring-necked Pheasant	<i>Phasianus colchicus</i>
American Coot	<i>Fulica americana</i>
Virginia Rail	<i>Rallus limicola</i>
Sora	<i>Porzana carolina</i>
Killdeer	<i>Charadrius vociferus</i>
American Avocet	<i>Recurvirostra americana</i>
Black-necked Stilt	<i>Himantopus mexicanus</i>
Common Snipe	<i>Gallinago gallinago</i>
Wilson's Phalarope	<i>Phalaropus tricolor</i>
Mourning Dove	<i>Zenaida macroura</i>
Great-Horned Owl	<i>Bubo virginianus</i>
Northern Flicker	<i>Colaptes auratus</i>
Western Wood-Pewee	<i>Contopus sordidulus</i>
Ash-throated Flycatcher	<i>Myiarchus cinerascens</i>
Cassin's Kingbird	<i>Tyrannus vociferans</i>
Black-billed Magpie	<i>Pica hudsonia</i>
Horned Lark	<i>Eremophila alpestris</i>
Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>
Violet-green Swallow	<i>Tachycineta thalassina</i>
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>
Barn Swallow	<i>Hirundo rustica</i>

Appendix E. Cont.

Common name	Scientific name
House Wren	<i>Troglodytes aedon</i>
Marsh Wren	<i>Cistothorus palustris</i>
American Robin	<i>Turdus migratorius</i>
Sage Thrasher	<i>Oreoscoptes montanus</i>
European Starling	<i>Sturnus vulgaris</i>
Yellow Warbler	<i>Dendroica petechia</i>
Common Yellowthroat	<i>Geothlypis trichas</i>
Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>
Blue Grosbeak	<i>Guiraca caerulea</i>
Vesper Sparrow	<i>Pooecetes gramineus</i>
White-crowned Sparrow	<i>Zonotrichia leucophrys</i>
Song Sparrow	<i>Melospiza melodia</i>
Western Meadowlark	<i>Sturnella neglecta</i>
Brown-headed Cowbird	<i>Molothrus ater</i>
Yellow-headed Blackbird	<i>Xanthocephalus xanthocephalus</i>
Red-winged Blackbird	<i>Agelaius phoeniceus</i>
Brewer's Blackbird	<i>Euphagus cyanocephalus</i>
Great-tailed Grackle	<i>Quiscalus mexicanus</i>
American Goldfinch	<i>Carduelis tristis</i>
House sparrow	<i>Passer domesticus</i>

Appendix F. Universal Transverse Mercator coordinates and numbers of Willow Flycatchers detected during survey periods one, two, and three at the Colorado Division of Wildlife State Wildlife Areas.

Site	Survey period	Number detected	Easting ¹	Northing ¹
Higel State Wildlife Area	1	1	411918	4157418
		1	412325	4157435
		1	413776	4157409
		1	413897	4157049
		1	412670	4157155
Higel State Wildlife Area	2	1	414055	4157088
		1	414089	4157096
		1	413952	4157032
		1	413954	4157203
		1	412709	4157138
		1	412713	4157175
		1	412340	4157448
		1	412088	4157348
Higel State Wildlife Area	3	1	411844	4157452
		2	413563	4157124
		1	413691	4157207
		1	413971	4157223
		1	413898	4157112
		2	413968	4157071
		1	414035	4157116
		1	414124	4157168
		1	411977	4157365
Rio Grande SWA Section 1	1	1	411744	4157458
		1	404150	4159535
		1	404563	4159638
		1	404793	4159546
		1	404729	4159531
		1	404826	4159491
Rio Grande SWA Section 1	2	1	405090	4159442
		1	405285	4159285
		1	404157	4159448
		1	404588	4159621
		1	404853	4159512
		2	405043	4159504
		1	405110	4159482
		1	405146	4159445
		1	405279	4159296
		2	405324	4159247

Appendix F. Cont.

Site	Survey period	Number detected	Easting ¹	Northing ¹
Rio Grande SWA Section 1	3	2	404601	4159620
		1	404810	4159572
		1	404832	4159530
		1	405094	4159490
		1	405139	4159424
		1	405134	4159395
		2	405312	4159309
		1	405345	4159276
Rio Grande SWA Section 2	1	1	406571	4158705
		1	406571	4158705
		1	405931	4158999
		1	405855	4159048
		1	405818	4159140
		1	405906	4159158
		1	405877	4159256
		1	405699	4159304
		1	405929	4159249
		2	405358	4159329
Rio Grande SWA Section 2	2	1	406911	4158496
		1	406951	4158558
		1	406616	4158833
		1	406382	4158650
		1	406340	4158635
		1	406271	4158652
		1	406064	4158787
		2	406049	4158989
		1	405976	4158956
		2	405927	4158983
		1	405888	4158963
		1	405846	4159055
		1	405849	4159156
		1	405871	4159251
Rio Grande SWA Section 2	3	2	405916	4159234
		2	406358	4158629
		1	406322	4158650
		1	406072	4158788
		1	406085	4158812
		1	406029	4158977
		1	405986	4158772
		1	405924	4158988
		2	405882	4159037
		1	405917	4159166
1	405867	4159205		

Appendix F. Cont.

Site	Survey period	Number detected	Easting ¹	Northing ¹
Rio Grande SWA Section 2	3	1	405858	4159262
		1	405791	4159261
		1	405722	4159264
Rio Grande SWA Section 3	1	1	406636	4158702
Rio Grande SWA Section 3	2	1	406678	4158739
Sego Springs SWA	2	1	421612	4116685
		1	421825	4116833
		1	421981	4116884
Sego Springs SWA	3	1	421719	4116697

¹All UTM coordinates (easting, northing) in zone 13S NAD 27.

Appendix G. Data forms for Southwestern Willow Flycatcher surveys in areas managed by the Colorado Division of Wildlife.

Willow Flycatcher Survey and Detection Form (rev. 4/98)

Site Name Higel State Wildlife Area Was site surveyed in previous year? Yes No
 If yes, what site name was used? Higel State Wl. Area
 County Alamosa State CO USGS Quad Name Mt Pleasant School
Home Lake
 Is copy of USGS map marked with survey area and WIFL sightings attached (as required)? Yes No
 Site Coordinates: Start: N 4156795 E 0414422 UTM
 Stop: N 4157349 E 0411549 UTM Zone 13S
 Elevation 2325 feet / meters (circle one)

** Fill in additional site information on back of this page **

Survey# Observer(s)	Date (m/d/y) Survey time	Number of WIFLs Found	Estimated Number of Pairs	Estimated Number of Territories	Nest(s) Found? Y or N	Cowbirds Detected? Y or N	Presence of Livestock, Recent sign Y or N	Comments about this survey (e.g., evidence of pairs or breeding, number of nests, nest contents or number of fledges seen; potential threats)
1 Kathi Borjmann Pam Clark	Date 5-28-03 start 0605 (P) 0627 (K) stop 0915 total hrs 5.85	5	0	5	N	Y (15+)	Y Cow pies	See back Habitat patchy but several good thick + dense patches of willow
2 WM Whit Markham	Date 6/4/03 Start 6/5 6-8 am Stop 5/4 6-9:30 am total hrs 5.5	9	0	9	N	Y	Y pies	Mosquito net required. Cause shortening of 1st survey Property boundary confusing
3 WM	Date 6/28-29 Start 6/28 6-9:00 Stop 6/29 5:30-8:00 total hrs 5.5	11	2	9	N	Y many	Y pies	Wetlands slightly drier. Many mosquitos. Hot and muggy atmosphere
	Date start stop total hrs							
	Date start stop total hrs							
Overall Site Summary (Total only resident WIFLs)		Adults	Pairs	Territories	Nests	Were any WIFLs color-banded? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Total survey hrs <u>16.85</u>		11	2	9	0	If yes, report color combination(s) in the comments section on back of form		

Name of Reporting Individual Kathi Borjmann Date Report Completed 7/11/03

Appendix G. Cont.

Fill in the following information completely. Submit original form. Retain copy for your records.

Name of Reporting Individual Kathi Bregmann Phone # 505-828-9455
 Affiliation Hawks Aloft, Inc Email kbregmann@hawksaloft.org

Site Name Hazel State Wildlife Area
 Did you verify that this site name is consistent with that used in previous years? Yes No (circle one)

Management Authority for Survey Area (circle one): Federal Municipal/County State Tribal Private

Name of Management Entity or Owner (e.g., Tonto National Forest) Colorado Division of Wildlife

Length of area surveyed: 26.6 Km (specify units, e.g., miles = mi, kilometers = km, meters = m)

Did you survey the same general area during each visit to this site this year? Yes/No If no, summarize in comments below.
Surveyed area more thoroughly, extending Area West + east to property boundary
 If site was surveyed last year, did you survey the same general area this year? Yes No If no, summarize in comments below.
See comment above

Vegetation Characteristics: Overall, are the species in tree/shrub layer at this site comprised predominantly of (check one):
 Native broadleaf plants (entirely or almost entirely, includes high-elevation willow) Mixed native and exotic plants (mostly native)
 Mixed native and exotic plants (mostly exotic) Exotic/introduced plants (entirely or almost entirely)

Identify the 2-3 predominant tree/shrub species: Willow, Cottonwood, cattail, Ribes (Gooseberry)

Average height of canopy: 6-7 m^{years} Willow canopy (specify units)
Not very much Cottonwood canopy

Was surface water or saturated soil present at or adjacent to site? Yes No (circle one)
 Distance from the site to surface water or saturated soil: — (specify units) water along almost entire Survey Route
 Did hydrological conditions change significantly among visits (did the site flood or dry out)? Yes No (circle one)
 If yes, describe in comments section below.

Remember to attach a xerox copy of a USGS quad/topographical map (REQUIRED) of the survey area, noting the survey site and location of WIFL detections. You may also include a sketch or aerial photograph showing details of site location, patch shape, survey route in relation to patch, and location of any willow flycatchers or willow flycatcher nests detected. Such sketches or photographs are welcomed, but DO NOT substitute for the required USGS quad map.

Comments (attach additional sheets if necessary):
WIFL #1 135 0411918 4157418 → Fairly dense Willow 4.5m tall, back ponding of H₂O heard from distance did not respond to tap. Fitz-bewed several times, also BHT.
WIFL #2 135 0412325 4157438 → across Rio Grande ~25m NW of point. Came in quietly, Fitz-bewed once. Dense Willow 4-5m tall
WIFL #3 135 0413776 4157409 → patch of willow surrounded by cattail + standing H₂O. Fitz-bewed around W. SW patch
WIFL #4 135 0413897 4157049 → near start point, thick willow with ponded water. Hard to maneuver through, actively Fitz-bewing.
WIFL #5 135 0412670 4157155 → dense willow thicket with standing H₂O 5-6m tall. Fitz-bewed several times in willow thicket.

* site dried slightly over time, but remained overall like a wetland environment
 See attached for UTM's for Surveys 2 + 3

2003 Southwestern Willow Flycatcher Annual Report

Appendix G. Cont.

Willow Flycatcher Survey and Detection Form (rev. 4/98)

Site Name La Jara State Wildlife Area Was site surveyed in previous year? Yes No
 If yes, what site name was used? La Jara State Wildlife Area

County Concepcion State CO USGS Quad Name Vincente Canyon

Is copy of USGS map marked with survey area and WIFL sightings attached (as required)? Yes No
 Site Coordinates: Start: N 4115455 E 0392624 UTM
 Stop: N 4114643 E 0392645 UTM Zone 135
 Elevation 2517 feet / (meters) (circle one)

** Fill in additional site information on back of this page **

Survey # Observer(s)	Date (m/d/y) Survey time	Number of WIFLs Found	Estimated Number of Pairs	Estimated Number of Territories	Nest(s) Found? Y or N	Cowbirds Detected? Y or N	Presence of Livestock, Recent sign Y or N	Comments about this survey (e.g., evidence of pairs or breeding, number of nests, nest contents or number of fledges seen; potential threats)
1 <u>WM</u>	Date <u>5/28</u> start <u>0545</u> stop <u>0720</u> total hrs <u>1.5</u>	Ø	Ø	Ø	N	N	N	willow patches do not exceed 10 m in width. Few patches total. Not much suitable habitat
2 <u>WM</u>	Date <u>6/1</u> Start <u>0610</u> Stop <u>0850</u> total hrs <u>1.6</u>	Ø	Ø	Ø	N	N	N	
3 <u>WM</u>	Date <u>6/24</u> Start <u>0548</u> Stop <u>0730</u> total hrs <u>1.6</u>	Ø	Ø	Ø	N	N	N	no change... slightly dry compared to previous visit
	Date start stop total hrs							
	Date start stop total hrs							
Overall Site Summary (Total only resident WIFLs)		Adults	Pairs	Territories	Nests	Were any WIFLs color-banded? Yes No If yes, report color combination(s) in the comments section on back of form		
Total survey hrs <u>4.7</u>		Ø	Ø	Ø	Ø			

Name of Reporting Individual Kathi Boraymann Date Report Completed 7/16/03

Appendix G. Cont.

Fill in the following information completely. Submit original form. Retain copy for your records.

Name of Reporting Individual Kathi Borgmann Phone # 505-828-9455
Affiliation Hawks Aloft, Inc Email kborgmann@hawksaloft.org

Site Name La Jara State Wildlife area
Did you verify that this site name is consistent with that used in previous years? Yes No (circle one)

Management Authority for Survey Area (circle one): Federal Municipal/County State Tribal Private

Name of Management Entity or Owner (e.g., Tonto National Forest) Colorado Division of Wildlife

Length of area surveyed: 1.6 km (specify units, e.g., miles = mi, kilometers = km, meters = m)

Did you survey the same general area during each visit to this site this year? Yes No If no, summarize in comments below.

If site was surveyed last year, did you survey the same general area this year? Yes No If no, summarize in comments below.

Vegetation Characteristics: Overall, are the species in tree/shrub layer at this site comprised predominantly of (check one):

- Native broadleaf plants (entirely or almost entirely, includes high-elevation willow)
- Mixed native and exotic plants (mostly native)
- Mixed native and exotic plants (mostly exotic)
- Exotic/introduced plants (entirely or almost entirely)

Identify the 2-3 predominant tree/shrub species: willow cottonwood juniper

Average height of canopy: ~ 5 m (specify units)

Was surface water or saturated soil present at or adjacent to site? Yes No (circle one)

Distance from the site to surface water or saturated soil: _____ (specify units)

no surface H₂O but river flowing

Did hydrological conditions change significantly among visits (did the site flood or dry out)? Yes No (circle one)
If yes, describe in comments section below.

Remember to attach a xerox copy of a USGS quad/topographical map (REQUIRED) of the survey area, noting the survey site and location of WIFL detections. You may also include a sketch or aerial photograph showing details of site location, patch shape, survey route in relation to patch, and location of any willow flycatchers or willow flycatcher nests detected. Such sketches or photographs are welcomed, but DO NOT substitute for the required USGS quad map.

Comments (attach additional sheets if necessary): Very few willow patches (or any dense vegetation) on survey route. Not suitable.

2003 Southwestern Willow Flycatcher Annual Report

Appendix G. Cont.

Willow Flycatcher Survey and Detection Form (rev. 4/98)

Site Name Poso Creek Was site surveyed in previous year? Yes No
 If yes, what site name was used? POSD Creek

County Conchos State CO USGS Quad Name Terrace Reservoir

Is copy of USGS map marked with survey area and WIFL sightings attached (as required)? Yes No
 Site Coordinates: Start: N 4124954 E 0390071 UTM
 Stop: N 4124715 E 0387200 UTM Zone 13S
 Elevation 2520 feet / meters (circle one)

** Fill in additional site information on back of this page **

Survey # Observer(s)	Date (m/d/y) Survey time	Number of WIFLs Found	Estimated Number of Pairs	Estimated Number of Territories	Nest(s) Found? Y or N	Cowbirds Detected? Y or N	Presence of Livestock, Recent sign Y or N	Comments about this survey (e.g., evidence of pairs or breeding, number of nests, nest contents or number of fledges seen; potential threats)
1 <u>WM</u> <u>Whit</u> <u>Markham</u>	Date <u>5/29</u> start <u>0545</u> stop <u>0645</u> total hrs <u>1</u>	Ø	Ø	Ø	N	N	N	NO WATER! Only 2 areas w/ willow habitat. Not very suitable. Could not find creek!
2 <u>WM</u>	Date <u>6/2</u> Start <u>0600</u> Stop <u>0700</u> total hrs <u>1</u>	Ø	Ø	Ø	N	N	N	no change since last visit. There are couples, but very old
3 <u>WM</u>	Date <u>6/24</u> Start <u>0825</u> Stop <u>0940</u> total hrs <u>1.25</u>	Ø	Ø	Ø	N	N	N	no change. Area very dry
_____	Date start stop total hrs _____							
_____	Date start stop total hrs _____							
Overall Site Summary (Total only resident WIFLs)		Adults	Pairs	Territories	Nests	Were any WIFLs color-banded? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, report color combination(s) in the comments section on back of form		
Total survey hrs <u>3.25</u>		Ø	Ø	Ø	Ø			

Name of Reporting Individual Kathi Borgmann Date Report Completed 7/11/03

Appendix G. Cont.

Fill in the following information completely. Submit original form. Retain copy for your records.

Name of Reporting Individual Kathi Borgmann Phone # 505-828-9455

Affiliation Hawks Aloft, Inc Email kborgmann@hawksaloft.org

Site Name Poso Creek

Did you verify that this site name is consistent with that used in previous years? Yes No (circle one)

Management Authority for Survey Area (circle one): Federal Municipal/County State Tribal Private

Name of Management Entity or Owner (e.g., Tonto National Forest) Colorado Division of Wildlife

Length of area surveyed: 0.9 km (specify units, e.g., miles = mi, kilometers = km, meters = m)

Did you survey the same general area during each visit to this site this year? Yes No If no, summarize in comments below.

If site was surveyed last year, did you survey the same general area this year? Yes No If no, summarize in comments below.

Vegetation Characteristics: Overall, are the species in tree/shrub layer at this site comprised predominantly of (check one):
 Native broadleaf plants (entirely or almost entirely, includes high-elevation willow)
 Mixed native and exotic plants (mostly native)
 Mixed native and exotic plants (mostly exotic)
 Exotic/introduced plants (entirely or almost entirely)

Identify the 2-3 predominant tree/shrub species: willow cottonwood rabbit brush

Average height of canopy: 2 0 m (specify units)

Was surface water or saturated soil present at or adjacent to site? Yes No (circle one)
Distance from the site to surface water or saturated soil: — (specify units)

Did hydrological conditions change significantly among visits (did the site flood or dry out)? Yes No (circle one)
If yes, describe in comments section below.

Remember to attach a xerox copy of a USGS quad/topographical map (REQUIRED) of the survey area, noting the survey site and location of WIFL detections. You may also include a sketch or aerial photograph showing details of site location, patch shape, survey route in relation to patch, and location of any willow flycatchers or willow flycatcher nests detected. Such sketches or photographs are welcomed, but DO NOT substitute for the required USGS quad map.

Comments (attach additional sheets if necessary): no water at all, creek not running

Appendix G. Cont.

Section 1

Willow Flycatcher Survey and Detection Form (rev. 4/98)

Site Name Rio Grande State WL Area Site 1 Was site surveyed in previous year? Yes No
 If yes, what site name was used? Rio Grande State WL Area Site 1

County Rio Grande State CO USGS Quad Name Home Lake

Is copy of USGS map marked with survey area and WIFL sightings attached (as required)? Yes No
 Site Coordinates: Start: N 4159830 E 0403453 UTM
 Stop: N 4159199 E 0405282 UTM Zone 13S
 Elevation 2321 feet / meters (circle one)

** Fill in additional site information on back of this page **

Survey # Observer(s)	Date (m/d/y) Survey time	Number of WIFLs Found	Estimated Number of Pairs	Estimated Number of Territories	Nest(s) Found? Y or N	Cowbirds Detected? Y or N	Presence of Livestock, Recent sign Y or N	Comments about this survey (e.g., evidence of pairs or breeding number of nests, nest contents or number of fledges seen; potential threats)
1 <u>Pam Clark</u>	Date <u>5-29-03</u> start <u>5:25</u> stop <u>9:35</u> total hrs <u>4 1/4</u>	7	0	7	N	Y	Y Cows, pigs, trucks etc.	good habitat - not much ground water, but still lots of flycatchers - dense. more flycatchers about 1/2 mile from start.
2 <u>W.M.</u> <u>Whit</u> <u>Markham</u>	Date <u>6/12/03</u> Start <u>0545</u> Stop <u>0930</u> total hrs <u>3.5</u>	10	2	8	N	Y	Y old pics	Many WIFLs, very buggy. Most WIFL found in patches of older willow. (UTMs... see attached sheet)
3 <u>W.M.</u>	Date <u>7/7</u> Start <u>0530</u> Stop <u>0845</u> total hrs <u>3.25</u>	10	2	8	N	Y	Y old pics	very very buggy. Rio Grande running much lower. All WIFL found in east 1/2 of route
	Date start stop total hrs							
	Date start stop total hrs							
Overall Site Summary (Total only resident WIFLs)		Adults	Pairs	Territories	Nests	Were any WIFLs color-banded? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, report color combination(s) in the comments section on back of form		
Total survey hrs <u>11</u>		10	2	8	0			

Name of Reporting Individual Kathi Borgmann Date Report Completed 7/11/03

Appendix G. Cont.

Fill in the following information completely. Submit original form. Retain copy for your records.

Name of Reporting Individual Kathi Bergmann Phone # 505-828-9455
 Affiliation Hawks Aloft, Inc Email kbergmann@hawksaloft.org

Site Name Rio Grande State Wildlife Area - Section 1
 Did you verify that this site name is consistent with that used in previous years? Yes No (circle one)

Management Authority for Survey Area (circle one): Federal Municipal/County State Tribal Private

Name of Management Entity or Owner (e.g., Tonto National Forest) Colorado Division of Wildlife

Length of area surveyed: 2.4 miles (specify units, e.g., miles = mi, kilometers = km, meters = m) only about 1.2 m site
→ 305 m site + 1.2 m site

Did you survey the same general area during each visit to this site this year? Yes/No If no, summarize in comments below.

If site was surveyed last year, did you survey the same general area this year? Yes/No If no, summarize in comments below.

Vegetation Characteristics: Overall, are the species in tree/shrub layer at this site comprised predominantly of (check one):
 Native broadleaf plants (entirely or almost entirely, includes high-elevation willow)
 Mixed native and exotic plants (mostly native)
 Mixed native and exotic plants (mostly exotic)
 Exotic/introduced plants (entirely or almost entirely)

Identify the 2-3 predominant tree/shrub species: Salix spp + Populus angustifolia

Average height of canopy: 10 meters (specify units)

Was surface water or saturated soil present at or adjacent to site? No (circle one) only in a few select spots
 Distance from the site to surface water or saturated soil: 0m (specify units)

Did hydrological conditions change significantly among visits (did the site flood or dry out)? Yes No (circle one)
 If yes, describe in comments section below.

Remember to attach a xerox copy of a USGS quad/topographical map (REQUIRED) of the survey area, noting the survey site and location of WIFL detections. You may also include a sketch or aerial photograph showing details of site location, patch shape, survey route in relation to patch, and location of any willow flycatchers or willow flycatcher nests detected. Such sketches or photographs are welcomed, but DO NOT substitute for the required USGS quad map.

Comments (attach additional sheets if necessary): Lots of WIFL found. #1 13S 0404150 4159525
off trail to south near the canal - maybe using both sides of canal. #2 13S 0404563
4159638 #3 13S 0404743 4159546 #4 13S 0404729 4159531
#5 13S 0404826 4159491 → #2 - #5 were all located in a very large
dense section of willow - about .6 mile from start point between the trail and
the river. #6 13S 0405090 4159442 - next big section of willow - actually
calling from a high perch. #7 13S 0405205 4159285 - calling in
willow - very close to stop point. All but #1 were in willow along
the main river.

See Attached for UTM locations for Survey 2 + 3

Appendix G. Cont.

Willow Flycatcher Survey and Detection Form (rev. 4/98)

Site Name Rio Grande State Wildlife Area - Section 2 (North) Was site surveyed in previous year? Yes No
 If yes, what site name was used? Rio Grande State Wildlife Area Section 2 (North)

County Rio Grande State CO USGS Quad Name HOME LAKE

Is copy of USGS map marked with survey area and WIFL sightings attached (as required)? Yes No
 Site Coordinates: Start: N 4158771 E 0408290 UTM
 Stop: N 4159571 E 0405983 UTM Zone 13S
 Elevation 2324 feet / meters (circle one)

** Fill in additional site information on back of this page **

Survey # Observer(s)	Date (m/d/y) Survey time	Number of WIFLs Found	Estimated Number of Pairs	Estimated Number of Territories	Nest(s) Found? Y or N	Cowbirds Detected? Y or N	Presence of Livestock, Recent sign Y or N	Comments about this survey (e.g., evidence of pairs or breeding, number of nests, nest contents or number of fledges seen; potential threats)
¹ Kathi Borjmann	Date 5/29/03 start 0600 stop 1003 total hrs 4 ^{hrs} 3 ^{mins}	11	3	8	Y Possible see back	Y (19 ⁺)	Y COWPIES	Area along Rio Grande Mostly Gallery Cottonwood Areas around canals very wet with lots of thick dense willow Several WIFLs near Fish Hatchery
² WM Whit Markham	Date 6/13/03 Start 0535 Stop 1000 total hrs 4.6	18	3	15	N	Y- (many)	Y old pics	Thickest willow around wetland N of Rio Grande. Eastern km of route not very productive habitat, but has willow
³ WM	Date 7/6 Start 0525 Stop 0940 total hrs 4.25	15	2	13	N	Y many seen grazing near center of route	Y	Ground drier, canals drier. Many mosquitoes. Cows seen in SWA boundary. Rio Grande running lower
	Date start stop total hrs							
	Date start stop total hrs							
Overall Site Summary (Total only resident WIFLs)		Adults	Pairs	Territories	Nests	Were any WIFLs color-banded? Yes <input checked="" type="checkbox"/> No		
Total survey hrs	12.8	15	2	13	4	If yes, report color combination(s) in the comments section on back of form		

Name of Reporting Individual Kathi Borjmann Date Report Completed 7/11/03

2003 Southwestern Willow Flycatcher Annual Report

Appendix G. Cont.

Fill in the following information completely. Submit original form. Retain copy for your records.

Name of Reporting Individual Kathi Bergmann Phone # 505-828-9455
 Affiliation Hawks Aloft, Inc Email KBergmann@hawksaloft.org
 Site Name Rio Grande State Wildlife Area - Section 2 (North)
 Did you verify that this site name is consistent with that used in previous years? Yes No (circle one)

Management Authority for Survey Area (circle one): Federal Municipal/County State Tribal Private

Name of Management Entity or Owner (e.g., Tonto National Forest) Colorado Division of Wildlife

Length of area surveyed: 2.1 km (specify units, e.g., miles = mi, kilometers = km, meters = m) 5/29/03 KB surveyed ~ 6 km of winding in + out of habitat patches
 Did you survey the same general area during each visit to this site this year? Yes No If no, summarize in comments below.

If site was surveyed last year, did you survey the same general area this year? Yes No If no, summarize in comments below.

Vegetation Characteristics: Overall, are the species in tree/shrub layer at this site comprised predominantly of (check one):
 Native broadleaf plants (entirely or almost entirely, includes high-elevation willow) Mixed native and exotic plants (mostly native)
 Mixed native and exotic plants (mostly exotic) Exotic/introduced plants (entirely or almost entirely)

Identify the 2-3 predominant tree/shrub species: Willow, Narrowleaf Cottonwood

Average height of canopy: Cottonwood canopy 20 meters Willow canopy 7.5 meters (specify units)

Was surface water or saturated soil present at or adjacent to site? Yes No (circle one)
 Distance from the site to surface water or saturated soil: - (specify units)
Most of Willow patches surveyed contained standing H₂O.
 Did hydrological conditions change significantly among visits (did the site flood or dry out)? Yes No (circle one)
 If yes, describe in comments section below.

Remember to attach a xerox copy of a USGS quad/topographical map (REQUIRED) of the survey area, noting the survey site and location of WIFL detections. You may also include a sketch or aerial photograph showing details of site location, patch shape, survey route in relation to patch, and location of any willow flycatchers or willow flycatcher nests detected. Such sketches or photographs are welcomed, but DO NOT substitute for the required USGS quad map.

Comments (attach additional sheets if necessary):

WIFL #1	135	0406571	4158705	likely pair, Fitz bews, wec-oo + whiting
WIFL #2	135	0406571	4158705	dense willow low tall, H ₂ O ~ 5m away
WIFL #3	135	0405931	4158799	dense standing H ₂ O difficult to access
WIFL #4	135	0405855	4159048	came in to tape Fitz bew + Whit
WIFL #5	135	0405818	4159140	dense willows + standing H ₂ O
WIFL #6	135	0405906	4159158	Fitz-bew 25m East of waypoint
WIFL #7	135	0405877	4159256	likely pair with #8 with possible nest
WIFL #8	135	0405699	4159304	possible nest. 19' + 15m from way pt. + small orange flag. Wifl in area whiting
WIFL #9	135	0405929	4159249	dense willows + standing H ₂ O
WIFL #10				
WIFL #11	>135	0405358	4159329	pair across canal from point 208' + 30m from waypoint

* Rio Grande level lowered over season making habitat more dry.

Appendix G. Cont.

Willow Flycatcher Survey and Detection Form (rev. 4/98)

Site Name Rio Grande State Wildlife Area Section 3 (South) Was site surveyed in previous year? Yes No
 If yes, what site name was used? Rio Grande State Wildlife Area Section 2 (South)

County Rio Grande State CO USGS Quad Name HOME LAKE

Is copy of USGS map marked with survey area and WIFL sightings attached (as required)? Yes No
 Site Coordinates: Start: N 4158638 E 0405776 UTM
 Stop: N 4157998 E 0408137 UTM Zone 13S
 Elevation 2334 feet (meters) (circle one)

** Fill in additional site information on back of this page **

Survey # Observer(s)	Date (m/d/y) Survey time	Number of WIFLs Found	Estimated Number of Pairs	Estimated Number of Territories	Nest(s) Found? Y or N	Cowbirds Detected? Y or N	Presence of Livestock, Recent sign Y or N	Comments about this survey (e.g., evidence of pairs or breeding number of nests, nest contents or number of fledges seen; potential threats)
1 <u>Catoff Evans</u>	Date <u>5-29-03</u> start <u>545</u> stop <u>930</u> total hrs <u>3 3/4</u>	1	0	1	N	Y	Y	1 wifl heard at a distance N side of river
2 <u>WM</u> <u>Whit</u> <u>Markham</u>	Date <u>6/14</u> Start <u>0530</u> Stop <u>0830</u> total hrs <u>3</u>	1	0	1	N	Y	Y pres. tracks	not much habitat. only wifl heard was on other side of Rio Grande. could have been surveyed w/section 2
3 <u>WM</u>	Date <u>7/10/03</u> Start <u>0530</u> Stop <u>0815</u> total hrs <u>2.75</u>	0	0	0	N	Y	Y	Water is running very low in Rio Grande. Wetland areas quite dry.
	Date start stop total hrs							
	Date start stop total hrs							
Overall Site Summary (Total only resident WIFLs)		Adults	Pairs	Territories	Nests	Were any WIFLs color-banded? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Total survey hrs <u>9.5</u>		0	0	0	0	If yes, report color combination(s) in the comments section on back of form		

Name of Reporting Individual Kathi Bergmann Date Report Completed 7/11/03

Appendix G. Cont.

Fill in the following information completely. Submit original form. Retain copy for your records.

Name of Reporting Individual Kathi Borgmann Phone # 505-828-9455

Affiliation Hawks Aloft, Inc Email Kborgmann@hawksaloft.org

Site Name Rio Grande State Wildlife Area - Section 2 South

Did you verify that this site name is consistent with that used in previous years? Yes No (circle one)

Management Authority for Survey Area (circle one): Federal Municipal/County State Tribal Private

Name of Management Entity or Owner (e.g., Tonto National Forest) Colorado Division of Wildlife

Length of area surveyed: 2.5 km (specify units, e.g., miles = mi, kilometers = km, meters = m)

Did you survey the same general area during each visit to this site this year? Yes No If no, summarize in comments below.

If site was surveyed last year, did you survey the same general area this year? Yes No If no, summarize in comments below.

Vegetation Characteristics: Overall, are the species in tree/shrub layer at this site comprised predominantly of (check one):

- Native broadleaf plants (entirely or almost entirely, includes high-elevation willow)
- Mixed native and exotic plants (mostly native)
- Mixed native and exotic plants (mostly exotic)
- Exotic/introduced plants (entirely or almost entirely)

Identify the 2-3 predominant tree/shrub species: Cotton wood, Salix spp

Average height of canopy: 7 meters (specify units)

Was surface water or saturated soil present at or adjacent to site? Yes No (circle one)

Distance from the site to surface water or saturated soil: _____ (specify units)

River flowing adjacent to site

Did hydrological conditions change significantly among visits (did the site flood or dry out)? Yes No (circle one)
If yes, describe in comments section below.

Remember to attach a xerox copy of a USGS quad/topographical map (REQUIRED) of the survey area, noting the survey site and location of WIFL detections. You may also include a sketch or aerial photograph showing details of site location, patch shape, survey route in relation to patch, and location of any willow flycatchers or willow flycatcher nests detected. Such sketches or photographs are welcomed, but DO NOT substitute for the required USGS quad map.

Comments (attach additional sheets if necessary): _____

5-29 01 0406636/4158702 - detected on other side of River
6/14 01 04066078 4158739

Area dried significantly over time. River is running much lower by mid July.

Appendix G. Cont.

Willow Flycatcher Survey and Detection Form (rev. 4/98)

Site Name Sego Spring State Wildlife Area Was site surveyed in previous year? Yes No
 If yes, what site name was used? Sego Spring State Wildlife Area

County Conchos State CO USGS Quad Name Manassa

Is copy of USGS map marked with survey area and WIFL sightings attached (as required)? Yes No

Site Coordinates: Start: N 4116226 E 0421309 UTM
 Stop: N 4117221 E 0422000 UTM Zone 13S
 Elevation 2344 feet / meters (circle one)

** Fill in additional site information on back of this page **

Survey # Observer(s)	Date (m/d/y) Survey time	Number of WIFLs Found	Estimated Number of Pairs	Estimated Number of Territories	Nest(s) Found? Y or N	Cowbirds Detected? Y or N	Presence of Livestock, Recent sign Y or N	Comments about this survey (e.g., evidence of pairs or breeding; number of nests, nest contents or number of fledges seen; potential threats)
1 <u>Crafton</u>	Date <u>5-31</u> start <u>600</u> stop <u>900</u> total hrs <u>3</u>	0	0	0	0	Y	N	Many Cow Birds and Kestrels
2 <u>WM</u> <u>Whit</u> <u>Markham</u>	Date <u>6/5</u> Start <u>0600</u> Stop <u>0825</u> total hrs <u>2.5</u>	3	0	3	N	Y	N	Willow habitat in several patches WIFE found in SAGE GROVES NEAR CENTER.
3 <u>WM</u>	Date <u>6/25/03</u> Start <u>0615</u> Stop <u>0900</u> total hrs <u>2.75</u>	1	0	1	N	Y few	N	MANY more mosquitoes, fewer WIFL. Marsh dryer this time
	Date start stop total hrs							
	Date start stop total hrs							
Overall Site Summary (Total only resident WIFLs)		Adults <u>3(?)</u>	Pairs <u>0</u>	Territories <u>3(?)</u>	Nests <u>0</u>	Were any WIFLs color-banded? Yes <input checked="" type="radio"/> No <input type="radio"/> If yes, report color combination(s) in the comments section on back of form		
Total survey hrs	<u>8.25</u>							

Name of Reporting Individual Kathi Bergmann Date Report Completed 7/11/03

Appendix G. Cont.

Fill in the following information completely. Submit original form. Retain copy for your records.

Name of Reporting Individual Kathi Borgmann Phone # 505-828-7455
Affiliation Hawks Aloft, Inc Email KBorgmann@hawkaloft.org

Site Name Sego Spring State Wildlife Area
Did you verify that this site name is consistent with that used in previous years? Yes No (circle one)

Management Authority for Survey Area (circle one): Federal Municipal/County State Tribal Private
Name of Management Entity or Owner (e.g., Tonto National Forest) Colorado Division of Wildlife

Length of area surveyed: 1.3 Km (specify units, e.g., miles = mi, kilometers = km, meters = m)

Did you survey the same general area during each visit to this site this year? Yes No If no, summarize in comments below.

If site was surveyed last year, did you survey the same general area this year? Yes No If no, summarize in comments below.

Vegetation Characteristics: Overall, are the species in tree/shrub layer at this site comprised predominantly of (check one):

- Native broadleaf plants (entirely or almost entirely, includes high-elevation willow)
- Mixed native and exotic plants (mostly native)
- Mixed native and exotic plants (mostly exotic)
- Exotic/introduced plants (entirely or almost entirely)

Identify the 2-3 predominant tree/shrub species: Cottonwood, willow, (Salix exigua)

Average height of canopy: 5 m (specify units)

Was surface water or saturated soil present at or adjacent to site? Yes No (circle one)
Distance from the site to surface water or saturated soil: 0 (specify units)

Did hydrological conditions change significantly among visits (did the site flood or dry out)? Yes No (circle one)
If yes, describe in comments section below.

Remember to attach a xerox copy of a USGS quad/topographical map (REQUIRED) of the survey area, noting the survey site and location of WIFL detections. You may also include a sketch or aerial photograph showing details of site location, patch shape, survey route in relation to patch, and location of any willow flycatchers or willow flycatcher nests detected. Such sketches or photographs are welcomed, but DO NOT substitute for the required USGS quad map.

Comments (attach additional sheets if necessary): 1/5 WIFL #1 13S 0421612 4116685,
#2 13S 0421625 4116533, #3 13S 0421981 4116884

6/25 WIFL #1 13S 0421719 4116697

Marsh area East of river dried out significantly between
visits