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IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF ARIZONA

CENTER FOR BIOLOGICAL DIVERSITY and  
MARICOPA AUDUBON SOCIETY,

Plaintiffs,

v.

DIRK KEMPTHORNE, in his capacity as Secretary  
of Interior; UNITED STATES FISH AND  
WILDLIFE SERVICE; H. DALE HALL, in his  
capacity as Director of U.S. Fish and Wildlife  
Service; DR. BENJAMIN TUGGLE, in  
his capacity as Regional Director of U.S. Fish and  
Wildlife Service, ROBERT M. GATES, in his  
capacity as Secretary of Defense; UNITED STATES  
ARMY; PETE GEREN, in his capacity as Secretary  
of the Army; and MELISSA STURGEON, in her  
capacity as Commander of Fort Huachuca,

Defendants.

Civil No. 07-cv-484-TUC-JMR

FIRST AMENDED  
COMPLAINT FOR  
DECLARATORY AND  
INJUNCTIVE RELIEF

INTRODUCTION

1. The San Pedro River is the last free-flowing, undammed desert river in the American southwest. Situated in the arid Chihuahuan desert, the San Pedro is an oasis of shady trees, green grasses, and life-giving water. The river and its surrounding forest are a sanctuary to millions of migrating birds and home to one of the most diverse assortment of animal and plant species in the United States.

2. Groundwater pumping near the river, however, is intercepting water that would

otherwise feed the upper San Pedro and is lowering the water table. As a result, the San Pedro River – and its lush ribbon of riparian vegetation – is drying up.

3. Fort Huachuca, a U.S. Army base near Sierra Vista, Arizona, is largely responsible for the groundwater pumping that threatens to destroy the upper San Pedro River. This groundwater pumping also threatens at least two endangered species and designated critical habitat that depend on the river. To address these impacts, and as required by a court settlement, the U.S. Army and the U.S. Fish and Wildlife Service (FWS) carried out a formal consultation pursuant to the Endangered Species Act, (ESA), 16 U.S.C. §§ 1531 et seq. FWS issued a Biological Opinion completing this consultation on June 14, 2007.

4. Even though the agencies acknowledge groundwater pumping associated with the Fort will reduce the San Pedro's flows and the water table will continue to drop, FWS's Biological Opinion concludes Fort Huachuca's activities and operations are not likely to jeopardize any endangered species or destroy or adversely modify designated critical habitat. FWS also approves the expansion of the Fort by another 3,000 people, thereby increasing the threat to the river.

5. These conclusions are arbitrary and capricious, contrary to the ESA, have no rational connection to the facts found in the Biological Opinion, and are not based on the best available science. For these reasons, Plaintiffs Center for Biological Diversity and Maricopa Audubon Society (collectively, the "Center") seek to have the Biological Opinion set aside as invalid. The Center also challenges the Army's reliance on the unlawful Biological Opinion, in violation of the ESA. The Center seeks declaratory and injunctive relief for both claims.

#### JURISDICTION AND VENUE

6. This case arises under the ESA, 16 U.S.C. §§ 1531-1544, and the Administrative Procedure Act (APA), 5 U.S.C. §§ 701-706. This Court has jurisdiction over this action pursuant to 28 U.S.C. § 1331 (federal question jurisdiction) and 5 U.S.C.

§§ 701-706 (APA). An actual controversy exists between the parties within the meaning of 28 U.S.C. § 2201 (declaratory judgments). Pursuant to 16 U.S.C. § 1540(g)(1)(A), the Center provided the Army with notice of its ESA violations 60 days prior to the commencement of the Second Claim for Relief.

7. Venue is proper in the District Court for the District of Arizona pursuant to 28 U.S.C. § 1391(e).

#### PARTIES

8. Plaintiff CENTER FOR BIOLOGICAL DIVERSITY (Center) is a nonprofit corporation with more than 35,000 members and headquarters in Tucson, Arizona. The Center works to raise public awareness and to preserve, protect, and restore biodiversity, native species, ecosystems, and public lands. The Center's members research, study, observe, publicize, and seek protection for ecosystems, plants, and animals, including the San Pedro River, Huachuca water umbel, and southwestern willow flycatcher. The Center's members use, benefit from, and enjoy lands throughout the Southwest, including the ecosystems, plants, and animals affected by decreasing water levels in the San Pedro River. They use the Huachuca water umbel, southwestern willow flycatcher, and other plants and animals in the upper San Pedro River basin for wildlife observation, research, educational trips, photography, aesthetic enjoyment, and other recreational, scientific, and educational activities. The Center's members intend to continue to engage in these activities in the future. The Center and its members analyze and disseminate information to the public about the areas affected by the decreasing water levels in the San Pedro River. The Center and its members' extensive involvement in the San Pedro River includes more than 15 years of activism and litigation. Defendants' failure to comply with the ESA has adversely affected the foregoing interests of the Center and its members. Unless this Court grants the requested relief, the Center and its members will continue to be adversely affected and irreparably harmed by Defendants' failure to comply with environmental laws.

9. Plaintiff MARICOPA AUDUBON SOCIETY (Maricopa) is an organization of volunteers dedicated to the enjoyment of birds and other wildlife with a primary focus on the protection and restoration of the habitat of the Southwest through education and community involvement. Maricopa is a nonprofit Arizona organization with approximately 2,000 members. Maricopa has a long history of involvement with the San Pedro River, including being instrumental in stopping the proposed Charleston Dam in 1977. The Charleston Dam was authorized by Congress in 1968 and would have inundated the southern half of the upper San Pedro River. Maricopa's volunteers and members use, enjoy, and benefit from the San Pedro River for wildlife observation, research, education, and recreational activities. They intend to continue to engage in these activities in the future. Defendants' failure to comply with the ESA has adversely affected the foregoing interests of the Maricopa Audubon Society, its volunteers, and members. Unless this Court grants the requested relief, these interests will continue to be adversely affected and irreparably harmed by Defendants' failure to comply with these environmental laws.

10. Defendant DIRK KEMPTHORNE is sued in his official capacity as Secretary of Interior. He is charged with implementing the ESA with regard to threatened and endangered terrestrial species.

11. The Secretary of Interior has delegated his duties under the ESA to Defendant UNITED STATES FISH AND WILDLIFE SERVICE. FWS is the agency within the United States Department of Interior responsible for administering the provisions of the ESA with regard to certain listed species, including the Huachuca water umbel and the southwestern willow flycatcher.

12. Defendant H. DALE HALL is sued in his official capacity as the Director of FWS. He is the official responsible for ensuring that FWS complies with its obligations under the ESA.

13. Defendant DR. BENJAMIN TUGGLE is sued in his official capacity as the

Regional Director for the Southwest Region of FWS. He is the official responsible for ensuring that FWS complies with its obligations under the ESA in the Southwest Region.

14. Defendant ROBERT M. GATES is sued in his official capacity as Secretary of Defense and is responsible for the actions of the U.S. Army. Fort Huachuca is a U.S. Army installation.

15. Defendant PETE GEREN is sued in his official capacity as Secretary of the Army. He is the official responsible for ensuring that U.S. Army installations, including Fort Huachuca, comply with all applicable laws.

16. Defendant MELISSA STURGEN is sued in her official capacity as Commander of Fort Huachuca. She is the official responsible for ensuring that Fort Huachuca complies with all applicable laws, including the ESA.

#### STATUTORY BACKGROUND

17. The ESA “provide[s] a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved.” 16 U.S.C. § 1531(b). Congress enacted the ESA to achieve two purposes: to provide for the protection of imperiled species to prevent their extinction, and to facilitate recovery of such species so that they no longer need the protections provided by the ESA.

18. To achieve its twin objectives of survival and recovery, the ESA directs FWS to determine which species of plants and animals are “threatened” or “endangered” within the meaning of the ESA. *Id.* § 1533. A species is “endangered” if “it is in danger of extinction throughout all or a significant portion of its range.” *Id.* § 1532(6). A species is “threatened” if “it is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” *Id.* § 1532(20). Concurrently with listing, FWS must designate “critical habitat,” which is defined as those areas “essential to the conservation of the species.” *Id.* § 1533(a)(3); § 1532(5)(A) & (B).

19. Section 7 of the ESA requires each federal agency to ensure that its actions are

not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of designated critical habitat. 16 U.S.C. § 1536(a)(2). An “action” includes “all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies.” 50 C.F.R. § 402.02.

20. To assist federal agencies in complying with their substantive duty to avoid jeopardizing listed species or destroying or adversely modifying critical habitat, section 7 of the ESA establishes an interagency consultation process. 16 U.S.C. § 1536. Under this process, a federal agency proposing an action that “may affect” a listed species or cause the destruction or adverse modification of a species’ critical habitat must prepare and provide to FWS a “biological assessment” of the effects of the proposed action. 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(a).

21. FWS must then review the biological assessment and any other relevant information to determine whether the proposed action is likely to jeopardize a listed species or destroy or adversely modify its designated critical habitat. 50 C.F.R. § 402.14(h)(3). This determination is set forth in a biological opinion from FWS. *Id.*; 16 U.S.C. § 1536(b)(3)(A). In fulfilling this consultation process, both agencies must use the best scientific data available. 16 U.S.C. § 1536(a)(2).

22. When assessing whether an agency action will jeopardize the continued existence of a species, FWS’s biological opinion must address the effects of an agency’s action not only on the ability of the species to survive, but also on its ability to recover to the point that it no longer needs the protection of the ESA. Similarly, when addressing whether an agency action will destroy or adversely modify a species’ designated critical habitat, FWS’s biological opinion must consider the effects of the action on the value of the critical habitat for the recovery of the species, as well as for its survival.

23. When a biological opinion’s “no-jeopardy” or “no-adverse modification” conclusion is based in whole or in part on mitigation measures, those measures must be reasonably specific, certain to occur, and capable of implementation. The proposed

mitigation measures must also be subject to deadlines or other enforceable obligations, and must address threats to the listed species so as to satisfy the jeopardy and adverse modification standards set forth in the ESA.

24. Regardless of the conclusion reached by FWS in the Biological Opinion, the action agency has an independent duty to meet its substantive section 7 obligation to ensure its actions are not likely to jeopardize listed species or result in the destruction or adverse modification of designated critical habitat. 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.16 (requiring re-consultation under certain circumstances and where agency maintains discretionary involvement over the action). An action agency violates its substantive section 7 duty if it relies on an inadequate, incomplete, or flawed biological opinion in carrying out an action.

#### FACTUAL ALLEGATIONS GIVING RISE TO THE CLAIM

##### A. The San Pedro River

25. The San Pedro River originates in Mexico and flows north across the Arizona border until it joins the Gila River north of Tucson. It is home to one of the Southwest's most precious and rare wetland ecosystems. More than 490 species of birds, mammals, fish, amphibians, and reptiles reside in or near the San Pedro River, making it one of the most ecologically and biologically rich places on earth.

26. In 1988, Congress designated 36 miles of the river's upper basin as the San Pedro Riparian National Conservation Area (Conservation Area). The Conservation Area encompasses one of the most extensive contiguous reaches of cottonwood-willow forest remaining in the Southwest.

27. The San Pedro River and the Conservation Area host millions of songbirds that migrate every year between their wintering grounds in Central America and Mexico and their summer breeding grounds in Canada and the northern United States. In 1995, the American Bird Conservancy recognized the San Pedro River as its first "Globally

Important Bird Area” in the United States. The San Pedro River also supports the richest variety of mammal species in the United States and the second richest variety in the world. In addition, it is home to 47 species of reptiles and amphibians.

28. The San Pedro is also home to at least two endangered species, including the Huachuca water umbel, a semi-aquatic plant, and the southwestern willow flycatcher, a neo-tropical songbird.

29. The Huachuca water umbel survives in only a few cienegas, springs, and river systems, including the San Pedro. The limited number of remaining populations and the small size of those populations mean that a single natural event, such as drought or a flood, could extirpate populations or cause the species to go extinct.

30. The upper San Pedro River provides the largest contiguous habitat capable of supporting populations of Huachuca water umbel and is the most important area for the umbel’s recovery. Because it is essential to the survival and recovery of the Huachuca water umbel, FWS designated 33.7 miles of the upper San Pedro River as critical habitat for the species.

31. The southwestern willow flycatcher is a riparian-dependent bird, nesting along rivers, streams, and other wetlands. The San Pedro serves as a migration corridor for southwestern willow flycatchers flying between wintering grounds in Latin America and breeding grounds in the southwestern United States.

32. The lower reaches of the San Pedro River contain a large population of flycatchers. Because the lower San Pedro is hydrologically connected to the upper San Pedro, reductions in discharge in the upper San Pedro River affect discharge in the lower reaches of the river.

33. Although the upper San Pedro River contains fewer southwestern willow flycatchers than the lower San Pedro, the presence of flycatchers has increased in response to the removal of livestock from the Conservation Area in 1988. As evidence of the bird’s increasing use of the upper San Pedro, southwestern willow flycatchers nested

in the Conservation Area in 2005 for the first time since 1997.

34. Expansion of the flycatcher's nesting grounds into the upper San Pedro River would improve the stability of flycatcher populations and assist in recovery of the species. The Recovery Plan for the southwestern willow flycatcher identifies the upper San Pedro River as an area with "[s]ubstantial recovery value," and provides that "recovery efforts should be focused" there. FWS, Final Recovery Plan, Southwestern Willow Flycatcher (Aug. 2002) at 91.

B. Groundwater Pumping and the San Pedro River

35. Groundwater pumping from the aquifer that supplies water to the upper San Pedro River poses the greatest threat to the river, its associated habitats, and the species that depend on these habitats.

36. Groundwater pumping affects the river because there is a direct hydrologic connection between the groundwater in the Sierra Vista subwatershed and the San Pedro's flows. The aquifer in the Sierra Vista subwatershed provides the San Pedro's base flows – the flows that sustain the river year-round regardless of seasonal variations in rainfall or snowmelt. The aquifer, in turn, is recharged primarily by precipitation that falls on the Huachuca Mountains to the west of the river.

37. Groundwater pumping affects this hydrologic system in two ways. First, it intercepts groundwater that would otherwise contribute to the San Pedro River's flows. Second, it lowers the water table. If the water table continues to drop, the river's hydrology will eventually reverse – in other words, instead of the aquifer feeding the San Pedro River, the San Pedro will feed the aquifer, and the river will dry up.

38. Fort Huachuca is a U.S. Army base located near the town of Sierra Vista, directly between the Huachuca Mountains and the San Pedro River.

39. Groundwater pumping is the sole water source for Fort Huachuca, Sierra Vista, and the surrounding communities.

40. Directly and indirectly, Fort Huachuca is the largest single source of

groundwater pumping in the Sierra Vista subwatershed. The Fort is directly responsible for its own groundwater pumping. It is also indirectly responsible for additional groundwater pumping by homes and businesses connected to the Fort or drawn to the area as a result of the Fort's presence or economic expenditures in the area. Fort Huachuca thus bears the greatest responsibility for the adverse effects of groundwater pumping on the San Pedro and the habitat it provides for hundreds of species.

41. In the Sierra Vista subwatershed, the rate of groundwater pumping exceeds the rate of natural recharge, creating a "groundwater deficit" and lowering the water table. In a 2004 estimate, the Arizona Department of Water Resources determined the groundwater deficit was at least 8,400 acre-feet per year near Fort Huachuca. According to the Fort, an average estimate for the groundwater deficit is now 10,962 acre-feet per year.

42. This deficit groundwater pumping has caused the upper San Pedro's base flows to decline dramatically in the last 50 years. Formerly perennial stretches of the upper San Pedro River have become intermittent and, since 1996, the river has had an increasing number of days where it runs dry during the fall and winter.

43. These reduced base flows have adversely affected the riparian and wetland vegetation surrounding the San Pedro.

44. Reduced base flows have also caused declines in Huachuca water umbel populations. In the Conservation Area, researchers documented 51 water umbel populations between 1995 and 1997, 43 populations in 2001, and 30 populations in 2004.

45. As the groundwater deficit grows and groundwater pumping continues, the San Pedro's flows will continue to decline until the river is completely dry. At that point, its value as habitat for the Huachuca water umbel and southwestern willow flycatcher will be destroyed.

46. FWS admits the greatest threat to Huachuca water umbel and its critical habitat on the San Pedro is excessive groundwater pumping. Indeed, any additional

reduction in flow may lead to extirpation of particular populations of the Huachuca water umbel from the San Pedro River.

47. There is not enough groundwater in the Sierra Vista area to ensure the survival of the San Pedro River, maintain federally reserved water rights in the Conservation Area, and support Fort Huachuca's operations and the groundwater-dependent growth associated with Fort Huachuca. The Army's operation of Fort Huachuca harms the San Pedro River, its associated ecosystems, federally protected species, and designated critical habitat.

C. 1999 and 2002 Biological Opinions

48. The Army and FWS have long recognized that activities and operations at Fort Huachuca are likely to adversely affect threatened and endangered species, including the southwestern willow flycatcher, the Huachuca water umbel, and designated critical habitat. Accordingly, the agencies have completed three formal consultations pursuant to section 7(a)(2) of the ESA.

49. In 1999, FWS issued a biological opinion stating that operations at Fort Huachuca were not likely to jeopardize the flycatcher or water umbel and were not likely to destroy or adversely modify designated critical habitat. FWS based its no-jeopardy and no-adverse modification opinion on the future implementation of an Effluent Recharge Project in Sierra Vista, which was aimed at delaying the impacts of Fort Huachuca's groundwater pumping on the San Pedro River. The Biological Opinion also was based on the Fort's commitment to identify, develop, and implement proposed mitigation measures as a long-term remedy to the groundwater deficit problem.

50. In 2000, the Center for Biological Diversity and others challenged the 1999 biological opinion in this Court. Ctr. for Biological Diversity v. Rumsfeld, 198 F. Supp. 2d 1139, 1143 (D. Ariz. 2002). Plaintiffs argued FWS's no-jeopardy biological opinion was arbitrary and capricious and a violation of the ESA in part because it did not require any specific or enforceable mitigation measures to control groundwater pumping related

to Fort Huachuca's operations, and therefore failed to protect the San Pedro River and the species that depend on it. Id. at 1144-45.

51. In 2002, Judge Marquez agreed with plaintiffs and concluded the 1999 biological opinion was arbitrary and capricious and a violation of the ESA. Id. at 1152-57. Judge Marquez noted the biological opinion's premise – that the Army would identify mitigation measures to resolve the groundwater deficit within three years – was “an admission that what is currently on the table as far as mitigation measures is inadequate to support the FWS's ‘no-jeopardy’ decision.” Id. at 1154. The court held the biological opinion must identify and include specific mitigation measures to support a no-jeopardy conclusion. Id.

52. To comply with Judge Marquez's decision, FWS and the Army again entered into formal consultation pursuant to ESA section 7(a)(2). The consultation considered the effects of the Fort and its associated population's groundwater pumping on threatened and endangered species and designated critical habitat.

53. In August 2002, FWS issued a new biological opinion. FWS acknowledged that decreased flow in the San Pedro River “would affect” Huachuca water umbel sites, and recognized that groundwater pumping that “appreciably decreases base flow and appreciably reduces the wetted surface area of perennial rivers or springs may destroy or adversely modify” the Huachuca water umbel's designated critical habitat.

54. To avoid these impacts, the Fort committed to eliminating its contribution to the groundwater deficit through various conservation measures. The biological opinion used the Fort's on-base and associated local population to calculate the level of groundwater withdrawal for which the Fort was responsible. It determined Fort Huachuca was responsible for the presence of 34,993 persons, or 54% of the human population, in the Sierra Vista subwatershed. By multiplying the estimated 5,144 acre-foot water deficit by 54%, the 2002 biological opinion calculated the Fort was accountable for 2,784 acre-feet of the deficit.

55. Based primarily on the Fort's commitment to eliminate its contribution to the groundwater deficit, FWS determined that the Fort's activities would not jeopardize the Huachuca water umbel or the southwestern willow flycatcher or destroy or adversely modify the umbel's designated critical habitat.

56. Since the 2002 Biological Opinion, the condition of the upper San Pedro has worsened. For example, the river's base flows continue to decline, the estimated groundwater deficit has more than doubled, and Huachuca water umbel sites have disappeared. In addition, a key stretch of the river at the Charleston gauge, located just to the east of Fort Huachuca, went dry for the first time in recorded history from July 5-12, 2005. The Charleston gauge is the most sensitive indicator of the health of the San Pedro because the riverbed is composed of bedrock at that point, forcing all available groundwater to the surface. During the summers of 2006 and 2007, the river again precipitously declined at the Charleston gauge, registering only slightly more than zero flow each year.

57. Even though the river's condition declined and the Fort's proposed mitigation measures proved ineffective, the Fort significantly increased the number of employees and related population beyond the 1,369 people provided for in the 2002 Biological Opinion.

58. On June 1, 2005, the Center for Biological Diversity and Maricopa Audubon Society filed suit against FWS and the Army, alleging that the changed circumstances and new information required FWS and Fort Huachuca to reinstate formal consultation pursuant to section 7 of the ESA. Ctr. for Biological Diversity v. U.S. Dep't of Hous. & Urban Dev., Civ. No. 05-261-TUC-CKJ (D. Ariz.).

59. On August 29, 2006, the parties filed a stipulated settlement agreement for this claim, whereby the Army and FWS agreed to complete a new formal section 7 ESA consultation on or before June 30, 2007. Id. (Docket Nos. 44, 49).

60. Pursuant to the settlement agreement, the Army submitted a Programmatic

Biological Assessment for Ongoing and Future Military Operations and Activities at Fort Huachuca, Arizona to FWS in December 2006. Upon request by FWS, the Army submitted an addendum to the Programmatic Biological Assessment in February 2007. Based in part on the Programmatic Biological Assessment and its addendum (collectively, the “PBA”), FWS issued the Biological Opinion completing the formal consultation on June 14, 2007.

61. The Biological Opinion evaluates the effects of activities that are directly or indirectly caused by the Fort’s operation, or that are interrelated to or interdependent with activities and operations at the Fort. Relying on section 321 of the Defense Authorization Act of 2004 (P.L. 108-136), which modified “present and future” ESA consultations involving Fort Huachuca, FWS did not consider the “cumulative” effects of future water use by State, tribal, local, or private actions that also occur in the Sierra Vista subwatershed in determining whether the Fort’s operations will jeopardize listed species or destroy or adversely modify critical habitat.

D. The 2007 Biological Opinion

62. The action evaluated by the PBA and the 2007 Biological Opinion includes ongoing and planned military operations and activities at and near Fort Huachuca through the year 2016. There is no basis for limiting the consultation to operations covering this nine-year time frame. Indeed, the Biological Opinion recognizes that the river will continue to deteriorate after 2016.

63. The 2007 Biological Opinion also recognizes that, for the nine years until 2016, groundwater pumping related to Fort Huachuca will intercept water that would otherwise feed the San Pedro River and will continue to deplete the aquifer.

64. The Biological Opinion further acknowledges that unmitigated withdrawal of groundwater will eventually lower the water table such that the flow of stored water will reverse. Such a reversal will dewater the San Pedro River, causing perennial reaches to go dry for extended periods of time.

65. The Biological Opinion evaluates the river depletions caused by groundwater pumping attributable to the Fort separately from the depletions caused by groundwater pumping attributable to water use by State, tribal, local, or private entities unrelated to Fort Huachuca. FWS concludes river flow will decrease 0.85 cubic feet per second (cfs) by 2016 as a result of water use by sources unrelated to the Fort.

66. In addition to the water depletion caused by these unrelated sources, FWS also concludes that groundwater pumping attributable to the Fort alone will continue to diminish the San Pedro's base flows. The magnitude of the decline, according to FWS, depends on the success of water conservation measures proposed to be implemented by the Fort.

67. The flow reductions contemplated by the Biological Opinion, caused by the Fort alone as well as in combination with other sources, are appreciable and may cause formerly perennial stretches of the upper San Pedro to become intermittent.

68. The agencies recognize that continued decreases in flow and increases in intermittency will harm the riparian habitats associated with the San Pedro and the species that depend on the river.

69. In particular, any decrease in base flows will likely harm or extirpate populations of Huachuca water umbel and its designated critical habitat. For example, almost any reduction in flow will result in the San Pedro River changing from perennial to intermittent in the Brunchow Hill-Charleston area, which will affect umbel populations there. Near the town of Hereford, any decrease in the river's water level could result in increasing periods of intermittent flow and extirpation of the umbel populations at that location. Similarly, if base flows decline during May and June near the Tombstone Gauge area, water umbel populations will likely be extirpated there.

70. FWS also acknowledges that a drop in the water table will make it difficult or impossible for young cottonwoods to take root and sustain the cottonwood-willow forests upon which the southwestern willow flycatcher depends.

71. Nonetheless, the Biological Opinion concludes the Fort's activities and

operations will not jeopardize the Huachuca water umbel or southwestern willow flycatcher, or adversely modify designated critical habitat. Further, FWS endorses the PBA's proposal to allow the Fort to expand by an additional 3,000 people.

72. In reaching this conclusion, the Biological Opinion fails to account for all of the Fort's effects on the river and fails to use the best available science.

73. For example, instead of using the same process the agencies used in the 2002 Biological Opinion to calculate the Fort's responsibility for groundwater pumping, the 2007 Biological Opinion adopts a new and unsupported methodology. The Army provided this methodology to FWS in the PBA.

74. This new methodology significantly reduces the Fort's responsibility for the growing groundwater deficit in the area and the groundwater pumping that is destroying the San Pedro River.

75. The new methodology artificially minimizes the Fort's impacts on the river in part by ignoring the effects of the Army's increasing annual economic expenditures. For example, between 2002 and 2005, the Fort increased its local expenditures from \$569.7 million to \$830.6 million. These expenditures induce off-post economic development that would not occur but for the Fort Huachuca's presence and increase water use in the area. Nonetheless, FWS concludes that the Fort's responsibility for the water deficit decreased during this same time from approximately 54% in 2002 to 18% in 2005.

76. FWS and the Army fail to provide a reasoned basis for adopting this new methodology, which is contrary to accepted economic models and the best available science. Had FWS and the Army used other available economic models, the Fort's responsibility for groundwater pumping in the area may have been as high as 80% of the total groundwater deficit.

77. FWS and the Army also failed to adequately consider the groundwater pumping from all projects related to the Fort, including the expansion of the airport on Fort Huachuca.

78. Even with the agencies' new, overly optimistic methodology and its failure to account for all of the Fort's impacts, however, FWS concludes groundwater pumping associated with the Fort will continue to harm the San Pedro's flows.

79. To address this problem, FWS and the Army rely on an assortment of water conservation measures proposed by the Fort for implementation by 2016. Even under the best-case scenario, assuming successful implementation of each proposed conservation measure, the Fort's groundwater pumping will continue to deplete the river's flows.

80. Nonetheless, based on these mitigation measures, the 2007 Biological Opinion concludes the Fort will not jeopardize the water umbel or flycatcher or adversely modify the umbel's critical habitat.

81. The proposed water conservation measures, however, suffer from many of the same deficiencies recognized by Judge Marquez in rejecting the 1999 Biological Opinion.

82. For example, FWS and the Army fail to explain precisely which proposed mitigation measures they rely upon.

83. Further, Fort Huachuca has committed to implement only some of the identified mitigation measures. Many of the proposed mitigation measures identified in the Biological Opinion have no secured funding. Others are conceptual in nature and therefore may be altered, replaced, or abandoned as part of an "adaptive management" strategy. This "adaptive management" approach does not identify reasonably certain, enforceable measures that would be implemented if changes are necessary to protect species or critical habitat.

84. Even where certain water conservation measures are identified and funded, FWS and the Army fail to explain how or why they will be effective. Indeed, one of the mitigation measures the agencies rely upon appears to be a recharge facility explicitly found to be insufficient by Judge Marquez in 2002.

85. In other words, the mitigation measures proposed in the PBA and critical to

FWS's conclusions in the Biological Opinion – to the extent they are identified – are speculative, unenforceable, and not reasonably certain to occur. Judge Marquez specifically rejected the 1999 Biological Opinion for reliance on similarly uncertain and undeveloped mitigation measures in his 2002 ruling. Rumsfeld, 198 F. Supp. 2d at 1153-54.

86. Further, even if the Fort successfully implements the long-term mitigation measures by 2016, the agencies recognize the San Pedro River will not realize the benefits of these efforts for several decades. To avoid jeopardizing endangered species or adversely modifying critical habitat in the interim, the PBA proposes – and the Biological Opinion relies on – the development of a “targeted mitigation strategy” to identify actions that would benefit these species and critical habitat within the next ten years. As with the 1999 Biological Opinion, however, the PBA and the 2007 Biological Opinion fail to identify any such short-term mitigation measures, because the “targeted mitigation strategy” has not yet been developed. Judge Marquez concluded in 2002 that a promise to develop mitigation measures at some point in the future is insufficient. Rumsfeld, 198 F. Supp. 2d at 1154, 1156.

87. Moreover, even if the mitigation measures identified in the Biological Opinion are effective to the extent claimed by the Fort and FWS, the groundwater pumping associated with the Fort will still diminish the San Pedro's flows. The Biological Opinion fails to adequately analyze the impact of these flow reductions.

88. For example, FWS compares the anticipated reductions in base flow caused by the Fort to the river's average annual flow. The San Pedro's flows fluctuate significantly during the year, depending on the amount of precipitation the area has received. Based on the average flows, FWS concludes the changes caused by the Fort's groundwater pumping are so small that they will not result in appreciable reductions to the population sizes or geographic extent of Huachuca water umbel. The Biological Opinion fails to compare the magnitude of the Fort-caused decrease in base flow to the amount of water

in the San Pedro River during the inevitable low flow periods. This failure is critical because even under the best-case scenario predicted by FWS, reduction in flow attributable to Fort Huachuca may cause the river to dry up in some places at certain times of the year.

89. This failure is also critical because Huachuca water umbel populations are most vulnerable to extirpation during the driest time of year. FWS and the Army fail to consider the impacts of decreases in base flow on the umbel or its designated critical habitat when the river is already nearly dry. They also fail to analyze whether decreases in base flow during low flow periods will affect the southwestern willow flycatcher or its habitat.

90. The Biological Opinion, consistent with the PBA, also fails to adequately evaluate the existing status of the San Pedro River, the Huachuca water umbel, and its designated critical habitat. For instance, the Biological Opinion fails to present data showing that groundwater pumping has already negatively affected flow in the San Pedro River at Lewis Springs, just to the east of Fort Huachuca, and at the Babocomari River confluence. FWS and the Army also ignore the significance of the increasing groundwater deficit and the results of current U.S. Geological Survey data and models.

91. Similarly, the agencies fail to acknowledge and adequately evaluate the umbel's already precarious status. Documented umbel populations on the Fort plummeted from 22 to 14 in the three years between 2002 and 2005. Similarly, documented umbel populations in the Conservation Area fell from 51 in 1995-97 to just 30 in 2004. Despite this decline from an already small number of populations, FWS concludes the status of the Huachuca water umbel is stable on the Fort and in the Conservation Area. FWS also assumes – without any supporting evidence – that umbel populations can and will recolonize if a particular population disappears as a result of decreasing flows in the San Pedro.

92. Further, the agencies' obligation to consider the impacts to endangered species

and critical habitat is not limited to how the Fort's activities will affect the species' ability to survive. The agencies must also evaluate how these activities will affect the species' ability to recover so that they no longer need the protection of the ESA. Despite acknowledging its legal obligation to conduct this analysis, FWS failed to consider how the Fort's activities will affect the value of the umbel's designated critical habitat for the umbel's recovery. The Biological Opinion also unlawfully fails to analyze how diminishing flows in the San Pedro River will affect the Huachuca water umbel or the southwestern willow flycatcher's ability to recover in its jeopardy analysis.

93. In addition, FWS and the Army fail to consider how changes in precipitation or snowmelt from global climate change may affect the San Pedro or the effectiveness of proposed mitigation measures. Scientific data available today establishes that global climate change is occurring and will affect hydrology in the western United States in general and Arizona in particular. The PBA and Biological Opinion assume, however, that neither precipitation nor snowmelt will change. This assumption forms the basis for the Biological Opinion's conclusion that after 2016, sufficient rain will fall to maintain the San Pedro's flows even though the river's base flows will be reduced.

94. In sum, for these and other reasons, FWS's "no-jeopardy" and "no adverse modification" conclusions are unsupported – and in many cases contradicted – by the information presented in the Biological Opinion. The Biological Opinion's conclusions are unlawfully based on uncertain and ineffective mitigation measures, flawed assumptions, inadequate legal and factual analyses, and unsupported and contradictory assertions, and are not based on the best available science.

95. In addition, the Army failed to provide FWS with the best available science in the PBA. Further, because the Biological Opinion is invalid, the Army's reliance on the Biological Opinion is arbitrary, capricious, and in violation of the ESA.

FIRST CLAIM FOR RELIEF  
(FWS's Violation of ESA and APA)

96. Each and every allegation set forth in this Complaint is incorporated herein by reference.

97. FWS's finding in the 2007 Biological Opinion that activities and operations at Fort Huachuca will not result in jeopardy to the Huachuca water umbel or southwestern willow flycatcher and will not destroy or adversely modify designated critical habitat has no factual and analytical basis in the Biological Opinion and is not rationally connected to the facts found in the Biological Opinion.

98. The 2007 Biological Opinion unlawfully failed to analyze the effects of Fort Huachuca's operations and activities on the recovery of the Huachuca water umbel and the southwestern willow flycatcher. FWS also unlawfully failed to analyze whether Fort Huachuca's activities and operations will affect the value of the Huachuca water umbel's critical habitat for recovery of the species.

99. The 2007 Biological Opinion improperly relies on mitigation measures that are not reasonably specific, not certain to occur, and unenforceable. Many of these mitigation measures have not yet been developed or proposed, and there is no evidence in the Biological Opinion that the measures that have been identified will be effective.

100. FWS failed to consider the best available science in reaching its conclusions in the 2007 Biological Opinion.

101. The Biological Opinion's analysis, reasoning, and conclusions are arbitrary, capricious, an abuse of discretion, and not in accordance with law. This violates section 7(a) of the Endangered Species Act, 16 U.S.C. § 1536(a), and its implementing regulations, as well as the Administrative Procedure Act, 5 U.S.C. § 706(2)(A).

SECOND CLAIM FOR RELIEF  
(U.S. Army's Violation of ESA)

102. Each and every allegation set forth in this Complaint is incorporated herein by

reference.

103. Pursuant to section 7 of the ESA, federal agencies must ensure their actions are not likely to jeopardize the continued existence of threatened and endangered species or adversely modify or destroy designated critical habitat. 16 U.S.C. § 1536(a)(2). To meet this duty, a federal agency proposing an action that “may affect” a listed species or critical habitat must complete the consultation process and receive a valid biological opinion. As part of the consultation process, the agency must prepare and provide to FWS a biological assessment of the effects of the proposed action. 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.12(g). In preparing the biological assessment, the federal agency must provide FWS with the best scientific and commercial data. 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(d).

104. The Army is relying on the 2007 Biological Opinion to meet its substantive section 7 duty under the ESA. The 2007 Biological Opinion is not a valid biological opinion because it is arbitrary and capricious and violates the ESA. In addition, the shortcomings of the 2007 Biological Opinion stem in part from the Army’s own failure to identify, fund, and implement specific and effective mitigation measures and from its failure to provide FWS with the best available science.

105. The Army’s operation of Fort Huachuca in the absence of a valid Biological Opinion and its failure to provide adequate and accurate information to FWS violates section 7(a)(2) of the ESA, 16 U.S.C. § 1536(a)(2), and the ESA’s implementing regulations. The Army’s actions are arbitrary, capricious, an abuse of discretion and otherwise not in accordance with the ESA. 5 U.S.C. § 706(2).

#### PRAYER FOR RELIEF

WHEREFORE, Plaintiffs respectfully request that this Court enter judgment against all Defendants and provide the following relief:

1. Find and declare that the 2007 Biological Opinion is arbitrary and capricious, an abuse of discretion, and not in accordance with law in violation of the

APA, 5 U.S.C. § 706;

2. Hold unlawful and set aside the 2007 Biological Opinion;
3. Find and declare that the U.S. Army has failed to ensure that Fort Huachuca's operations are not likely to jeopardize listed species or adversely modify or destroy critical habitat;
4. Order FWS, through an injunction, to reinitiate and complete formal consultation with the Army with respect to the impacts of activities and operations of Fort Huachuca on the Huachuca water umbel, the southwestern willow flycatcher, and the designated critical habitat for the water umbel;
5. Retain jurisdiction over the matter until such time as Defendants have complied fully with the Court's order;
6. Award Plaintiffs their costs of litigation, including reasonable attorney and expert witness fees; and
7. Provide such other relief as the court deems just and proper.

Dated: October 30, 2007

Respectfully submitted,

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### CERTIFICATE OF SERVICE

I hereby certify that on October 30, 2007, I electronically transmitted the attached Amended Complaint and the Summons to the Clerk's Office using the CM/ECF System for filing and served same by U.S. mail on the following, who are not registered participants of the CM/ECF System:

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