SCREENING FORM FOR LOW-EFFECT HCP DETERMINATIONS

I. Project Information

A. Project Name:

San Rafael Ranch Habitat Conservation Plan in Santa Cruz County, Arizona

B. Affected Species:

Covered species: Gila chub (*Gila intermedia*), federally endangered; northern Mexican gartersnake (*Thamnophis eques megalops*), federally threatened; Canelo Hills ladies'-tresses (*Spiranthes delitescens*), federally endangered; Huachuca water umbel (*Lilaeopsis schaffneriana* ssp. *recurva*), federally endangered; Sonoran tiger salamander (*Ambystoma mavortium* [=*tigrinum*] *stebbinsi*), federally endangered; Huachuca springsnail (*Pyrgulopsis thompsoni*), federal candidate. Species not covered: Chiricahua leopard frog (*Lithobates* [=Rana] chiricahuensis), federally threatened; Gila topminnow (*Poeciliopsis o. occidentalis*), federally endangered; northern aplomado Falcon (*Falco femoralis septentrionalis*) federally endangered; western yellow-billed cuckoo (*Coccyzus americanus*) federally threatened; jaguar (*Panthera onca*) federally endangered; ocelot (*Leopardus pardalis*) federally endangered; lesser long-nosed bat (*Leptonycteris curasoae yerbabuenae*) federally endangered.

C. Project Size:

The SRRHCP covers a total of 22,057 acres, including 18,375 acres of rangeland and 125 acres of irrigated pasture owned by the San Rafael Cattle Company. This also includes 3,557 acres of grazing preference on the Arizona State Parks, San Rafael State Natural Area, consistent with lease or agreement terms. The San Rafael Ranch includes 8.1 miles of the Santa Cruz River, of which 5.5 miles currently have perennial flow. There are also 4.2 miles of perennial tributaries of the Santa Cruz River that flow on the ranch, for a total of 9.6 perennial stream miles in the project area. In addition, there are approximately 37 earthen tanks throughout the ranch, and at least half of them are associated with groundwater wells that can be used to control water levels in the tanks.

D. Brief project description including minimization and mitigation plans:

The San Rafael Cattle Company is seeking an incidental take permit, under Section 10(a)(1)(B) of the Federal Endangered Species Act, to cover take of four animal species resulting from continuing cattle ranching and farming operations on the 18,500- acre ranch and the 3,557-acre San Rafael State Natural Area while providing habitat conditions favorable to the management and restoration of several listed and unlisted species.

A 30-year permit is requested to address incidental take associated with the following ranch activities: hay farming, watering and grazing by cattle in stock tanks and riparian habitats,

including herding of cattle within pastures and between pastures; maintenance of stock tanks, wells, waterlines, fences, roads, and utility lines supporting these facilities; and brush and invasive plant management to reduce shrub invasion of uplands. These activities may result in take of the riparian obligate and aquatic species proposed for coverage.

Since purchasing the San Rafael Ranch in 2000, the San Rafael Cattle Company has improved upland and riparian habitat conditions by committing to sustainable grazing levels, implementing deferred grazing in pastures along perennial stretches of the Santa Cruz River and tributaries, and adding water sources in the form of stock tanks. This has improved riparian vegetation conditions and provided refugia for one or more of the covered species. A major purpose of the San Rafael Habitat Conservation Plan is to provide a regulatory framework and early agreement to enable the San Rafael Cattle Company to cooperate with the Service, the Arizona Game and Fish Department, and other conservation organizations for the translocation or reestablishment of new populations of covered species on covered lands. The San Rafael Ranch HCP and associated permit will allow for the incidental take of covered species that already exist on the covered lands and of new populations of covered species that are established by the cooperating agencies and organizations to promote recovery of these species.

The San Rafael Cattle Company will implement measures to minimize take of covered species including grazing management that continues to reverse the effects of past overgrazing, rotational short duration grazing (1-2 weeks at a time) for a total of 4-6 weeks of grazing annually of the pasture containing Sheehy Spring, limited grazing of other riparian pastures along the Santa Cruz River between November 1st through March 31st, and management of water in stock tanks for use by covered species as well as control of non-native invasive species. Stock tanks will be maintained following guidelines developed in part by the Fish and Wildlife Service in the Sonora Tiger Salamander Recovery Plan (U.S. Fish and Wildlife Service 2002). Fences will be maintained around all pastures to prevent access by cattle when pastures should not be grazed. Fences will also be maintained around some stock tanks to limit access by cattle. Brush and invasive plant management activities will be conducted using best management practices to prevent associated sediments and herbicides from entering aquatic habitats (White 2007). Herbicides will not be used in habitats containing covered plant species. Personnel will not knowingly engage in the release of non-native fish, amphibian, or invertebrate species within the covered area.

The San Rafael Cattle Company will implement measures to mitigate unavoidable impacts to covered species. Maintenance of perennial water sources will improve habitat conditions for covered species; however, perennial waters will also allow nonnative aquatic predators to spread more easily. The potential to spread such predators will be mitigated through continued cooperation with agencies to renovate stock tanks to control non-native species. The San Rafael Cattle company will also work with these agencies to preclude livestock from entering stock tanks occupied by covered species and add drinkers for livestock use adjacent to these stock tanks. Furthermore, the San Rafael Cattle company will promote conservation and recovery of covered species by allowing establishment of new populations on the San Rafael Ranch.

II. Does the HCP fit the low-effect criteria in the HCP Handbook? ***The answer must be "yes" to all three questions below for a positive determination. Each response should include an explanation.***

A. Are the effects of the HCP minor or negligible on federally listed, proposed, or candidate species and their habitats covered under the HCP before implementation of the mitigation plan?

Yes, the effects of the HCP on federally listed and candidate species and their habitats covered under the HCP are minor before implementation of the mitigation plan. Managed waters such as stock tanks can and do provide refuges for water-dependent species during dry periods.

The largest impact to Sonoran tiger salamanders from implementation of the HCP would be from the periodic need to clean stock tanks. The Sonoran Tiger Salamander Recovery Plan recognizes that the species is now essentially dependent upon stock tanks and their maintenance for its existence (U.S. Fish and Wildlife Service 2002). The long-term benefit of the availability of reliable aquatic habitat that stock tanks provide for Sonoran tiger salamanders outweighs the relatively minor effects to the species that may result from occasional incidental take associated with stock tank maintenance. Stock tanks must be cleaned of sediment every 20 to 25 years to maintain storage capacity. This periodic maintenance maximizes the amount of habitat available to the salamander. The lands covered by the HCP are an essential link between populations found on National Forest lands to the west and east. Thus, implementation of the HCP will contribute a key component to the recovery of this species.

Currently, due to the wide-ranging presence of bullfrogs in the San Rafael Valley, northern Mexican gartersnake populations are negatively impacted. If methods are developed and implemented to reduce or eliminate bullfrogs in the covered area, it is anticipated that the northern Mexican gartersnake may become more widespread and numerous in the covered area. In this case, the largest impact from the action to northern Mexican gartersnake populations would be from the periodic need to clean stock tanks. As with the Sonoran tiger salamander, the long-term benefit of the availability of reliable aquatic habitat that stock tanks would provide for the northern Mexican gartersnake outweighs the relatively minor effects to the species that may result from occasional incidental take associated with stock tank maintenance. A 4(d) rule exempting the use and maintenance of stock tanks from section 9 prohibitions for northern Mexican gartersnakes exists.

Initial effects of the action on Gila chub resulting from covered activities will be minor, of short duration, and have minimal significant effects to the species. Grazing in the pasture currently containing Gila chub habitat is rare and is restricted to short duration. The proposed action will at a minimum maintain this disjunct population that the Service considers threatened and unstable, and likely will lead to continued improvement in habitat condition and extent within the upper Santa Cruz River. Gila chub may be released into additional sites on the ranch to enhance conservation status of the species. Concurrently with the increase in distribution of the species on the ranch, there would be an increase in potential impacts to the species. The likely increase in incidental take that would occur if new populations are established would be more than offset by the creation of additional populations.

Effects of the action on the Huachuca springsnail will be minor, of short duration, and have minimal long-term/significant effects on the species. Grazing and watering that occurs in the pastures containing Huachuca springsnail is restricted to short durations during the non-growing season. The proposed action will at a minimum maintain this population that is currently one of 14 extant populations of the species. This population of Huachuca springsnails has persisted with the current grazing management practices for which the applicants seek coverage under the HCP.

The level of impacts from herbivory and trampling of Canelo Hills ladies'-tresses and Huachuca water umbel is expected to be minimal since the areas where these two plant species occur are managed to minimize impacts to the species. Critical habitat for Huachuca water umbel in the covered area includes about 2.7 miles of the Santa Cruz River within a riparian pasture with limited grazing during the non-growing season (November 1 through March 31). During this time, rains are adequate to encourage dispersal of cattle and cold temperatures discourage cattle from lingering in river bottoms and trampling plants. Impacts to critical habitat from trampling by cattle walking down the banks to the river bottom are minimal because banks in the covered area are armored with thick riparian vegetation and there appears to be an upward trend in riparian condition in the covered area since the applicant purchased it in 2000 (D. Duncan, USFWS, pers. comm.; FWS files). According to the listing rule for the Huachuca water umbel, well-managed livestock grazing is compatible with Huachuca water umbel: "Light trampling also may keep other plant densities low, providing favorable microsites for *Lilaeopsis* [Huachuca water umbel]. The fact that *Lilaeopsis* [Huachuca water umbel] and its habitat occur in the upper Santa Cruz and San Pedro river systems in the San Rafael Valley attests to the good land stewardship of past and current landowners" (62 FR 3). This is also likely the situation for the Canelo Hills ladies'-tresses found at Sheehy Spring on the San Rafael Ranch. Dense vegetation surrounding Canelo Hills ladies'- tresses, such as non-native Johnson grass and Bermuda grass, is possibly a great threat to the survival and growth of these small orchid plants. Disturbance resulting from limited grazing may decrease this competition with such non-native plants. The invasive plant management activities covered under the HCP may also decrease competition between Canelo Hills ladies'-tresses and invasive plants. Finally, livestock grazing in the pasture containing Sheehy Spring is limited to 1 to 2 week periods for a total of 4 to 6 weeks annually, and in some years this pasture is not grazed at all.

These minor, short duration effects to covered species and their habitats will be balanced by the overall conservation program of the HCP. The maintenance of the 80-plus stock tanks and drinkers and associated infrastructure combined with frequent movement of cattle among pastures and limited use of riparian pastures should improve conditions on a landscape level for the habitat of covered species. The brush and invasive plant management program will also reduce threats of shrub encroachment on floral grassland species. Management of non-native invasive plants will reduce the threats of non-natives and their indirect effects on cover as well as fire frequency and intensity. This management will help retain habitats of covered species. The education program established under this plan will increase awareness of the limited users of the ranch of the needs of covered species.

B. Are the effects of the HCP minor or negligible on other environmental values or resources (e.g. air quality, geology and soils, water quality and quantity, socio-economic, cultural resources, recreation, visual resources, etc.) before implementation of the mitigation plan?

Yes, the project would cause only minor or negligible effects on other environmental values and resources before implementation of the mitigation plan. Negligible effects on air quality could result from limited grading during periodic stock tank maintenance and driving on dirt roads to accomplish ranch management and maintenance activities. Impacts to geology, soils, and cultural resources would be minor because ground disturbance will be limited to maintenance of existing stock tanks, roads, and fences. There are potential effects related to erosion and storm water runoff from maintenance of existing stock tanks; however, due to the size and frequency of disturbance (about 40 stock tanks will be cleaned out one or two times during the 30-year period of the permit, resulting in maximum surface area soil disturbance of about 0.4 acres per year), and distance from stock tanks to water courses, the project will have minor effects to geology, soil, and water quality. Effects on water quality and quantity are anticipated to be minor because the San Rafael Cattle Company is committed to managing livestock grazing and hay production so that the present water table and perennial flows along the Santa Cruz River are sustained for the plant and animal communities that the river supports. Recreation is limited and controlled by the landowner.

C. Would the impacts of this HCP, considered together with the impacts of other past, present, and reasonably foreseeable similarly situated projects <u>not</u> result, over time, in cumulative effects to environmental values or resources which would be considered significant?

Yes, we anticipate that the project will not have significant cumulative effects to environmental values or resources in the foreseeable future. The intent and expectation is that impacts of implementation of this HCP along with reasonably similarly situated projects would have significant positive effects to environmental values and resources over time.

III. Do any of the exceptions to categorical exclusions apply to this HCP? (form 516 DM 2.3, Appendix 2) ***If the answer is "yes" to any of the questions below, the project cannot be categorically excluded from NEPA. Each "no" response should include an explanation.***

Would implementation of the HCP:

A. Have significant adverse effects on public health or safety?

No. The covered activities are conducted for the purposes of ongoing cattle ranching and improvement of habitat conditions for covered species. The ranch management activities on the covered area use established techniques that are unlikely to result in any health or safety effects.

B. Have adverse effects on such unique geographic characteristics as historic or cultural resources, park, recreation or refuge lands, wilderness areas, wild or scenic rivers, sole or principal drinking water aquifers, prime farmlands, wetlands, floodplains, or ecologically

significant or critical areas, including those listed on the Department's National Register of Natural Landmarks?

No. There are no historic or cultural resources, refuge lands, wilderness areas, wild or scenic rivers, prime farmlands, floodplains, or ecologically significant or critical areas that would be adversely affected. The San Rafael Valley Historic District, which includes the covered area of the HCP, is on the Department's National Register of Historical Landmarks. The historical values of the ranch will not be adversely affected by this action. There are about 40 existing stock tanks that will be cleaned out (excavated) between 1 and 2 times during the life of the permit. Excavation will occur in previously disturbed areas, be temporary, and have only superficial and temporary effects on the ground surface. Creation of additional stock tanks is not a part of the action. All other maintenance work covered by the HCP will occur in previously disturbed areas. Implementation of the HCP will enhance the historical use and cultural resources by protecting grassland, aquatic, and riparian habitats on the covered area.

C. Have highly controversial environmental effects?

No. These activities are consistent with sound grazing practices developed with the assistance of the Natural Resources Conservation Service and a University extension specialist. These practices are improving range condition and have negligible or beneficial effects to covered species (Natural Resource Conservation Service 2004). Two comment letters were received on the draft HCP, one from the Arizona Game and Fish Department and one from Arizona State Parks.

D. Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks?

No. The activities are primarily routine maintenance activities associated with cattle ranching, which lack unique or unknown environmental risks.

E. Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects?

No. The HCP does not establish a precedent for future actions or represent a decision in principle about future actions that will potentially cause significant environmental effects.

F. Be directly related to other actions with individually insignificant but cumulatively significant environmental effects?

No. The methods and practices used to implement this HCP are standard and routine, have been and will be used elsewhere; other actions are not directly related to this HCP. There will likely be a positive cumulative impact if similar actions are implemented in other areas.

G. Have adverse effects on properties listed or eligible for listing on the National Register of Historic Places?

The San Rafael Valley Historic District, which includes the covered area of the HCP, is on the Department's National Register of Historical Landmarks. The historical values of the ranch will not be adversely affected by this action.

H. Have adverse effects on listed or proposed species, or have adverse effects on designated Critical Habitat for these species?

No. Implementation of the HCP will not have adverse effects on other listed or proposed species that could potentially occur in the covered area during the life of the project. These include the federally endangered jaguar (*Panthera onca*), federally endangered northern aplomado falcon (*Falco femoralis septentrionalis*), federally threatened Chiricahua leopard frog (*Lithobates* [=Rana] chiricahuensis), federally threatened western yellow-billed cuckoo (*Coccyzus americanus*), federally endangered ocelot (*Leopardus pardalis*), federally endangered lesser long-nosed bat (*Leptonycteris curasoae yerbabuenae*), and federally endangered Gila topminnow (*Poeciliopsis occidentalis occidentalis*). There is a reasonable likelihood that jaguars will pass through the covered area; however, no covered activities will adversely affect jaguars. The San Rafael Valley does not support suitable nesting habitat for the northern aplomado falcon. In addition, the northern aplomado falcon is an experimental non-essential population under Section 10(j) of the Act in this area.

There is one population of Gila topminnow currently extant on the covered lands. Any effects from this and subsequent releases of the Gila topminnow to the San Rafael Ranch will be under the terms of the Safe Harbor Agreement for topminnows and pupfish in Arizona (Arizona Game and Fish Department 2007). In 2009, the San Rafael Cattle Company signed a certificate of inclusion prepared under the Arizona Game and Fish Department (2006) Safe Harbor Agreement for the Chiricahua leopard frog in Arizona. An initial introduction of Chiricahua leopard frogs was conducted in October 2009. Any effects from this introduction, subsequent introductions, or colonization of sites by the Chiricahua leopard frog in the covered area will be addressed under the terms of this Safe Harbor Agreement. It appears the initial Safe Harbor population of frogs on the ranch was invaded by bullfrogs, is likely extirpated, and is unlikely to be reestablished.

I. Have adverse effects on wetlands, floodplains, or be considered a water development project thus requiring compliance with either Executive Order 11988 (Floodplain Management), Executive Order 11990 (Protection of Wetlands), or the Fish and Wildlife Coordination Act?

No. Implementation of the HCP will likely have beneficial effects to wetlands and floodplains. This is not considered a water development project.

J. Threaten to violate a Federal, State, local or tribal law or requirement imposed for the protection of the environment?

No. Implementation of the HCP will be in full compliance with all other laws and regulations. The proposed project does not take place on tribal land.

References

Arizona Game and Fish Department. 2007. Safe Harbor Agreement for topminnows and pupfish in Arizona. Arizona Game and Fish Department. Phoenix, AZ. 36pp.

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Natural Resource Conservation Service. 2004. San Rafael Cattle Company, excerpt from the NRCS Grazing Plan. Natural Resource Conservation Service. 13pp.

U.S. Fish and Wildlife Service. 2002. Sonora tiger salamander (*Ambystoma tigrinum[=mavortium] stebbinsi*) recovery plan. U.S. Fish and Wildlife Service. Phoenix, Arizona. iv + 67pp.

White, J. A. 2007. Recommended protection measures for pesticide management applications in Region 2 of the U.S. Fish and Wildlife Service. U.S. Fish and Wildlife Service, Austin, Texas. 199pp.

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