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July 16, 2013

Mr. Jim Upchurch
Coronado National Forest
300 West Congress Street
Tucson, Arizona 85701

RE: Draft Biological Opinion, Rosemont Copper Project

Dear Mr. Upchurch:

Thank you for the opportunity to provide review and recommendations for the Draft Biological Opinion for the Rosemont Copper Project. We know the pace at which you and your staff are working to bring the Preliminary Administrative FEIS to a state of readiness for publication before the effective date of the new Forest Service appeal regulations at 36 CFR Part 218.

We have been able to focus attention on the Draft BO since we received it on July 8, 2013. We greatly appreciate the extension of time to share our thoughts with you to July 16, 2013. In the time available, we have attempted to review the Draft BO critically. As a Cooperating Agency, we take our duty seriously to provide you with our best efforts to identify areas of weakness or vulnerability in crucial documents such as this one. Where we could, we have cited case law to help illustrate vulnerabilities. Ultimately, our objective in providing review is to offer constructive suggestions that would help to minimize or offset the effects to threatened and endangered species or their affected critical habitat.

The six days allotted for review of the 418-page Biological Opinion necessarily limited the Department's ability to provide comprehensive comments. However, a couple of factors appear consistent in our review: the strategy to mitigate effects from the project is dependent upon implementation by a third party conservation partner; and descriptions of conservation outcome expectations of some actions seem indefinite. While the Arizona Game and Fish Department has been identified as a potential third party conservation service provider, we are concerned that the commitment of financial resources through the Biological Opinion necessary to successfully achieve the desired conservation outcomes for listed species falls short of what would be necessary. Assuming the role of third party conservation service provider, if the implementing resources are not truly available, implies great risk of financial and other liability upon that agency. If defined conservation outcomes are vague, then the service provider is left with expectations and implied obligations that may not be met. If the Department is to assume the role of third party service provider, there will need to be an enforceable commitment of sufficient

Mr. Jim Upchurch

July 16, 2013

2

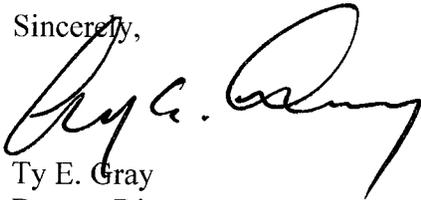
resources to make a set of definitive conservation outcomes feasible and achievable. Those commitments would need to be made available in some form over the life of the project, a factor that seems to be lacking in the conservation measures as described.

The Department has had some, though limited involvement in the preparation of the Biological Opinion. We have appreciated the opportunity for Department biologists to contribute their expertise in the development of certain conservation measure concepts for Threatened and Endangered Species. We have not been engaged to help estimate the cost of feasibly implementing those measures.

We are working diligently to continue our review the Preliminary Administrative FEIS. It is, as we know you are aware, a daunting task. We plan to share with you our comments according to the timeline you have provided. The Department may have additional comments on the Biological Opinion in the context of our comments to the Draft Administrative FEIS.

Thank you for allowing us to share the observations and recommendations that we have developed thus far. If we can be of service in trying to refine financial estimates to achieve some of the conservation outcomes described in the Biological Opinion, please don't hesitate to call on us.

Sincerely,



Ty E. Gray
Deputy Director

LR:lr

COMMENTS OF THE ARIZONA GAME AND FISH DEPARTMENT TO THE DRAFT
BIOLOGICAL OPINION FOR THE ROSEMONT COPPER MINE, PIMA COUNTY,
ARIZONA

GENERAL COMMENTS

BO at 37: “Rosemont Copper will fund the monitoring to which the Forest Service commits in the ROD and that will be defined in the final MPO. Other monitoring activities may be associated with the regulatory authority of Federal and State agencies and *would be funded by permit fees or the agencies themselves as part of their normal activities*” (emphasis added)

Comment: The BO anticipates a substantial commitment of third party resources in the oversight and implementation of Rosemont Copper Company’s Conservation Measures and Reasonable and Prudent Measures’ Terms and Conditions without provision for funding. The BO identifies the Department’s participation in, *inter alia*:

Participating in a multiagency monitoring and evaluation task force to evaluate Rosemont monitoring results and made recommendations to the forest supervisor; locating and designing Cienega Creek stream renovation and restoration projects (42); determining with FS Biological Monitor whether additional field data collection is necessary to determine a wildlife crossing need and location (50); working with FS, FWS and Rosemont to permanently protect a known lesser long-nosed bat roost site within, or as close to the action area and to evaluate protective measures for bat roosts (85-86); working with FWS and Rosemont to implement a monitoring program for LLNB (86-87); coordinating with Rosemont, and FWS in the monitoring of jaguar movements (135); participating in a CLF frog local recovery group with CNF, FWS and local stakeholders (196).

The Department does not receive general fund appropriations from the State. The Department’s funding sources for conservation efforts involving Threatened and Endangered Species come from its Section 6 Endangered Species Act grant and its State Wildlife Grant, matched with monies from the Arizona Heritage Fund. These resources are limited, may fluctuate from year to year, and are committed to identified multi-year projects on state and federal lands commensurate with the Arizona Game and Fish Commission’s priorities. The Department does not have any contractual agreement with Rosemont Copper Company nor an identified funding source to implement ESA-required conservation measures for private parties.

AGFD cannot participate in BO conservation measures absent a contractual agreement between RCC and the Commission to provide specified services. It should be noted that any expenditure of Department funds on behalf of Rosemont Copper Company would have to be demonstrably and adequately in the interest of the State to conform to the Gift Clause of the Arizona Constitution.

SONOITA CREEK RANCH

The BO identifies ownership and management of Sonoita Creek Ranch (SCR) and its certificated water rights for the benefits of federally-listed species as an identified conservation measure for the Chiricahua leopard frog, Gila Chub, Gila topminnow, Mexican spotted owl, Western Yellow-billed Cuckoo, jaguar and ocelot.

Term and Condition 3.1 for CLF requires CNF to ensure the creation of small waters on SCR to be managed as potential source populations of Chiricahua leopard frogs for future releases in the affected management areas, including renovation to remove harmful nonnative predators such as bullfrogs, crayfish, nonnative spiny-rayed fish and the construction and maintenance of frog barrier fencing to prevent bullfrogs from recolonizing these waters.

BO at 41: “Rosemont anticipates transferring ownership of Sonoita Creek Ranch, including the appurtenant water rights, to the AGFD or other suitable owner for conservation purposes consistent with the conservation and public benefits contemplated by these conservation measures. . . Funding for long-term management will be provided by Rosemont via a payment of \$150,000 per year to a management account for a period of 10 years commencing with the production of copper concentrates at the project”.

The BO at 41 states: “Sonoita Creek Ranch will be managed for conservation purposes to provide habitat and connectivity for the Jaguar and Ocelot between the Canelo Hills/Patagonia Mountains and the Santa Rita Mountains, slightly over a mile away to the west of the ranch, *in perpetuity.*”

Rosemont is required to commit only \$1.5 million payable at \$150,000/yr over 10 years toward a SCR “management fund”. It is unclear what activities are allowable under this for the “management fund”. The BO at 243 states the funds are for “resource management” which does not clarify the issue.

The BO at 243 notes that Rosemont commits an additional \$100,000 (\$20,000 annually for five years) for “management against nonnative species” at SCR, and, “*at a minimum* Gila chub and Gila topminnow will be established in the ponds after nonnatives are removed from them [emphasis added].

Regardless of how the funding provided by RCC for SCR is employed, it is not adequate to cover the costs of managing Sonoita Creek Ranch for federally-listed species, in either the short- or long term.

It appears to the Department that CNF and FWS identified SCR’s potential for federally-listed species and habitat; the BO specifically earmarks a portion of the \$100,000 offered by RCC for pond maintenance for, *at a minimum*, Gila Chub and Gila topminnow introduction into the SCR ponds.

Neither the BO nor the FEIS impose any funding commitment upon Rosemont to implement the full suite of BO conservation measures called for at SCR, or to fund the maintenance of SCR in perpetuity for connectivity for federally-listed species. Mitigation measures without a clear, definite commitment of resources for future improvements violate the ESA. *National Wildlife Federation v. National Marine Fisheries Service*, 524 F. 3d 917 (9th Cir. 2008).

It is unclear to the Department how CNF can commit to ESA conservation measures or Terms and Conditions at SCR without a commitment of funding from RCC, or how CNF expects that resources will be available to ensure these ESA conservation measures will be performed. The CNF, as the action agency, has an independent duty to ensure that its actions are in compliance with the ESA. *Center for Biological Diversity v. Salazar*, 804 F.Supp.2d 987, 990 (D. Ariz.2011).

ESA 16 U.S.C. §1539(a)(2)(A) states that no permit may be issued by the Secretary authorizing any take of a federally-listed species unless the applicant submits a conservation plan that specifies what steps the applicant will take to minimize and mitigate impacts, and that the applicant ensures that adequate funding will be provided to implement the conservation measures.

BO at 39. “Rosemont shall prepare an Annual Conservation Measure Implementation and Monitoring Report (“Annual Report”) at the end of each calendar year. The Annual Report shall be due to Coronado National Forest by January 31 of the next calendar year throughout the life of the project and for five years post-closure”.

The text describes the required content of the Annual Report, including specific actions accomplished for each specific conservation measure (and Reasonable and Prudent Measures‘ Terms and Conditions); whether the objectives of each conservation measure was or was not met; the status of invasive species management and amount of take of threatened and endangered species.

Comment: The BO clearly expects conservation measures and Terms and Conditions to be implemented for the 25-year life of the mine and five years post-closure, but RCC funding for activities at SCR is limited to a 10-year period.

BO at 41. The BO anticipates the transfer of responsibility for the implementation of ESA Conservation Measures from RCC to “AGFD or other suitable owner”.

Comment: The Draft Administrative FEIS, Appendix B at 30 identifies a “Corps-approved ILF sponsor” as the entity to take title to SCR and presumably implement the ESA conservation measures identified in the BO. In fact, the Draft Administrative FEIS, Appendix B at 31 states that the ILF sponsor is responsible for any habitat projects in accordance with the BO. This is not an authorized use of ILF funds.

The FEIS states that Rosemont Copper is responsible for purchasing SCR and conveying ownership to a Corps-approved ILF sponsor; the ILF sponsor is responsible for “habitat projects

and site protection". The FEIS further states that SCR partially compensates for impacts to wildlife habitat and habitat connectivity for federally-listed species.

The BO and Draft Administrative FEIS anticipate that the costs of SCR pond permitting, site engineering, hydrology/hydraulics, construction, and long-term maintenance will be performed by a Corps-approved ILF sponsor under a Corps-approved compensatory mitigation plan. These are appropriate costs for ILF watershed projects.

Federal regulations for Compensatory Mitigation for Losses of Aquatic Resources, 33 CFR at 332.3(j)(3), allow Section 404 compensatory mitigation projects to provide compensatory mitigation under the ESA, but the same credits may not be used to provide mitigation for more than one permitted activity (33 CFR 332.3(j)(1)(ii)). The proceeds from the sale of ILF credits are to be deposited into a dedicated account and spent *only* toward Corps-approved wetland function projects (32 CFR 332.8(i)). The ILF sponsor may not expend ILF funds to implement ESA-mandated conservation measures, or mandatory terms and conditions of an incidental take statement for federally-listed species. The Draft FEIS, Appendix B at 30-31 is incorrect in its apparent assumption that the ILF sponsor will be responsible for projects directly benefiting jaguar, ocelot, Mexican spotted owl, LLNB, Gila Chub, Gila topminnow, CLF, western yellow-billed cuckoo, or the Huachuca water umbel. If the existence of SCR in a conservation status is perceived to be a benefit to listed species incidental to its function as an ILF project, then that should be stated explicitly. If there are actions to be undertaken at SCR for the purpose of conserving specific listed species, they should be specifically identified and resources should be allocated to achieve them.

As an example, ILF funds may be utilized to conduct SCR pond restoration and maintenance, but not to colonize, transplant threatened or endangered species into or from those ponds or to pay for their long-term protection and survival. If SCR is to achieve both ESA-mandated conservation measures as well as ILF compensatory mitigation for Waters of the US at SCR, the company should be required to establish separate, dedicated funding *properly calculated* to fulfill all ESA-mandated conservation measures for species that are otherwise jeopardized by the Rosemont Mine Project¹.

Moreover, the Corps of Engineers has yet to determine whether RCC will be allowed to purchase ILF restoration credits from the SCR ILF sponsor. If RCC is allowed to purchase only a limited

¹ Estimating the amount of funding for implementation of ESA measures at SCR will require a general description of tasks to be performed, timeframes, and deliverables (e.g., submission of data and reports for Rosemont's *Annual Conservation Measure Implementation and Monitoring Report*, due to CNF on January 31 of every year throughout life of project and for five years post-closure, *see* BO at 39). If an ESA fund is to be established to cover such costs, the cost estimates must factor in contingencies such as inflation, invasive species introductions, neighboring uses (pesticides or pollutants by adjacent property owner in upstream reaches), unanticipated events (fire, flood, drought, disease, vandalism etc), legal, administrative, personnel, overhead and fund management costs.

number of credits at SCR, RCC should not be permitted to rely on credit purchases by other CWA 404 permittees to subsidize its ESA obligations at SCR.

AGFD as a potential ILF project sponsor cannot accept title to SCR if title ownership imposes upon the Department any unfunded or underfunded responsibilities under ESA which belong to CNF and RCC.

BO at 41: “In addition to the payments described in #4 above, Rosemont will provide a total of \$100,000 in support of these renovation efforts [to renovate two perennial ponds, adjacent wetland habitat, and earthen-lined channel between the ponds at SCR]. Funding for this effort will be provided by Rosemont via a payment of \$20,000 per year to a management account for a period of 5 years commencing with the production of copper concentrates at the Project”.

Comment: Funding for five years of nonnative species removal or suppression at SCR is inadequate. RCC is obligated to perform conservation measures and prepare annual reports to the CNF throughout the life of the project and for five years post-closure (BO at 39). Term and Condition 3.1 for CLF requires removal of nonnative predators from the SCR ponds.

The BO does not identify funding for the introduction or protection of CLF, Gila Chub or Gila topminnow or for the recolonization of CLF in the Rosemont action area for the life of the mine or for five years post-closure.

BO at 201: “The Coronado National Forest shall ensure the creation of small waters on the Sonoita Creek Ranch property to be managed as potential source populations of Chiricahua leopard frogs for future releases in the affected management areas”.

Comment: This is a mandatory and non-discretionary Term and Condition of the ESA Incidental Take Statement for the CLF, which must be undertaken by CNF through enforceable terms and conditions imposed on RCC in the Mine Plan of Operations.

It is unclear how CNF can commit to this Term and Condition or make this a binding condition upon the applicant given the lack of specific funding for these actions for the life of the mine.

BO at 41: “Wildlife-friendly fencing will be installed [at SCR] to discourage use by cattle and encourage use by threatened and endangered species”.

Comment: The text does not describe who will fund or construct wildlife-friendly fencing, what type of fencing will be used, where it will be, or what funds will be used to maintain it.

The Department estimates that it would cost approximately \$568,976 to construct and maintain the Sonoita Creek Ranch perimeter fence for the life of the Rosemont Mine and five years post-closure.

CIENEGA CREEK WATERSHED

The BO identifies acquisition of Cienega Creek certificated water rights, and funding for the development and implementation of projects within the Cienega Creek watershed to preserve and enhance aquatic and riparian ecosystems and habitat, as an identified conservation measure for Chiricahua leopard frog, Gila Chub, Gila topminnow, Mexican spotted owl, Western Yellow-billed Cuckoo, jaguar and ocelot.

BO at 42: “Rosemont will provide funding for stream renovation and restoration projects to increase water flows and enhance wetlands in the Cienega Creek watershed . . . Rosemont will provide funding for these projects by establishing a \$2,000,000 fund (the Conservation Fund). The Conservation Fund will be established through the annual payment of \$200,000 for 10 years to an escrow or other suitable account managed and controlled by the AGFD or other designated conservation partner (the Conservation Partner)”.

The Draft Administrative FEIS, Appendix B at 35 identifies RCC as responsible for funding the Conservation Watershed Fund and BLM and AGFD as responsible for using the Fund to identify potential mitigation actions, coordinate those actions with the Forest Service “and other key stakeholders”, as well as overseeing fund expenditures and all monitoring and reporting.

Comment: AGFD does not have an agreement with RCC to assume these responsibilities.

BO at 49, 242, 245, 376, 386: Various allowable uses of the Cienega Creek Watershed Conservation Fund are described.

Comment: The BO is vague in defining what projects the Cienega Creek Watershed Conservation Fund is to be used for, who will have final say over expenditures, and where within the watershed it can be used. According to the BO, the Fund is to be used for “surveys for and removal of nonnative species”, “enhancing populations of native species”, “initial restoration activities”, “increase habitat for the Gila chub”, “development and implementation of conservation measures”, “adaptive management strategies”, “supporting approved management efforts by Pima County to control invasive aquatic species in the Cienega Creek Nature Preserve”, “protecting water rights”, “fund mitigation projects for Rosemont’s stormwater exceedances”, “monitoring the success of [Rosemont’s] replacement or enhanced water features” “offset unanticipated effects resulting from groundwater drawdown from the mine” and “unforeseen issues”.

The Department is unable to determine whether the Conservation Fund will achieve its intended objectives given lack of direction in the BO and the unfocused descriptions of the Fund’s intended uses. Furthermore, the Fund may be grossly inadequate given all the uses intended. Explicit expectations should be identified and reasonable cost estimates should be provided if Rosemont Copper or its third party service provider is expected to achieve the conservation outcomes.

The case law states that conservation measures must be reasonably specific, certain to occur, and capable of implementation; subject to deadlines or otherwise enforceable obligations; and must address the threats to the species in a way that satisfies the jeopardy and adverse modification standards. *Sierra Club v. Marsh*, 816 F.2d 1376 (9th Cir.1987). In a 2011 decision the Ninth Circuit stated that ESA mitigation measures must involve “specific and binding” plans, “solid guarantees”, and a “clear, definite commitment of resources”. *Rock Creek Alliance v. U.S. Fish and Wildlife Service*, 663 F. 3d 439 (9th Cir. 2011).

Biological opinions that rely on uncertain and unidentified mitigation measures to support a no-jeopardy and no-adverse modification conclusion for listed species violate the ESA. *Center for Biological Diversity v. Salazar*, 804 F.Supp.2d 987, 1001 (D.Ariz.2011).

BO at 42: “Not more than 15 percent of [the Cienega Creek Watershed Fund] may be used by the Conservation Partner for fund administration, with the balance used for direct project execution.”

Comment: The only guidance the Department could locate in the BO for the intention of this 15% cap on “fund administration” is the BO at 386, where it states that 15% of the funds could be used for administrative costs: “Monies would be spent for on-the-ground restoration (except the 15% mentioned above) rather than inventory, monitoring, and research.” The phrase “direct project execution” means “on-the-ground restoration” (BO at 386).

A payout from the Fund at \$200,000/year results in a yearly allowance of \$30,000 for administrative costs, which by the BO’s definition is expected to cover the following: the Conservation Partner’s direct costs for salaries, ERE, travel, meals and incidental costs in meeting with CNF, BLM, FWS, and “other key stakeholders” in identifying and planning projects; costs responding to requests from the CNF Biological Monitor; all habitat and species inventories; all “research”, all permitting and environmental/regulatory compliance costs (e.g. NEPA); legal costs in defending water rights; costs of fund portfolio administration; costs of fund expenditure audits by CNF and “all monitoring and reporting” which presumably includes the costs of compiling data and preparing the Cienega Creek Watershed section of Rosemont’s *Annual Conservation Measure Implementation and Monitoring Report* for submission to CNF.

BO at 45: “Rosemont will enhance existing water features, including stockponds, and add additional water features throughout the allotments to mitigate for potential project impacts to seeps and springs on their grazing allotments. Up to 30 potential water features will be managed or constructed, if needed, for metapopulation management (persistence) of CLF, and to meet the minimum requirements of jaguar proposed/designated critical habitat PCE’s”.

BO at 47: In addition to seven identified tanks that are to be renovated by Rosemont to support the CLF Greaterville metapopulation, “to the extent determined necessary by the Biological Monitor, Rosemont will create up to 23 new water features to support CLF in the northern Santa Rita Mountains, in the area within the 5-ft, 150-year drawdown area, mapped by Westland”.

Comment: The BO at 45 states that “Rosemont will establish a long-term management and maintenance fund to maintain the water features”. While a valuable contribution to conservation, no committed fund amount or other details are provided.

All water features require maintenance over time. The BO does not specify RCC’s specific financial or other commitment to maintain constructed water features as a conservation measure. If maintenance is not funded or otherwise committed to, these water features will have little long-term utility to CLF or other listed species.

The Administrative Draft FEIS, Appendix B at 22 states that the “Cienega Creek Watershed Conservation Fund could be used for monitoring of success of replacement or enhanced water features. If spring levels decrease, mitigation could come from this fund”. The FEIS appears to suggest that RCC will not take responsibility if the constructed or enhanced water features dry up and fail to meet their expected conservation outcomes.

BO at 43: The BO states that the Cienega Creek Watershed Fund is “not to be used for remediation of unanticipated issues associated with the Rosemont Project”.

BO at 49: “The stormwater permit for the project imposes specific requirements for surface water sampling and it will be implemented in accordance with the requirements of ADEQ as specified by EPA. Should impacts over and above the levels predicted in the EIS be anticipated by monitoring efforts, the funding provided by the Cienega Creek Watershed Conservation Fund *will* be used to implement adaptive management strategies to offset unanticipated effects” [emphasis added].

Comment: The purpose of the Fund is to restore the watershed to a functioning ecosystem from baseline (BO at 386). The Department believes that allowing the use of the Fund to remediate damage to the watershed caused by Rosemont’s AZPDES stormwater permit exceedances, or other mine-related violations of state or federal water quality laws will frustrate the purpose of the Fund by risking fund depletion on remediation work. It is possible that mitigation costs could exceed the balance in the fund at any given point. State permit conditions impose a duty on Rosemont to correct the exceedances, and ADEQ has the authority to require Rosemont to conduct remedial actions. Federal natural resource damage laws require restoration or replacement of natural resources injured by releases of hazardous substances.

BO at 49: “Geomorphic monitoring will be conducted using the Forest Service Protocol or an agreed-upon alternative approved by the Biological Monitor . . . if monitoring shows the Cienega Creek Watershed is being [geomorphically] affected, the Cienega Creek Watershed Conservation Fund should be used as a resource to fund mitigation projects”.

Comment: The Department believes that the Fund should not be used to remediate scour and aggradation damage in the Barrel Canyon/Davidson Canyon watershed caused by the Rosemont Mine. The purpose of the Cienega Creek Watershed Conservation Fund is to restore the watershed *from its current condition* to a functioning ecosystem for listed species, not to respond

to and provide corrective actions for mine-related releases which further degrade the watershed and habitat.

BO at 43: “Rosemont will transfer 150 acre-feet of the 1933 water right to AGFD or to another entity authorized under Arizona law to hold a surface water right for recreation and wildlife purposes . . . this water right must be used to preserve and enhance the aquatic and riparian ecosystem in the upper Cienega Creek watershed for the benefit of federally listed species and other native species of fish, wildlife and plants”.

Comment: The proposal to transfer 150 acre-feet is contingent on the BLM granting to AGFD a sufficient legal interest in BLM property in order for the Department to hold a water right appurtenant to Cienega Creek. The Department has been identified as a potential holder of that water right. Such a legal interest may include a special use permit, but it is unprecedented whether ADWR would accept a special use permit as a sufficient legal interest.

The BO at 270 notes that the “mitigative value of the water rights-related component of the conservation measure must be considered speculative at this time, as the action depends on the successful navigation of complex administrative and legal proceedings involving the Arizona Department of Water Resources, AGFD, BLM, and, potentially, other permitted and certificated water rights holders.” This is a detail that must be resolved if the conservation benefit of the water right transfer is to be secured.

BO at 50 and 124: “Rosemont will provide \$50,000 to AGFD or other suitable entity approved by the Coronado National Forest to support camera studies for large carnivores including Jaguar and Ocelot. The money will be provided for additional monitoring efforts between the Santa Rita and the Whetstone Mountains and along the Santa Rita Mountains. In addition to increasing knowledge regarding the movement of wildlife in the area, information collected during this investigation may identify a suitable wildlife crossing structure location that could be constructed using Regional Transportation Authority funds dedicated for that purpose”.

Comment: The BO acknowledges a concern regarding the loss of movement corridors for jaguar and ocelot between the Santa Rita and Whetstone Mountain habitat blocks, and that crossing structures are needed as a result of the Rosemont Mine-related traffic, which will place 455 mine trucks a week on State Route 83 on a 24/7 basis, along with employee traffic, and impede wildlife access.

The Department agrees there is limited data on the movement patterns of these species as well as other state trust species in the vicinity of the Rosemont Copper project, and little data on the extent to which the area is used by jaguars and ocelots. The Department has stated to CNF and FWS its concern that \$50,000 is not enough to conduct the necessary studies and does not appear to be sufficient to determine much, and will likely contribute little, toward conservation of large carnivores or other terrestrial wildlife.

The Department recommends a comprehensive study tracking the movement of wildlife species such as mountain lions, deer and javelina using satellite transmitter-collared animals. The cost

of such a project is approximately \$285,000. A camera study would be less effective, but a well-designed camera-only study would cost \$175,000 at a minimum.

The BO only requires RCC to fund a study to make a recommendation for a suitable crossing structure, rather than recommending conservation measures that will remediate the loss of connectivity. There is no requirement in the BO to address any adaptive needs that may be identified as a result of information obtained through the camera or crossing structure studies. This seems to us to be a significant omission.

Neither RCC nor the Pima County Regional Transportation Authority has agreed to commit funds for the construction of a wildlife crossing structure to mitigate for effects to federally-listed species or any other wildlife impacted by the Rosemont Mine. We believe it is inappropriate and potentially misleading for the BO to suggest that resources may be available to construct wildlife crossing structures to mitigate the effects of Rosemont-generated mine traffic in the absence of a commitment by RCC or any other entity to do so.

BO at 237: Cienega Creek is designated critical habitat for the endangered Gila Chub. The BO concludes that no impacts to Chub or its habitat is expected to occur as a result of the Rosemont Mine, although the “lack of information on the effects of with- and post-project water quality in the BA [Biological Assessment] makes it difficult for [FWS] to analyze water quality issues as they relate to biological systems”.

Nevertheless, the BO determines that good water quality in Cienega Creek, a primary constituent element for the Gila Chub, is unlikely to be affected by the Rosemont Mine.

Comment: The BO appears to suggest that FWS may not have been provided with adequate scientific data to allow an analysis of potential water quality effects that the Rosemont Mine may have on Cienega Creek. The action agency requesting formal consultation is required to provide the best scientific data available for an adequate review of the effects of an action upon listed species or critical habitat. 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14. We agree that wet water is better than no water, but water of sufficient quality as well as quantity should be available if the BO is to assert that no impact to chub or its habitat is expected to occur.