



June 1, 2020

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Submitted via email to: objections-southwestern-prescott@usda.gov

RE: Objection to the Riverbend Placer Mine and Lost Nugget Reclamation Project, Bradshaw Ranger District, Prescott National Forest

Pursuant to the Public Notice published in the Prescott Daily Courier on April 15, 2020, setting an objection deadline of June 1, 2020, please accept this objection from the Center for Biological Diversity (“the Center”) specific to the Proposed Riverbend Placer Mine and Lost Nugget Reclamation Project Supplemental Environmental Assessment (“SEA”) and Finding of No Significant Impact (“FONSI”).

In our scoping comments we stated:

“Thank you for the opportunity to comment on the Pine Creek Mining Inc. Riverbend Placer operation. The Prescott Forest Plan (page 110) states that a desired condition is that ‘the Hassayampa River...support[s] healthy, properly functioning riparian areas.’ I agree with this desired condition, and trust that the Prescott National Forest will ensure that such conditions are achieved and that the EA will explain how this condition is achieved with the proposed action.”

Our faith that the Prescott National Forest has any regard for riparian areas on the Hassayampa River has been permanently eroded. The careless and unprofessional discarding of the Hassayampa Mineral Withdrawal, while several other mining projects were prioritized,¹ makes it abundantly clear that the Prescott National Forest has zero regard for the Hassayampa and its surrounding environment. This is reflected in the current Riverbend Placer project, which would allow the destruction of a globally imperiled plant species and the continued degradation of the Hassayampa River.

The Prescott National Forest does close to nothing to protect and restore our rare and declining riparian areas. While mining, grazing, unmanaged OHV use, and other destructive extractive industries continue in riparian areas, the Prescott National Forest has not advanced a single riparian or aquatic restoration project. The Gila Chub restoration project has lingered in obsolescence while the Prescott National Forest dutifully processes permits and pushes paper to help industry pillage our public lands. Grazing permits are processed in a timely manner. Mines are approved without proper study. More ATV trails are sliced across the landscape. Loggers trash soils, rut wetlands, and leave forests in waste as soft-spoken foresters look on in permissive silence. And nothing restorative ever happens. We are truly disappointed with the Prescott National Forest’s unwillingness to protect the public lands, and the eagerness to defend and facilitate exploitation of the environment.

¹ Review of documents obtained by FOIA request record the Prescott National Forest prioritizing Jack’s Project, Riverbend Placer Mine, Drake Cement Upgrade, and Prescott Rock Products, with the Hassayampa Withdrawal renewal coming in dead last. See Exhibit 1, email of Frances Alvarado to Kendra Bull and Zakiya Shivji, 3.21.2018.

PROJECT DESCRIPTION: “*Pine Creek Mining, Inc., proposes placer mining, bulk testing, and reclamation in the Hassayampa River drainage near Orofino Wash east of Wilhoit, Arizona, on mining claims within Federal lands administered by the U.S. Department of Agriculture (USDA), Forest Service, Prescott National Forest, Bradshaw Ranger District. The Proposed Action consists of mining terrace gravels, non-chemical processing of these minerals, and concurrent reclamation on the entire Riverbend Placer claim and a portion of the Miners Delight claim and post-operational reclamation at the previously mined Lost Nugget claim site. The estimated Riverbend mine life is approximately 15 years with one working shift per day and processing 50 cubic yards per hour, though this could change based on several factors such as extent and quality of ore, acquired equipment, and economic and weather conditions. Both claims are part of the Gold Basin Project approved by the Prescott National Forest in 2005 following preparation of an Environmental Assessment (EA) and Finding of No Significant Impact in compliance in with the National Environmental Policy Act.*”²

STATEMENT OF CONNECTION BETWEEN PRIOR COMMENTS AND THE OBJECTION:

The Center submitted comment on Pine Creek Mining Company’s Plan of Operations on August 15, 2017 (“scoping comments”), in response to the agency’s “Interested Party” letter of July 18, 2017. Under each Issue heading below, we explain the connection between prior comments and the objection.

The issues we raise in this objection include:

Issue 1: The SEA/FONSI fail to analyze cumulative impacts.

We argue that the SEA and FONSI do not identify, disclose, and analyze the extent of mining and mining related disturbance across the Bradshaw Ranger District, therefore the SEA fails to analyze the direct and indirect effects on the environment of connected, cumulative, and similar actions. The result of this is a finding of no significant impact, in spite of there being an ongoing legacy of mining impacts to the environment. This issue can only be remedied through additional analysis in an EIS.

Issue 2: The SEA/FONSI fail to take a hard look at direct and indirect impacts to a Region 3 Sensitive Species.

We argue that the SEA and FONSI do not take a hard look at direct and indirect impacts of the proposed action on *Agave phillipsiana*. The Forest Service did not collect baseline data on the plant in the project area, and as such a finding of no significant impact is precluded. This can only be remedied through supplemental data collection, collaboration with scientists, and additional analysis in an EIS.

Issue 3: The SEA/FONSI fail to ensure that mitigation measures are sufficient to minimize, mitigate, and avoid significant impacts.

We argue that the SEA and FONSI rely heavily on voluntary mitigation measures which have not been evaluated for their effectiveness in avoiding adverse impacts. The SEA and FONSI fail to describe who will pay for or monitor the mitigation measures, who will curate the monitoring information, and how the measures would be enforced. The Prescott National Forests track record of monitoring mining does not inspire confidence that these measures will have any beneficial effect.

² SEA at 2.

ISSUE 1: THE SEA/FONSI FAIL TO ANALYZE CUMULATIVE IMPACTS.

In the Centers scoping comments, we stated:

- “Any mining along the Hassayampa has immediate and long-term, direct and indirect negative effects on hydrologic function, riparian ecosystem integrity, wildlife habitat connectivity, and recreational opportunities – not just at the mining site but along the course of the entire river.”
- “The EA must ... provide a quantified analysis of all the cumulative impacts from all past, present, and reasonably foreseeable future activities, whether occurring on private or public land.”
- “The Forest Service must consider all connected, cumulative, and similar actions together in a single analysis. The agency must also consider and analyze cumulative impacts. The agency may not break a proposal into smaller parts to avoid preparing an Environmental Impact Statement.”

In these statements, we clearly identified our concern for consideration of direct, indirect, connected, cumulative, and similar actions. In the SEA and FONSI, the Forest Service has failed to mention, describe, or analyze these. The SEA correctly identifies the issue of “*Previous and proposed mines’ effects on the Hassayampa River drainage*”³ as a cumulative effect concern. However, the cumulative effects analysis in the SEA fails to mention by name a single mining activity occurring on the Hassayampa River, and in fact lies to the public by claiming that “*Much of the upper Hassayampa has been withdrawn from mining.*”⁴ We will remind the Prescott National Forest that a combination of incompetence and negligence allowed the withdrawal to expire while mine permits were dutifully processed.

The SEA states that “*Currently there are several mines active within the Upper Hassayampa watershed, and more in some stage of planning*”⁵ and that “*The PNF has received up to 6 proposals involving placer (production phase) and exploration activities within the Bradshaw Ranger District,*” but none of these are described in detail. Further, the EA fails to identify the reasonably foreseeable expansion of mining in the upper watershed now that the mineral withdrawal has been carelessly allowed to expire by Forest Service employees who care very little about protecting the environment.

The issue here is with the incremental degradation of the Prescott National Forests riparian areas. This is akin to a ‘death by one thousand cuts’ scenario. Cumulative effects are defined as:

“[T]he impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.”⁶

As established in the Code of Federal Regulations definition of cumulative impacts above, the NEPA obligation to extends to all “past,” “present,” and “reasonably foreseeable” future projects. Past projects include the very location of the proposed Riverbend mine, where decades of Forest Service mismanagement has allowed mine damage to go un-reclaimed. Despite our bringing attention to this

³ SEA at 8.

⁴ SEA at 55.

⁵ SEA at 55.

⁶ 40 CFR §1508.7.

in scoping, the proposed action does nothing to remedy these abuses of public trust. We wonder if the responsible official has ever even visited the area under question and seen firsthand the complete devastation wrought by the legacy of placer and dredge mining.

In addition to an unrepainted legacy of environmental disaster, there is a tremendous amount of active and foreseeable mining occurring in riparian areas across the Bradshaw Ranger District. A document we retrieved through a FOIA request titled “2018-0049150.1” lists 169 claims in Yavapai County held by Roadrunners Prospecting Club (RRPC) alone. As we stated in our recent comments on the Jack’s Project Plan of Operations, we are concerned that the full impact of RRPCs operations on the Prescott National Forest has been ignored because our suspicion is that many of these claims are operating without plans of operations. How many other clubs, individuals, or organizations, are similarly operating without being addressed in a quality cumulative impacts analysis?

In ignoring other similar projects, such as the Jack’s Project Plan of Operations, the Climax Mine, or the activities occurring on claims neighboring the Riverbend claims, for example, the Forest Service has failed to fully review all cumulative environmental impacts of the proposed action and connected and similar actions, which violates NEPA. The Forest Service further failed to conduct an adequate cumulative effects analysis by ignoring the recent lapsing of the Hassayampa Mineral Withdrawal. Since the withdrawal expired, the entire upper Hassayampa River and several miles of Groom Creek has been scooped up by speculative miners, and now future mining activity on the previously protected areas is reasonably foreseeable. In our review of claims online, it now appears that these recent claims have been validated and mining activity is soon to begin. The Forest Service must analyze the cumulative impact of the reasonably foreseeable development of these claims to avoid violating NEPA. And, we suggest that the lie about the withdrawal being active be removed from any future NEPA documents.

The NEPA requirement to analyze cumulative impacts prevents agencies from undertaking a piecemeal review of environmental impacts.⁷ In a leading mining and NEPA case dealing with two nearby mining projects, the Ninth Circuit held that, even though the two mines were not “*connected actions*” under NEPA, the NEPA review document for each mine had to fully review the cumulative effects/impacts of the two mines together on the regional environment.⁸ In the Riverbend project, we have a situation where numerous mining activities are taking place concurrently on the Hassayampa River and a number of other streams within the Bradshaw Ranger District, all with direct and indirect impacts to riparian ecosystems. As we pointed out in our comments on Jack’s Project, the Forest Service has failed to conduct baseline inventory for the 27 miles of affected streams in that project. In sum, it is clear that the Prescott National Forest is not willing to consider that mineral development on nearly every mile of stream on the Ranger District has a significant adverse effect. The analysis must analyze the cumulative impacts of all of these claims operating concurrently, or violate NEPA.

The Ninth Circuit has repeatedly faulted the federal land agencies’ failures to fully review the cumulative impacts of mining projects. In a recent case, vacating BLM’s approval of a mine, the court stated that “*in a cumulative impact analysis, an agency must take a ‘hard look’ at all actions that may combine with the action under consideration to affect the environment.*”⁹ In this case the BLM violated NEPA because it “*did not ‘identify and discuss the impacts that will be caused by each*

⁷ *Earth Island Institute v. U.S. Forest Service*, 351 F.3d 1291, 1306-07 (9th Cir. 2003).

⁸ *Great Basin Mine Watch v. Hankins*, 456 F.3d 955, 968-74 (9th Cir. 2006).

⁹ *Great Basin Resource Watch v. BLM*, 844 F.3d 1095, 1104 (9th Cir. 2016)(emphasis in original)(quoting Te-Moak Tribe).

*successive project, including how the combination of those various impacts is expected to affect the environment.”*¹⁰

In a case where an EA was rejected because it failed to include detailed analysis of impacts from nearby proposed mining operations, the Court ruled that

*“An agency must take a “hard look” at all cumulative impacts. ... An EA’s analysis of cumulative impacts must give a sufficiently detailed catalogue of past, present, and future projects, and provide adequate analysis about how these projects, and differences between the projects, are thought to have impacted the environment. ... Without such information, neither the courts nor the public ... can be assured that the [agency] provided the hard look that it is required to provide.”*¹¹

The SEA does not “give a sufficiently detailed catalogue of past, present, and future projects, and provide adequate analysis about how these projects, and differences between the projects, are thought to have impacted the environment.” The Forest Service has failed to take a hard look at the cumulative impact of multiple concurrently operating placer claims, and in fact neither the Jack’s Project Draft EA nor the Riverbend Placer SEA don’t even go so far as to give lip service to the other mining activity occurring. We wonder how much nefarious activity the Prescott National Forest has been engaged in prior to the Center becoming deeply invested in reforming the management of this Forest.

The SEA correctly states that “*Historical mining east of the project area has affected the watershed through remaining waste and tailings piles. Additionally, past mining led to poorly placed or constructed roads. This has resulted in high sediment loads, diminished riparian areas and impaired water quality issues, all issues of concern for this project.*”¹² However, in spite of continuing the tradition of ecological impacts, and failing to provide a “sufficiently detailed catalogue of past, present, and future projects,” the SEA concludes that “*Considered cumulatively with other mining operations in the project vicinity, the Proposed Action would result in a minor adverse impact in the cumulative effects analysis area.*” We contend that the Forest Service cannot make such a determination without an actual cataloging of connected, similar, direct, indirect, and cumulative impacts.

In Great Basin Mine Watch, the Ninth Circuit required “*mine-specific ... cumulative data*,” a “*quantified assessment of their [other projects] combined environmental impacts*” and “*objective quantification of the impacts*” from other existing and proposed mining operations in the region.¹³ The agency cannot “*merely list other [projects] in the area without detailing impacts from each one.*”¹⁴ The SEA fails to undertake this required analysis of cumulative impacts, and even fails to take the ‘easy way out’ and at least list other projects. A cumulative impact analysis must provide a “*useful analysis*” that includes a detailed and quantified evaluation of cumulative impacts to allow for informed decision-making and public disclosure.¹⁵

¹⁰ Id. at 1105 quoting *Great Basin Mine Watch*, 456 F.3d, pp. 973-974.

¹¹ *Te-Moak Tribe of Western Shoshone v. U.S. Dept. of Interior*, 608 F.3d 592, 603 (9th Cir. 2010).

¹² SEA at 55.

¹³ *Great Basin Mine Watch*, pp. 972-974.

¹⁴ Id., p. 972. See also *ONRC v. Goodman*, 505 F.3d 884, 893 (9th Cir. 2007).

¹⁵ *Kern v. U.S. Bureau of Land Management*, 284 F.3d 1062, 1066 (9th Cir. 2002); *Ocean Advocates v. U.S. Army Corps of Engineers*, 361 F.3d 1108 1118 (9th Cir. 2004).

As the Ninth Circuit has further held:

“Our cases firmly establish that a cumulative effects analysis “must be more than perfunctory; it must provide a useful analysis of the cumulative impacts of past, present, and future projects.” Klamath-Siskiyou, 387 F.3d at 994 (emphasis added) (quoting Ocean Advocates v. U.S. Army Corps of Eng’rs, 361 F.3d 1108, 1128 (9th Cir.2004)). To this end, ... it must consider the interaction of multiple activities and cannot focus exclusively on the environmental impacts of an individual project...”¹⁶

The SEA’s use of the Upper Hassayampa River Watershed as the geographic scale of analysis is questionable, given the Prescott National Forests’ seemingly programmatic-level approval and management of riparian mining operations. The SEA admits that there are 1,800 active placer claims on the Prescott National Forest. Knowing the geology as we do, we suspect that many, if not most, of those are on the Bradshaw Ranger District. The Prescott National Forest is concurrently analyzing Jack’s Project, which would approve suction dredge mining along 27 miles of creek in the Bradshaw Ranger District. In addition, there are an untold number of suction dredge and placer mining operations concurrently operating on creeks in the Bradshaw Ranger District. There are an untold number of placer claims and ongoing operations on the Hassayampa River. These are “untold” numbers of claims and mines because the SEA fails to identify them; a violation of NEPA.

Because future additional placer and dredge mining is reasonably foreseeable on streams across the Bradshaw Ranger District, the Forest Service must analyze the cumulative impacts of connected and similar mineral development and extraction on an area far greater than is covered in the current inadequate SEA. Because there seems to be a programmatic mining decisionmaking structure in place, with standardized BMP’s and ‘cut-n-paste’ analysis, any subsequent NEPA analysis must be done at the scale of the Ranger District, if not the entire Prescott National Forest.

In the FONSI, the responsible official incorrectly stated that “*The cumulative impacts to each resource have been fully analyzed and [she] did not find any to be significant.*”¹⁷ As we have stated above, connected, similar, direct, indirect, and cumulative impacts were not identified or catalogued, and as such no such analysis occurred. Instead, the Forest Service assumes there will be no impact because mitigation measures and best management practices are specified, though as we will describe in this objection, no assurance of the effectiveness of these is provided. Therefore, the conclusion that there is no significant impact is wrong, and an EIS is required.

While we anticipate the Forest Service completing an EIS as a result of this objection, we note that the requirement for a full cumulative impacts analysis is required in an EA, as well as in an EIS.¹⁸ In an EIS, we expect the Forest Service to analyze the cumulative impacts of the full extent of suction dredge and placer mining and associated use of unauthorized roads, campsites, facilities, wells, disposal areas, surface runoff, and other infrastructure across the Bradshaw Ranger District.

¹⁶ *Oregon Natural Resources Council Fund v. Brong*, 492 F.3d 1120, 1133 (9th Cir. 2007) (emphasis added), quoting *Klamath-Siskiyou Wildlands Center v. BLM*, 387 F.3d 989, 994, 996 (9th Cir. 2004).

¹⁷ FONSI at 8.

¹⁸ See *Te-Moak Tribe of Western Shoshone*, 608 F.3d 592, 603 (9th Cir. 2010) (rejecting EA for mineral exploration that had failed to include detailed analysis of impacts from nearby proposed mining operations).

ISSUE 2: THE SEA/FONSI FAIL TO TAKE A HARD LOOK AT DIRECT AND INDIRECT IMPACTS TO A REGION 3 SENSITIVE PLANT.

In the Centers scoping comments, we stated:

- *“The EA must also analyze how impacts will impact populations of regionally sensitive Phillips agave and Pale Townsend’s big-eared bat, and provide safeguards that ensure their protection.”*
- *“The EA must fully review all baseline conditions for all resources, including quality, quantity, and hydrologic conditions for surface and ground waters, air quality, wildlife, soils, recreation, and cultural, historical and religious resources.”*
- *“The EA must fully review all baseline conditions for all resources, including quality, quantity, and hydrologic conditions for surface and ground waters, air quality, wildlife, soils, recreation, and cultural, historical and religious resources.”*
- *“The EA must analyze how the proposed action impacts the recovery of threatened, endangered and sensitive species known to occur elsewhere in the Hassayampa River and likely to occur at the project site as climate changes and species move up in elevation...”*

Under NEPA, the Forest Service must consider all direct, indirect, and cumulative environmental impacts of the proposed action.¹⁹ Direct effects are caused by the action and occur at the same time and place as the proposed project.²⁰ Indirect effects are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.²¹ Both types of impacts include “*effects on natural resources and on the components, structures, and functioning of affected ecosystems,*” as well as “*aesthetic, historic, cultural, economic, social or health [effects].*”²²

As we stated in our scoping comments summarized above, we have many concerns for a variety of natural resources that will be impacted by the proposed mine. However, none of the deficiencies in the SEA are as significant as the failure to take a hard look at direct and indirect impacts of the mine, and to document baseline conditions for, *Agave phillipsiana*. The Forest Service cannot accurately assess the impacts of the Riverbend Mine on *Agave phillipsiana* without understanding the spatial relationship between the plant, its habitat, and the proposed mine.

The Forest Service is required to “*describe the environment of the areas to be affected or created by the alternatives under consideration.*”²³ In order to comply with NEPA, the Forest Service must obtain and analyze the required current baseline/background data/information – and subject it to full public review under NEPA – for all potentially affected resources including water quality and quantity, air quality, recreational resources, plants and wildlife, and other resources. The SEA does not provide for public review any baseline information for the locations, demographics, viability, and trends for *Agave phillipsiana*. The Forest Service has violated NEPA by failing to provide sufficient analysis and data for the current baseline conditions of all resources that might be affected by the

¹⁹ 40 CFR §§ 1502.16, 1508.8, 1508.25(c).

²⁰ 40 CFR § 1508.8(a).

²¹ 40 CFR § 1508.8(b).

²² *Id.*

²³ 40 C.F.R. §1502.15.

proposed project. Thus, in the absence of thorough information, the agency has not taken a hard look at the direct and indirect impacts of the proposed action on the plant.

We recognize that a Forest Service survey of some of the project area was completed in 2018,²⁴ but as far as we can tell from reviewing that report, the survey was limited to photographs and recording observations following a non-systematic sampling protocol which failed to visit the majority of the project area. As a result, we are concerned that the 2018 survey did not collect enough information to adequately describe the environment of the areas of *Agave phillipsiana* to be affected, which supports our position that baseline conditions were not documented thoroughly.

The 2018 report is a suitable reconnaissance, but does not satisfy NEPAs requirement to document baseline conditions, and in turn evaluate direct and indirect effects of the mine. Plant surveys should follow systematic sampling protocols, ideally with surveyors walking parallel transects, with the objective of visually inspecting the entire project area. Ideally, the shapefiles of the proposed access roads and extraction areas shown in the SEA (pages 13 and 14) would be loaded into a GPS and a thorough investigation of the proposed impacted areas would be completed. Instead, the surveyor(s) walked a non-systematic course, which resulted in almost the entire project area not being surveyed, though it's hard to tell because the SEA fails to include reference of the 2018 survey.²⁵ By not increasing the density of sampling along parallel transects, many individuals or clones could have been missed, including some that may be within areas planned for mining disturbance. For example, at least one of the clones identified in the 2018 survey were “*growing completely within the drip line of a large juniper.*” It is highly likely that other clones that may be impacted by the proposed activities are similarly concealed within other vegetation. But, we don't know as no complete survey was done.

The establishment of baseline conditions of the affected environment is a fundamental requirement of the NEPA process, because an inadequate environmental baseline precludes an accurate assessment of project impacts.²⁶ By not documenting the extent and condition of *Agave phillipsiana*, the Forest Service cannot predict the effects of mining on the species. The Forest Service cannot meet its NEPA obligations by foregoing collection of current baseline data, and, instead, anticipating that the impacts of a proposed decision will be insignificant based off of stale data or assumptions formed from a cursory photo-collection excursion.²⁷

²⁴ Anaya, F. 2018. Monitoring Update of Phillip's Agave (*Agave phillipsiana*) near the Orofino Wash and Hassyampa River confluence. Unpublished Prescott National Forest report.

²⁵ This, in itself, is a violation of NEPA: In finding that an EA violated NEPA by failing to obtain and analyze baseline water quality data the Ninth Circuit “acknowledge[d] the importance of obtaining baseline condition information before assessing the environmental impacts of a proposed project. … Without the baseline data, the agency cannot carefully consider information about significant environmental impacts and thus, the agency fails to consider an important aspect of the problem, resulting in an arbitrary and capricious decision. … Additionally, even if the mitigation measures may guarantee that the data will be collected in the future, the data is not available during the [NEPA analysis] process and is not available to the public for comment. … Thus, the process does not serve its larger information role and the public is deprived of the opportunity to play a role in the decision-making process. … Baseline information before approval is required so that the agency “can understand the adverse environment effects ab initio,” see *Gifford Pinchot*, 2014 WL3019165 at p. 28-29, quoting *N. Plains Resource Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1083-85 (9th Cir.2011), emphasis added.

²⁶ *Oregon Nat. Desert Ass'n v. Jewell* 823 F.3d 1258 (9th Cir. 2016) (without accurate baseline information the agency cannot accurately assess project impacts); *N. Plains Resource Council v. Surface Transp. Board*, 668 F.3d 1067 (9th Cir. 2011) (reversing decision due to inadequate baseline information).

²⁷ *Half Moon Bay Fishermans' Mktg. Ass'n v. Carlucci*, 857 F.2d 505, 510 (9th Cir. 1988).

The 2018 survey report introduces another troubling issue that has not been addressed in the SEA, and that is the population trend and viability of the *Agave phillipsiana* at the local and species levels. The 2018 survey report states that “*Of the five documented populations, two appear to be stable and the other four are at risk or decreasing in size*” (p. 2). This should be concerning to the Forest Service considering the that the 2014 “Viability analyses for vascular plant species within Prescott National Forest, Arizona” report found that *Agave phillipsiana* was an “*immediate viability concern*.” This 2014 report did not mention mining as a known or potential threat, so the addition of mining as a direct impact to these plants is a significant concern.

The SEA admits that there will be impact to this plant. The SEA states that:

“*According to the Prescott National Forest Ecological Sustainability Report (USDA 2009), Phillip’s agave has an immediate viability concern because the species is geographically limited and has few individuals. This species is ranked as G1-Critically Imperiled, because it occurs only in central Arizona, on pre-Columbian agriculture sites (Natureserve 2017). ... Prior field visits to the area in response to past plans of operations have found several occurrences of Phillip’s agave. Habitat for this species occurs within the project area, and several clones were identified on the east-west oriented ridge in the northern portion of the project area during biological surveys conducted during the summer of 2016. In addition, the Prescott National Forest surveys from 2009 identified one clone that falls within the proposed project’s currently planned disturbance footprint and several on the ridges surrounding the project area where they were identified during 2016 field surveys.*”²⁸

The SEA continues to state:

“*Under the proposed action, there would be removal of suitable habitat for Phillips’ agave on the benches and ridges above the Hassayampa River floodplain. In addition, it is likely that ground disturbance would occur in areas where the plants have been found. As a result, the mining operation would likely have direct and indirect adverse impacts to this population and its habitat. Effects would include many acres of habitat loss, possible take of individual rosettes, and ground disturbance that may lead to the introduction of noxious weeds.*”²⁹

These statements make it unmistakably clear that there will be direct loss of habitat and individuals as a result of the proposed mine. However, since the site has not been fully surveyed, the extent of direct and indirect impacts are unknown. Furthermore, because the Forest Service has not evaluated the species across its range, the effects of the loss of habitat and individuals at the Hassayampa site on the species viability cannot be evaluated. Therefore, the indirect effect of this mine on the viability of the species is unknown. Without the necessary baseline data, the

²⁸ SEA at 37, emphasis added.

²⁹ SEA at 38, emphasis added.

Forest Service cannot truthfully conclude that “*project activities would impact individual Phillips’ agave plants but [are] not likely to cause a trend toward listing or loss of viability.*”³⁰

The Center is extremely concerned with the Forest Service’s dismissal of the impacts of the proposed mine on *Agave phillipsiana*. We have attached a letter from professional botanist Wendy Hodgson³¹ which provides species background information which is notably missing from the SEA, as well as providing science-based concerns for this plants viability, important questions unanswered by the SEA/FONSI, and recommendations for making improvements to the monitoring and mitigation plan. The Center provides these comments as an exhibit to our objections, and we adopt them by reference into this objection, including all questions and recommendations therein, wholly and without exception.

ISSUE 3: THE SEA/FONSI FAIL TO ENSURE THAT MITIGATION MEASURES ARE SUFFICIENT TO MINIMIZE, MITIGATE, AND AVOID SIGNIFICANT IMPACTS.

In the Centers scoping comments, we stated:

- “*The EA must fully analyze all mitigation measures and their effectiveness...*”
- “*The EA must adequately analyze the effects of disturbance on natural channel function, riparian vegetation, and habitat components, and provide a clear path to reclamation, including costs, timelines, and adaptive management triggers to determine efficacy of reclamation practices. In addition, Pine Creek Mining Inc. should be required to post a bond for the full cost of reclamation of the entire disturbance area, in case the company abandons its obligations.*”

In the statements above, the Center identified that we are concerned for the effectiveness of mitigation, reclamation, and adaptive management processes. The SEA and FONSI do not alleviate our concerns, and in fact, our concerns are greater than before as we have discovered the extent to which the Forest Service is systematically dismantling mineral withdrawals and expanding the geographic extent of placer and dredge mining in sensitive riparian areas.

Under NEPA, the Forest Service must have an adequate mitigation plan to minimize or eliminate all potential project impacts. NEPA requires the agency to:

- (1) “*include appropriate mitigation measures not already included in the proposed action or alternatives,*”³² and
- (2) “*include discussions of: . . . Means to mitigate adverse environmental impacts (if not already covered under 1502.14(f)).*”³³

NEPA regulations define “*mitigation*” as a way to avoid, minimize, rectify, or compensate for the impact of a potentially harmful action.³⁴ NEPA requires that the agency discuss mitigation measures,

³⁰ SEA at 40.

³¹ See Exhibit 2.

³² 40 CFR § 1502.14(f).

³³ 40 CFR § 1502.16(h).

³⁴ 40 C.F.R. §§1508.20(a)-(e).

with “sufficient detail to ensure that environmental consequences have been fairly evaluated.”³⁵ “[O]mission of a reasonably complete discussion of possible mitigation measures would undermine the ‘action-forcing’ function of NEPA. Without such a discussion, neither the agency nor other interested groups and individuals can properly evaluate the severity of the adverse effects.”³⁶

The SEA provides lists of mitigation measures, but does provide any evaluation of the effectiveness of the measures. Merely listing mitigation measures does not ensure that significant impacts will be avoided. In rejecting an EIS for its failure to conduct adequate review of mitigation and mitigation effectiveness, the Ninth Circuit ruled that:

*“An essential component of a reasonably complete mitigation discussion is an assessment of whether the proposed mitigation measures can be effective. Compare *Neighbors of Cuddy Mountain v. U.S. Forest Service*, 137 F.3d 1372, 1381 (9th Cir.1998) (disapproving an EIS that lacked such an assessment) with *Okanogan Highlands Alliance v. Williams*, 236 F.3d 468, 477 (9th Cir.2000) (upholding an EIS where “[e]ach mitigating process was evaluated separately and given an effectiveness rating”). The Supreme Court has required a mitigation discussion precisely for the purpose of evaluating whether anticipated environmental impacts can be avoided. *Methow Valley*, 490 U.S. at 351–52, 109 S.Ct. 1835 (citing 42 U.S.C. § 4332(C)(ii)). A mitigation discussion without at least some evaluation of effectiveness is useless in making that determination.”³⁷*

In the District of Colorado, the Court found that “lack of detail as the nature of the mitigation measures” precluded “meaningful judicial review.”³⁸

The mere listing of Water Quality Best Management Practices (Appendix B in the FONSI) does not satisfy the need to mitigate adverse environmental effects. For example, the Water Quality Best Management Practices list dozens of steps to take, but neither the SEA nor FONSI provide any indication that all of those steps were taken. Significant questions remain: Has the Forest Service “Develop[ed] and implement[ed] an erosion control and sediment plan that covers all disturbed areas, including borrow, stockpile, fueling, and staging areas used during construction activities?” Has the Forest Service “Calculate[d] the expected runoff generated using a suitable design storm to determine necessary stormwater drainage capacity?” Will the project “Divert surface runoff around bare areas with appropriate energy dissipation and sediment filters?” How will the project “Stabilize steep excavated slopes?” Who will “Routinely inspect construction sites to verify that erosion and stormwater controls are implemented and functioning as designed and are appropriately maintained?” Has the Prescott National Forest “Develop[ed] site-specific BMP prescriptions for the following practices, as appropriate or when required, using State BMPs, Forest Service regional guidance, land management plan direction, BMP monitoring information, and professional judgment,” or has the Forest Service just ‘cut-and-paste’ BMP’s from other documents?

Dozens of items are listed in Appendix B of the FONSI. How has the Prescott National Forest enforced these on the Lost Nugget claim, or other claims? How many days a year does the Prescott

³⁵ *Id.* at 352.

³⁶ *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 353 (1989).

³⁷ *South Fork Band Council v. Dept. of Interior*, 588 F.3d 718, 727 (9th Cir. 2009) rejecting EIS for failure to conduct adequate review of mitigation and mitigation effectiveness in mine EIS.

³⁸ *Dine Citizens v. Klein*, 747 F.Supp.2d 1234, 1258-59 (D. Colo. 2010).

National Forest visit the Lost Nugget site to conduct this monitoring? We suspect the answer to these questions undermines any faith that these mitigation measures are effective. Simply listing, or briefly mentioning, mitigation measures violates NEPA. Because the EA concludes without adequate analysis that there will be no significant impacts it also fails to discuss how likely proposed or required mitigation measures are to reduce impacts. Supplemental environmental review must be provided to correct these errors.

In finding that the proposed project would have no impact, the FONSI states that “[t]he project was designed to minimize environmental effects through various resource protection measures as described in the supplemental environmental assessment.”³⁹ This faulty conclusion is based on the assumption that 1) the resource protection measures are effective (which has not been proven), and 2) that the Pine Creek Mining Company will adhere to the resource protection measures. As we stated in scoping, a legacy of un-reclaimed and damaged land is evident in the vicinity of the proposed mine. Therefore, we have no reason to believe that self-policing by the miners themselves will work to guarantee that the proposed action will not have significant effects.⁴⁰ Thus, the listing of resource protection measures does not in itself prove effectiveness, especially when no adaptive management triggers are identified. Many of these same questions and concerns are raised in Exhibit 2.

CONCLUSION AND PROPOSED REMEDIES

The Center supports the No-Action Alternative, and requests the abandonment of this project by the applicant. It is reprehensible that any habitat loss or direct or indirect impacts to *Agave phillipsiana* occur as a result of a dirty hobby like placer mining. We cannot tolerate such an abhorrent attack on nature and Native American culture. We request that in the resolution of this objection, that the Forest Service provide written answers to every question and comment posed here, including those posed in Exhibit 2. Public involvement is critical to sound decision-making. “One of the twin aims of NEPA is active public involvement and access to information.”⁴¹ Federal agencies must “assess and consider [public] comments both individually and collectively, and shall respond … stating its response in the final [NEPA document].”⁴² “Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA.”⁴³ Thus, agencies are to make “diligent efforts” to involve the public in NEPA procedures.⁴⁴ Many unanswered questions remain and we request that attention is given to each of them. The only reasonable solution to the issues posed here, as well as our similar concerns with Jack’s Project, is a forest-wide programmatic EIS evaluating the entire Prescott National Forest mining program so that a piecemeal approach is avoided and cumulative effects are properly analyzed.

Sincerely,



Joe Trudeau, Southwest Conservation Advocate, Center for Biological Diversity
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³⁹ FONSI at 7.

⁴⁰ Furthermore, consider the unanswered questions posed in Exhibit 2.

⁴¹ *Price Road Neighborhood Ass’n v. U.S. Dept. of Transportation*, 113 F.3d 1505, 1511 (9th Cir. 1997).

⁴² 40 C.F.R. § 1503.4(a).

⁴³ 40 C.F.R. § 1500.1(b).

⁴⁴ 40 C.F.R. § 1506.6.

EXHIBIT 1: Prescott National Forest internal email

EXHIBIT 1: An email from Frances Alvarado to Kendra Bull and Zakiya Shivji (dated 3.21.2018) which records the Prescott National Forest prioritizing Jack's Project, Riverbend Placer Mine, Drake Cement Upgrade, and Prescott Rock Products, over the Hassayampa Withdrawal Renewal which was ranked dead last.

From: [Alvarado, Frances -FS](#)
To: [Bull, Kendra A -FS](#)
Cc: [Shivji, Zakiya - FS](#)
Subject: Top 5 projects
Date: Wednesday, March 21, 2018 8:11:07 AM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)

1. Jack's Project
2. Riverbend Placer Plan of Operation
3. Drake Cement Upgrade-Section 18
4. Prescott Rock Products
5. Hassayampa Withdrawal Renewal

*Prescott Rock Products is actually a tie at #3.

We have another Plan of Operation that was submitted so stay tuned for the PIFs coming in this week.



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Caring for the land and serving people

EXHIBIT 2: Letter from Wendy Hodgson to Sarah Clawson, dated 6/1/2020

June 1, 2020

Sarah Clawson, Bradshaw District Ranger
Prescott National Forest
2971 Willow Creek Rd., Bldg 4
Prescott, AZ, 86301

Re: Riverbend Placer Mine and Lost Nugget Reclamation Project, Bradshaw Ranger District, Prescott National Forest

To the Responsible Official,

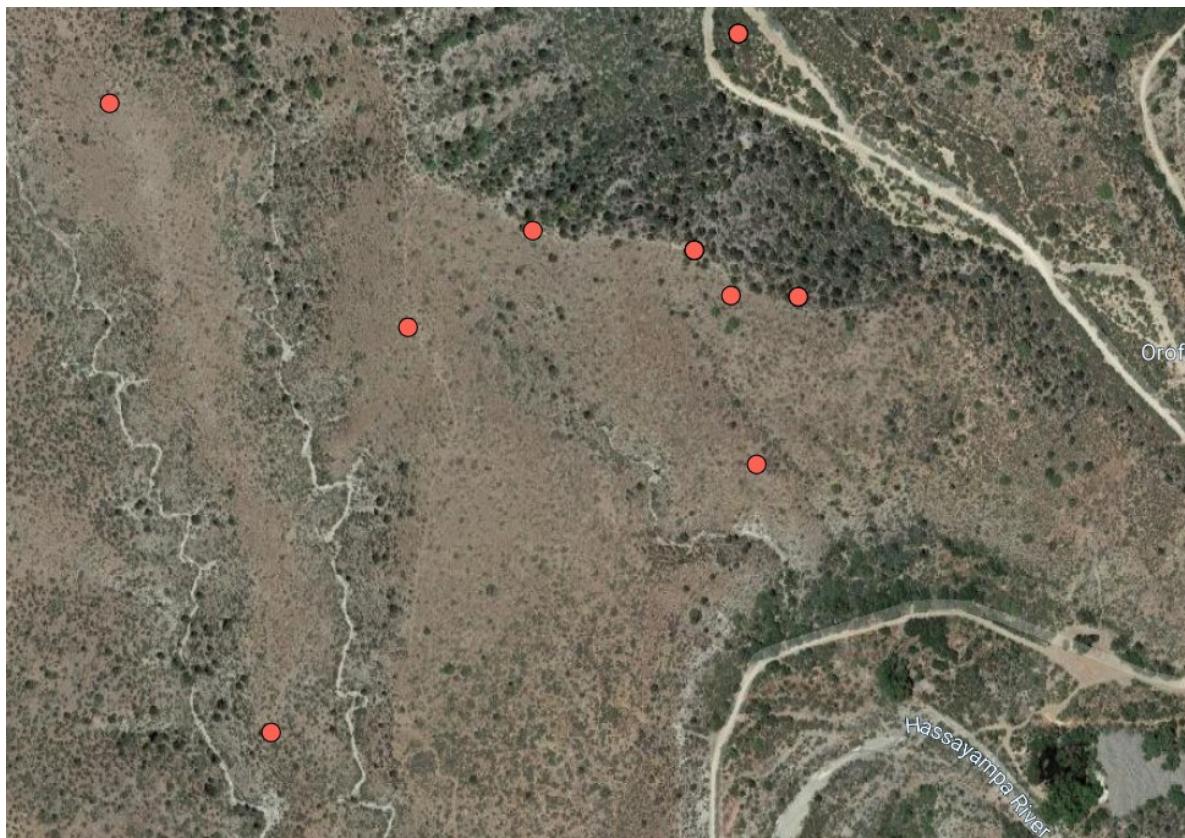
I would like to take this opportunity to comment on the proposed Riverbend Placer Mine and Lost Nugget Reclamation Project as it relates to the USFS Sensitive species, *Agave phillipsiana* through the lens of a scientist who knows this species very well. I am Herbarium Curator Emerita and Sr. Research Botanist at the Desert Botanical Garden, where I have worked for 46 years. My areas of expertise include Southwest and northern Mexico floristics, rare, endemic and invasive species, ethnobotany, and especially, systematics of the Agavaceae, with a focus on Agave, including the systematics of pre-contact domesticated agave species (hereafter referred as PCDAS). There are at least six such species formally described and named in Arizona – none have been found in any other state – of which five, including Phillip's agave, *Agave phillipsiana*, were discovered and named new to science by me and colleagues. I am arguably the expert on these irreplaceable PCDAS, having spent 36 years searching for, documenting, and conducting research on these plants.

Like other PCDAS, Phillips' agaves are unique plants – they are *national treasures that are, unfortunately, not guaranteed survivorship*. Prior to the 1980s, the idea of agaves grown extensively by pre-contact peoples for a multitude of purposes (including food and fiber), was not taken seriously by academia. In the mid-1980s University of Arizona archaeologists showed conclusive evidence that the Hohokam grew agaves on thousands of hectares, hundreds of years ago. During this time, I and other Desert Botanical Garden researchers found, described, and named *Agave delamateri*, the second presumed PCDAS found within the Hohokam cultural area (the first suspected domesticate being *A. murpheyi*). Soon thereafter, I named and described the third PCDAS, Phillips' agave, *A. phillipsiana*, which was first found in Grand Canyon. I and colleagues have since found, described, and named three more PCDAS (with further new species postulated), all found only in Arizona. *Agave phillipsiana* and all of the PCDAS represent relict populations that are virtually unchanged over centuries since being farmed, and then abandoned, by pre-contact peoples. In other words, they are living legacies still found in their bio-cultural landscape. Preliminary research suggests that a few of these PCDAS, including *A. phillipsiana*, may have their origins in Arizona, which is significant in that no other domesticated species – ancient or modern - has its origins solely in this state. Research thus far indicates that PCDAS are not found anywhere else in the world with the exception of Mexico.

Agave phillipsiana is known from only 45 sites. Although few in number, the sites are scattered, occurring in the bottom of the Grand Canyon, Sedona and Verde Valley area, south of Prescott (Orofino Wash/Hassayampa population) and one site in Tonto Basin. Like other Arizona agave domesticates, they occur not in “natural” landscapes, but rather engineered agricultural landscapes modified for dry-farming such as rock alignments by

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pre-contact people. *Agave phillipsiana* was first documented in the Orofino-Hassayampa area by Marc Baker in 2002. I determined it as *A. phillipsiana*, a species I had published as new to science in 2001 (Hodgson 2001). In 2003 and 2004 I visited the Orofino Wash-Hassayampa River site three times and documented with herbarium specimens a total of 14 separate clones of Phillips' agave. These are the only known sites of this species on Prescott National Forest.



Documented sites within the planned impacted area.

Possible linear alignments have been observed at this site (Anaya 2018; Hodgson, pers. obs.). An archaeological inventory identified and documented five isolated occurrences of cultural material, “not considered eligible to the National Register of Historic Places as their research potential was exhausted during the survey-level recording; thus, they require no further management consideration” (USFS 2020). The agaves occur and are part of this prehistoric bio-cultural landscape and should be seen as such by those doing survey-level recording. The research potential is not exhausted but is limitless when considering that the agaves are part of this archaeological context. In the words of Dr. Gary P. Nabhan, “what is at stake is the *in situ* survival of a prehistoric native crop - without intervening crop improvement or adulteration by historic breeders. It is a remarkable opportunity for botanists and archaeologists to collaborate on a study of prehistoric agriculture, if it is saved in place” (Nabhan 1989). Additionally, unlike other PCDAS, Phillips' agave grows within cultural areas defined as the Patayan (Orofino Wash-Hassayampa), Sinagua (Sedona-Verde Valley), Pre-ancestral Puebloan (Grand Canyon), and Hohokam (Tonto Basin) cultures. Such a distribution indicates extensive trading of an important species amongst unrelated cultural groups in different regions experiencing different geomorphology and climate, requiring different agricultural farming methods that are observable today. Of significance, too, is that no other PCDAS occurs within the Patayan defined cultural area.

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The Supplementary Environmental Assessment (2020) provides suggestions to help mitigate Phillips' agave habitat and individual plant loss. As stated in the assessment, “design features and/or mitigation measures should be incorporated in all Forest Service projects, as needed, to ensure that Southwestern Region sensitive plant species do not trend toward listing as threatened or endangered species.” Many questions come to mind as the devil is in the details. Who will oversee that all of the actions and recommendations, albeit commendable, will actually occur? Who will conduct a survey focused on the agave prior to the ground-disturbing activities? Where are these agaves in relation to the proposed roads and extraction areas? Is Pine Creek Mining, Inc. planning to hire knowledgeable plant experts? What is the plan for such removal from *in situ* to *ex situ* localities? If approved, who will oversee and who will actually remove and relocate the agaves? What institutions will receive these plants and will these institutions receive funding for the plants’ care? Who will monitor the agaves yearly? What monitoring protocols will be used? Are mining staff knowledgeable enough to identify for example, favorable sites for transplanting? Regarding invasive species, who will survey for and eliminate these species? Will they subcontract individuals, and who makes sure these people are knowledgeable? Who follows up on all these and other requirements? Will the Forest Service hold Pine Creek Mining Inc. accountable for any requirement not meant over the next 15 and more years, especially considering the Forest Service’s limited staffing and funding?

A solid, detailed plan has to be developed for every aspect should this project be approved, preferably made well in advance of the proposed start of the project so that those involved, such as institutions and their staff, are prepared. This plan should include an expert to survey for additional plants and determine their proximity to the impact area (roads, extraction sites) as depicted on a concise, clear map. Although having a Forest ecologist identify and monitor sites believed to be at risk of being impacted is a positive step, involving an expert, such as myself, from the very beginning of any assessment should be required. The plan should include knowledgeable and experienced people and a detailed plan to oversee the removal of agaves, care for plants *ex situ* in botanical/natural history institutions (such as the Desert Botanical Garden, Highlands Center for Natural History and others), transplant plants *in situ*, and initiate and continue long-term monitoring of transplants (and invasive species establishment). For example, within institutions, some agaves (especially those that are large) can be used for educational and research purposes, while also generating additional pups for transplant into suitable, safe areas away from any mining claim but as close to existing sites as possible. Remaining plants can be cared for until that time deemed best to relocate them into previously determined optimal sites *in situ* in late fall-early winter. These transplants *must* be monitored frequently to assess water needs, herbivory impact and other potential effects detrimental to successful establishment. To increase the chance of agave survival and monitor invasive species, I suggest involving those knowledgeable about the region’s plants. The Prescott chapter of the Arizona Native Plant Society is active and its members are an excellent resource to assist in activities. In addition to developing such a plan, Pine Creek Mining, Inc. should provide funds to implement and follow through all necessary mitigation measures. The financial cost of rescuing these agaves should not fall upon its rescuers and care-takers.

Finally, and unfortunately, this and other pre-Columbian domesticates cannot be federally listed as threatened or endangered. Given its unique direct connection with past and present indigenous cultures, the *bio-cultural* landscape of which it is a key component, and potential role in maintaining food security at a time when climate change and water scarcity are placing food security, human health, and community well-being at risk (IPCC, 2019; WHO, 2018; Nabhan et al. in press), it is imperative that surviving populations of *A. phillipsiana* – and

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other pre-Columbian domesticates - are protected to the fullest extent possible and not put at a greater risk of extinction. Petitioning the State Historic Preservation Office (SHPO) to protect these plants at this site as cultural relics within the context of the extensive pre-contact agricultural field under antiquities and historic preservation acts is warranted, similar to such petitioning for another PCDA, *Agave murpheyi*, on Table Mesa north of Phoenix. The Orofino-Hassayampa site, with these relic, prehistorically important agaves, should be reconsidered for eligibility to the National Register of Historic Places.

Thank you for this opportunity to comment.

Sincerely,

/s/ Wendy C. Hodgson, M.S.
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Desert Botanical Garden
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(480) 481-8108

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