Comments on BLM's Biological Monitoring Plan
From FONC, DNCA, and RBDA
2-25-2022

Introduction

Friends of the North Coast (FONC), Davenport North Coast Association (DNCA), and Rural Bonny Doon Association (RBDA) appreciate Coastal Commission Federal Consistency staff honoring our request by providing us with BLM's Biological Monitoring Plan on January 12, 2022. A subsequent email that day from Ben Blom, BLM Field Manager provided clarifications:

> emphasizing that this is a living document that BLM expects to continue to refine in coordination with the Coastal Commission moving into the future; and
>
> indicating that while there are components of the monitoring plan that are identified as "Subject to Availability of Funding", BLM is already moving forward with what BLM (and the Commission) believe are the most critical monitoring components [and that BLM has] been, and will continue to, work with Sempervirens to identify funding sources for some of the other components that would complement the core monitoring items, with emphasis on trying to fund some wildlife monitoring.

Starting with Scoping Comments, FONC/DNCA/RBDA have all repeatedly communicated our long-demonstrated commitment to protection of the environment at Cotoni-Coast Dairies (C-CD) and the surrounding area. When we learned by a newspaper article that trail construction was to commence on December 1, 2021, we collectively followed up in a detailed email on November 24, 2021 to find out what was happening in terms of collection and documentation of the existing baseline and future monitoring. We expressed concern that we had heard no response to FONC's 25-page "Proposal for Baseline Collection, Impact Identification, Mitigation, Monitoring, and Standards/Thresholds which may not be Exceeded" sent June 21, 2021 (other than an acknowledgement from BLM that "[t]here may be some components of what you sent that could be incorporated into this effort"). We have now reviewed BLM's Biological Monitoring Plan and are very concerned about its deficiencies, a number of which are discussed below.

.

Executive Summary

An adequate Biological Monitoring Plan, including a documented baseline inventory of existing conditions, is required by law and regulation and also because both BLM's adopted RMPA and the Coastal Commission's Federal Consistency Concurrence Condition (FCCC) require "effectiveness monitoring to evaluate whether resource objectives can occur:"

> so as to enable modification of the PDFs if monitoring demonstrates that resource objectives are not being met (FCCC p.28); and

so that “lessons learned” can be ascertained during Phase 1 recreational improvements so as to inform future planning and activities allowable in Phase 2 (FCCC p.22).

While BLM’s Biological Monitoring Plan, admittedly “a living document that BLM expects to continue to refine in coordination with the Coastal Commission,” may represent a start toward adequacy, it falls far short at this time and needs at least the below listed serious deficiencies corrected before any significant construction and operation. Indeed, these should have been addressed prior to RMPA Approval.

1. A specific commitment to produce a reliable baseline inventory document required by RMPA 1.3.2.A (including specifically identifying and inventorying objects and values for which the Monument was designated and maintaining an inventory of wildlife and wildlife habitat prior to significant disturbance, construction of improvements, and opening to the public. Given its effectiveness as an indicator species, BLM should add collection of pre-opening baseline data as to grasshopper sparrows sufficient to determine future trends.
2. Conduct of the surveys required by the RMPA (see, *e.g.*, 4.2.1 re upland terrestrial vegetation; 4.3.1, riparian habitats and wetlands; 4.3.6 re bees; 4.4.1 re fish & wildlife; and 4.5.1 re federally listed species and important habitat features for listed species.
3. Removal of the "Subject to Availability of Funding" language from the Monitoring Plan and replacement with language indicating that surveys are about to be underway given that the current language is inconsistent with the “general assumption” made in the adopted RMPA “to facilitate the analysis of potential impacts and common to all resources” that “Funding and personnel would be sufficient to implement any alternative described,” RMPA 4.1.4. In any event the lack of funds or personnel is not a proper basis for failure to establish baseline and conduct future monitoring.
4. Removal of the Monitoring Plan language stating that "formal monitoring protocols for each species discussed in the Proclamation is not recommended or proposed" because it is in violation of BLM Manual 6220 §1.6.A.3 and G.4.a. Replace with a statement that the Monitoring Plan includes specifically identifying and inventorying objects and values for which the Monument was designated.
5. Removal of the Monitoring Plan language stating that:

   > “For many of the common wildlife and plant species noted in the Proclamation, the BLM can meet this goal [conserving, protecting and restoring all species noted in the Proclamation] by managing their habitats effectively. For example, working towards protection and enhancement of riparian areas accounts for many of the common species noted in the Proclamation, such as red alder.”

   There is no credible scientific basis for such statement (*see*, attached Summary Analysis by Dr. Pollock).
6. Under Stream Surveys at page 22, for turbidity measurements replace Secchi disks with electronic optical sensors that measure light attenuation or backscatter; also include a threshold regarding turbidity. (*See*, attached Summary Analysis by Dr. Rubin).
7. Modify the Summary Table under the Resources column by adding: “oak woodlands, coastal scrub, conifer forest, and wetlands and riparian zones, “as to which the Decision Record (at p. 10) requires BLM to “monitor and evaluate the vegetation health.”

8. Add thresholds (**measurable** indicators of when a change in management needs to be made) as required by RMPA Appendix C. These should include carrying capacity thresholds. The monitoring of "Recreation" in the Monitoring Plan does not include monitoring impacts to resources, not to mention establishing a threshold of such resource impacts that would not be tolerated.

Analysis

An adequate Biological Monitoring Plan is required by law and regulation and also because both BLM's RMPA and the Coastal Commission's Federal Consistency Concurrence Condition (FCCC) require "effectiveness monitoring to evaluate whether resource objectives can occur." This is particularly critical where, as here, construction and operation of the proposed parking area and trails is required to be implemented in multiple phases. *See*, RMPA 4.11.1 p. 58 and FCCC. Indeed, the FONSI for the RMPA is expressly based on the fact that the BLM has incorporated a phased approach to implementation:

> "to ensure that the BLM is resulting in predicted outcomes prior to implementation of phase 2. The BLM maintains the authority to delay or adjust implementation of the RMPA if unforeseen effects occur." FONSI p. 3.

RMPA Section 1.7(b) states that the Overall Vision is to:

> (b) provide for sound, long-term stewardship of the property through cost-effective ***adaptive management*** designed to conserve and enhance its natural and cultural resource values and provide compatible recreation.

Section VII of the Decision Record - Monitoring and Adaptive Management – states at p. 29 that:

> Adaptive management is a system of management practices based on ***clearly identified outcomes***, ***monitoring to determine if management actions are meeting outcomes***, and, if not, facilitating management changes that will best ensure that outcomes are met or to reevaluate the outcomes.

Among the ***clearly identified outcomes*** set forth in the FONSI Conclusion is that ***the implementation of the RMPA will not have significant environmental impacts*** beyond those already addressed in (i) the EIS for the California Coastal National Monument (CCNM) Resource Management Plan (RMP), approved in 2005; and (ii) the Final EIS for the RMP for the Southern Diablo Mountain Range and Central Coast of California, approved in 2006.

The Decision Record identifies C-CD monitoring program as being described in Appendix C, which provides that:

> monitoring "requires knowledge of ***detailed information on existing conditions*** … [f]or example trend assessment ***requires gathering baseline or status information***."

The Coastal Commission's Concurrence Condition requires that BLM will submit a separate consistency determination to the Commission for Phase 2 activities associated with implementation of the C-CD Plan, including an analysis of consistency with Coastal Act Chapter 3 policies… and "***a detailed analysis of any feasible, potentially less environmentally damaging alternatives***." (Emphasis added.)

BLM's Decision Record Section 2.13 (p. 25) describes as an "Other Beneficial Action" the fact that "BLM's RMPA will be implemented through ongoing inventory and monitoring programs [and that]:

> "effectiveness monitoring is used to determine if the standards and guidelines, land allocations, and project design criteria are sufficient to meet resource objectives. This monitoring information can be used to make adjustments in the future design and implementation of actions [and that] Appendix C specifically outlines key monitoring indicators that would need to be met prior to implementation of Phase 2 of recreation development."

Thus an adequate Biological Monitoring Plan is a necessity under law and regulation and in order to enable any implementation of Phase 2. As quoted above, Appendix C expressly provides that monitoring requires ***detailed information on existing conditions*** by ***gathering baseline or status information***.

BLM's Biological Monitoring Plan may represent a start toward adequacy, but it falls far short at this time and needs much more before significant construction and operation occur.[1] The Monitoring Plan's more serious deficiencies are discussed below.

Lack of Specific Commitment to Produce Baseline Inventory Document

RMPA 1.3.2.A requires production of a "reliable inventory [a baseline document] enabling the management of C-CD to understand the significance and extent of objects and values this unit of the CCNM is intended to protect." BLM's Biological Monitoring Plan *cannot* be in compliance as to those resources where baseline collection and future monitoring are "Subject to availability of funding," namely:

Water Quantity – Streams,
Water Quality – Streams and Ponds,
Wildlife – Terrestrial Invertebrates,
Wildlife – Reptiles and Amphibians,
Wildlife –Birds[2],
Wildlife – Mammals, and, separately,
Wildlife – Badgers.

[1] *See also*, BLM Manual 6220 §M.3 providing that "Each Monument and NCA must develop and regularly update a science plan in coordination with the Washington Office NLCS Science Program. Science plans must include sections on: … c. the identification and prioritization of management questions and science needs, including: … 2. **assessment, inventory, and monitoring needs**,,,,"

[2] If, as rumored, BLM already has collected data as to birds, BLM should reference that in its Monitoring Plan and share the data with the public.

BLM's first step toward attempted compliance with RMPA 1.3.2.A should be removal of the "Subject to Availability of Funding" language from the Monitoring Plan and replacement with language indicating that surveys are about to be underway. For Wildlife, language should also be added stating an inventory of wildlife and wildlife habitat will be maintained [RMPA 2.7.2 MA-WLD-1]. The current language is inconsistent with:

> the "general assumption" made in the adopted RMPA "to facilitate the analysis of potential impacts and common to all resources" that "***Funding and personnel would be sufficient*** to implement any alternative described," RMPA 4.1.4; and
>
> NEPA, in that lack of funds or personnel is not a proper basis for failure to establish baseline and conduct future monitoring; rather these tasks are required to be prioritized and completed prior to RMPA adoption, and certainly before significant construction of improvements, or opening and operating the Monument lands.

Lack of Baseline Inventory Document Precludes Compliance with Coastal Commission's Condition for Concurrence

BLM's Biological Monitoring Plan does not include the baseline necessary to comply with the Coastal Commission's Federal Consistency Conditional Concurrence (FCCC) because without a baseline:

> the required effectiveness monitoring to evaluate whether resource objectives were met using the PDFs cannot occur so as to enable modification of the PDFs if monitoring demonstrates that resource objectives are not being met (FCCC p.28); and
>
> the required monitoring results and "lessons learned" cannot be ascertained during Phase 1 recreational improvements so as to inform future planning and activities allowable in Phase 2 (FCCC p.22).

The Coastal Commission Final Decision contains the following additional statements relevant to the need for a baseline and a better Monitoring Plan than provided by BLM:

> p 5: "BLM will continue to coordinate with the Executive Director regarding the other management and monitoring plans described in its RMP;"
> p. 7 "BLM has proposed two phases of activities, with finalization of Phase 2 activities dependent on completion and monitoring of Phase 1 activities;"
> p. 24 "The monitoring, avoidance, minimization, and mitigation measures proposed under the C-CD Plan include:
>
> - Avoidance of sensitive habitat areas in siting and construction of Phase I parking areas and trails
> - **Conducting periodic biological surveys** (in coordination with USFWS, NMFS and CDFW)
> - Implementation of Best Management Practices, Standard Operating Procedures, and other conservation measures to avoid and minimize erosion and **sedimentation**;

p. 28 “Post-project implementation monitoring will evaluate whether the BLM applied the PDFs selected during the project planning process;” and
p. 31 “BLM’s agreement to phased review, and coordination of future more specific implementation plans with the Commission staff (with such coordination potential leading to future federal consistency submittals), …, the Commission finds that the C–CD Plan would be carried out in a manner protecting ESHA as required by Section 30240. Furthermore, activities proposed adjacent to ESHA would be undertaken in a manner that would protect, and where feasible, restore, and be compatible with the continuance of those habitats, thereby protecting the C-CD property’s ESHAs and downstream waters’ biological productivity and quality.”

Lack of Specific Commitment to specifically identify and inventory objects and values for which the Monument was designated

BLM’s next step toward attempted compliance should be removal of the statement "formal monitoring protocols for each species discussed in the Proclamation is not recommended or proposed" because it is in violation of BLM Manual 6220 §1.6.A.3 and G.4.a. which provide, respectively, in pertinent part:

1.6.A.3 The BLM will inventory and monitor the objects and values for which Monuments and NCAs were designated; and

1.6.G.4 Land use plans must analyze and consider measures to ensure that objects and values are conserved, protected, and restored. Specifically, plans must:

a. clearly identify Monument and NCA objects and values as described in the designating proclamation or legislation; where objects and values are described in the designating legislation or proclamation only in broad categories (*e.g.* scenic, ecological, etc.), identify the specific resources within the designating area that fall into those categories; and
g. include a monitoring strategy that identifies indicators of change, methodologies, protocols, and time frames for determining whether desired outcomes are being achieved.

The current language is required to be replaced with a statement that the Monitoring Plan includes specifically identifying, inventorying, and monitoring objects and values for which the Monument was designated.

Lack of Specific Commitment to Conduct Surveys Required in the RMPA

BLM’s next step toward attempted compliance should be to include specific statements committing to conduct of surveys required in the RMPA. Section 4.3.1 of the RMPA requires that BLM “***Conduct biological surveys prior to disturbance*** and at the appropriate time of year to detect sensitive species and important biological resources [and] … in compliance with agency protocols.” Specific surveys required in the RMPA include:

RMPA 4.2.1 re **upland terrestrial vegetation**. The Decision Record approving the RMPA requires at p. 10 in terms of vegetation management that BLM “monitor and evaluate the vegetation

health of grasslands, oak woodlands, coastal scrub, and conifer forest." Yet, only grasslands are mentioned in the BLM Monitoring Plan as subject to monitoring;[3] the omission of the other upland vegetation communities is a violation of the RMPA Decision Record.

RMPA 4.3.1, **riparian habitats and wetlands**. The Decision Record approving the RMPA also requires at p. 10 that BLM "monitor and evaluate the vegetation health of wetlands and riparian zones." Yet the BLM Monitoring Plan does require[4] monitoring or evaluation of wetlands or riparian zones, a violation of the RMPA Decision Record.

RMPA 4.3.6 re **bees**. This section provides that "[s]urveys for [Native] Bees should be done and the phenology of their nectar sources assessed prior to planning [Glyphosate] spraying." Further, "[s]ince bees track their nectar sources and these shift as the season progresses a time for spraying could be worked out so as not to impact native bees." There is no mention in the BLM Monitoring Plan of the foregoing baseline and monitoring survey relevant to bees.

RMPA 4.4.1 & 4.4.2 re **fish & wildlife**. RMPA 4.4.2 references utilization of PDFs in Appendix D as a benefit to native populations and habitats at the local and landscape scale. PDF 1 under Biological Resources states that "[s]urveys will be conducted at the appropriate time of year to detect sensitive species and important biological resources." However, the fish and wildlife surveys required under RMPA 4.4.1 are "Subject to availability of funding[5]" despite the RMPA general assumption "to facilitate the analysis of potential impacts and common to all resources" that "***Funding and personnel would be sufficient*** to implement any alternative described."

The "Status" in the Monitoring Plan for the Resource Category of "Wildlife – Birds" is among those "Subject to available funding." This is unacceptable, particularly in light of indications that BLM has collected data on birds and the availability data collected by the Santa Cruz Bird Club as part of its recent surveys for updating the County's breeding bird Atlas[6]. In particular, baseline information on the frequency and distribution of nesting pairs of grasshopper sparrows[7] is important. This sensitive species and "object" of the Monument is found in grasslands and is part of the guild of grassland birds that have been identified by scientists as indicator species for grassland health. Birds have been shown to be useful as indicator species for a variety of reasons, not least of which are relative ease of survey. This guild of indicator species

[3]Grassland monitoring is "[s]et to begin (with emphasis on RMZ1) in January 2022." One method identified is "Manual data collection" and another method is "Photo-based monitoring of randomized grassland study plots (quadrat grid) with quantitative data extraction." The BMP should expressly state that the January 2022 data collection will be performed in a manner sufficient to create an adequate **baseline** of grasslands at Cotoni- Coast Dairies.

[4] Under Emerging Technologies - Unmanned Aerial Systems beginning at p. 25, potential uses include: riparian habitat surveys and wetland mapping; however no commitment is made to do so and no description given as to the adequacy for evaluation of vegetation health.

[5] The exceptions are surveys for monarchs and pumas.

[6] Alex Rinkert served as Atlas Director and has a degree in ecology from UCSC and per the internet is currently is a senior biologist at the San Francisco Bay Bird Observatory.

[7] Identified at RMPA 3.4 as present in Cotoni-Coast Dairies grasslands.

of grassland birds is the subject of widespread surveys in California, and so there is a useful reference system with which to compare the trends of this unit of the Monument. However, once trails are opened through the nesting areas, a pre-disturbance baseline will no longer be possible. However, some baseline information may be available on eBird[8] and/or through data collected by the Santa Cruz Bird Club as part of their recent surveys for updating the County's breeding bird atlas. Given its effectiveness as an indicator species, BLM's Biological Monitoring Plan should definitely **add collection of pre-opening baseline data as to grasshopper sparrows sufficient to determine future trends**.

Furthermore, the Monitoring Plan language states that:

> "For many of the common wildlife and plant species noted in the Proclamation, the BLM can meet this goal [conserving, protecting and restoring all species noted in the Proclamation] by managing their habitats effectively. For example, working towards protection and enhancement of riparian areas accounts for many of the common species noted in the Proclamation, such as red alder."

This language should be removed because there is no credible scientific basis for the broad notion that managing habitat is an effective substitute for monitoring and restoring the health of a species. It is a poor, unfounded shortcut that will not protect the objects of the monument noted in the Proclamation. Contrary to BLM's example, "working towards" enhancement of riparian areas does not ensure that red alder, or any other populations, are doing well. Quite the opposite, a healthy red alder forest might be considered a sign of a healthy riparian area. "Working towards" enhancement, in general, is a guarantee of nothing and certainly cannot substitute for monitoring protocols for determining the health of and protecting objects of the monument. If the BLM does not monitor a particular resource or object of the monument, it will never know if the "working towards" has accomplished anything concrete for the health of a particular species (*see*, attached Summary Analysis by Dr. Jacob Pollock).

RMPA 4.5.1 re **federally listed species and important habitat features for listed species**. Pursuant to RMPA 4.5.1 addressing special status species[9], among the "assumptions" used in the RMPA's impact analysis is the following: ■ **Species-specific surveys**. The PDF's described in Appendix D include: ■ Conduct surveys for federally listed species and important habitat features for listed species.

[8] Per BLM's Monitoring Plan at pp. 14 and 15, eBird is used by and "deemed informative by the BLM Biologist."

[9]The Proclamation now obligates BLM to manage for 24 species as well as 13 biotic communities that are not otherwise federally protected. See list attached at the end of this document. BLM should certainly reference its list of sensitive animal and plant species in California as required priority monitoring. If, as reported third-hand, BLM already has collected data as to birds and rare plants, BLM should reference that in its Monitoring Plan and share the data with the public. In any event, BLM should confirm presence or absence of all rare plants regardless of funding availability.

As to the California Red-legged Frog (CRLF), the Monitoring Plan commendably provides that "all data will be curated by BLM resource specialists and saved using an online data depository. An annual report will be produced describing the pattern of presence and abundance of CRLF across C-CD."

However, a similar degree of commitment by BLM should be included for salmonids. Instead the language makes it appear that BLM is forsaking its own responsibility in this regard in favor of other agencies such as NOAA-NMFS and the City of Santa Cruz. Language should be added applicable to salmonids similar to the above-described language for the CRLF. Additionally, the BLM Monitoring Plan acknowledges that in addition to the workload undertaken by these other agencies, there are streams not currently surveyed. RMPA 3.5 informed the public that the Management Plan "includes ongoing efforts to survey population levels of federally and state sensitive listed species," such as salmonids and states:

> Population size trends are not well known for most of the species on the property or in the surrounding areas. Research and management efforts are currently underway to improve understanding of the status of all listed species.

These circumstances required BLM to survey the streams not currently being surveyed by NOAA-NMFS or the City of Santa Cruz for salmonids.

Sedimentation is an important habitat feature for salmonids. Under Stream Surveys at page 22, for turbidity measurements the Monitoring Plan proposes to use Secchi disks. Secchi disks should be replaced with electronic optical sensors that measure light attenuation or backscatter (*see*, attached Summary Analysis by Dr. Rubin). A Secchi disk is just a black and white disk or solid white disk that is lowered into the water, to see how deep it is visible, *usually used in lakes, oceans, and deep rivers*. The problems Dr. Rubin sees with using Secchi disks in any of the six main creeks on Cotoni-Coast Dairies are:

> If the water is clear and shallow enough to see rocks and pebbles on the stream bed, the disk will remain visible all the way to the bed, so it won't give any result.
>
> If the water were turbid enough to give a measurement, it would be difficult or impossible to quantitatively relate a measurement to a specific turbidity threshold such as the 27 milligram per liter value cited in the North Coast Regional Water Quality Control Board report. This is routinely done using electronic sensors.

The sampling schedule is also critical and not adequately addressed in the BLM Biological Monitoring Plan. Baseline samples need to be collected at a wide variety of discharges and should at least capture the rising and falling limbs of multiple floods.

RMPA 4.7.1 addressing water resources includes the "Assumptions" that "[n]o water quality standards or waste discharge requirements would be violated during construction or operation

of the proposed trail systems." Quantitative measurement of specific existing turbidity and future turbidity using electronic sensors is necessary to assure compliance with the RMPA's Assumption.

Lack of RMPA-required Thresholds Identifying When a Change in Management is Needed

Appendix C governing Monitoring includes the following requirement:

> A monitoring system requires the development and use of indicators **and thresholds** based on guidelines. Thresholds are **measurable** indicators of when a change in management needs to be made. **For example**, the **specific amount of resource impacts** that would be tolerated **before a trail would be closed** to public use and rehabilitated is a threshold.

BLM's Biological Monitoring Plan does not contain the word "threshold," "outcome," or even the word "standard."[10] In light of Appendix C stating that "[u]ntil these [threshold] measures are in place, evaluations may not be completed," if lack of funding for monitoring continues to prevent adequate monitoring of specified aspects of the RMPA, those aspects should be tied to delayed opening or future closure of recreational use with the potential to damage resources.[11]

The current management actions with the greatest potential to impact resources, including objects and values of the Monument, are the opening of recreational trails to activities such as hiking, horseback riding, and biking. The monitoring of "Recreation" in the Monitoring Plan does not include monitoring impacts to resources,[12] not to mention establish a threshold for such resource impacts that would not be tolerated. RMPA 4.4.1 addressing fish and wildlife makes the following "Assumptions:"

> Impacts to wildlife and habitat from recreation activities … [vary] depending on the types and degree of activities allowed.
>
> Direct, adverse impacts to populations include effects leading to abandonment of breeding areas, such as a pond or creek in the case of aquatic species, or the cessation of nesting by one or more bird species.
>
> Direct, adverse effects to species include major declines in species, regarded as a whole, as a result of impacts to local populations as described above. For example, the cessation of

[10] See also BLM Manual 6220 providing that each RMPA must include a monitoring strategy that identifies indicators of change, methodologies, protocols, and time frames for determining whether desired outcomes are being achieved.

[11] See also, BLM Manual 6220 §1.6.G.4.b which provides that: BLM shall identify **specific and measurable** goals and objectives for each object and value, as well as generally for the Monument or NCA.

[12] See FONC's proposed Assessment of estimated impact of trail wildlife disturbance buffers on wildlife habitat and vegetation at p.2 of its Proposal for Baseline Collection, Impact Identification, Mitigation, Monitoring, and Standards/Thresholds which may not be Exceeded.

breeding by California red-legged frogs at C-CD would significantly delay or even preclude the recovery and delisting of the species.

RMPA 4.4.2 informs that when compared to many other areas in the central coast of California, wildlife species at C-CD have been relatively free of influence from development and other human activities over the course of the past century[13], and, further, that given that recreational use of C-CD has been minimal to date, all four alternatives would increase visitor use through **the development and use of trails**, concluding that this increase in use is **anticipated to have adverse impacts** on sensitive and other wildlife species. Per Appendix C, the Monitoring Plan is required to include thresholds as to the **specific amount of resource impacts** that would be tolerated **before a trail would be closed** to public use **and a change in management made**.

To establish and implement the thresholds, the Monitoring Plan also needs to monitor both the type and degree of trail use and each type of trail use separately (hiking, horseback riding, and biking). This would allow the feedback necessary for an adaptive management plan that would reduce specific types of recreation in specific areas for which action thresholds have been exceeded for the resource being monitored.

A good threshold to establish would be **carrying capacity analysis that establishes measurable indicators of when a change in management needs to be made, as required by Appendix C.** FONC's Proposal for Baseline Collection, Impact Identification, Mitigation, Monitoring, and Standards/Thresholds which may not be Exceeded sent June 21, 2021 proposed specific thresholds,[14] including carrying capacity thresholds for recreation impacts on resources to be determined within three years after opening of each public access point, and, as necessary, adjusted, for each public access point. Below is an updated version:

> Any new public access facility should be opened as soon as an adequate Resource Management Zone baseline inventory has been documented for it and made available to the public, and it has adequate off-highway parking. Parking area and trail carrying capacity should never exceed resource carrying capacity. Each formal parking area should be equipped with sufficient well-maintained restrooms, informational exhibits, and trash receptacles. Highway shoulder parking should be strongly discouraged or enforceably prohibited or limited where it would result in

[13] RMPA 3.4 confirms that:

> Natural fauna at the C-CD can include any and all elements of a fairly intact ecological interdependent model including: herbivores (black-tailed mule deer); top predators (mountain lion); mesopredators (bobcat, coyote, grey fox, raccoon, badger); small herbivorous mammals (brush rabbit, dusky-footed woodrat, California ground squirrel, deer mice); small carnivorous mammals including mustelids (longtailed weasel, striped skunk), moles and shrews, and bats.

[14] See threshold list at pages 24-25 of that document. For example, Threshold (1) on page 25 provides:

> (10) "Turbidity shall not be increased more than 20 percent above naturally occurring background levels in any stream with the potential to support salmonids. Per Dr. Rubin it would be advisable to add after "background levels" the phrase ", and will not exceed 27 milligrams per liter for a greater proportion of time than during natural background conditions."

recreational overuse, traffic hazards, visual barriers or other unmanaged abuse. Parking fees should not be imposed where it would incentivize unsafe parking on road shoulders, preclude reasonable public access, or impact residential neighborhoods. In furtherance of the foregoing, BLM will continue its participation on the newly formed North Coast Multi-Agency Working Group.

A carrying capacity should also be established appropriate to avoid public recreation or other uses from being adverse to adjacent agriculture, including organic agriculture, as well as a carrying capacity avoiding impacts on grazing counted upon for wildfire fuel reduction and, in turn impacts of grazing on resources.

Thank you for your consideration of these Comments. We would be happy to meet or Zoom to discuss further.

Sincerely,
Friends of the North Coast
Jonathan Wittwer

Davenport North Coast Association
John Barnes

Rural Bonny Doon Association

Kendra Turk-Kubo

Summary Analysis
re
Managing Habitat as a Substitute for Monitoring the Health of a Species

JACOB POLLOCK, PH.D[15]

The Introductory portion of the BLM Biological Monitoring Plan contains the below language.

> The BLM will work towards conserving, protecting and restoring all species noted in the Proclamation, as well as the diversity of native species not noted. For many of the common wildlife and plant species noted in the Proclamation, the BLM can meet this goal by managing their habitats effectively. For example, working towards protection and enhancement of riparian areas accounts for many of the common species noted in the Proclamation, such as red alder. Therefore, specific restoration goals or formal monitoring protocols for each species discussed in the Proclamation is not recommended or proposed.

I have been asked to provide a brief analysis of the concept underlying the above language, specifically the broad notion that managing habitat is an effective substitute for monitoring the health of a species. In my opinion, there is no credible scientific basis for this concept. Rather, it is a poor, unfounded shortcut that will not protect the objects and values of the monument.

Contrary to BLM's example, "working towards" enhancement of riparian areas does not ensure that red alder, or any other populations, are doing well. Quite the opposite, a healthy red alder forest might be considered a sign of a healthy riparian area. "Working towards" enhancement in general, is an assurance of nothing and certainly cannot substitute for monitoring protocols for determining the health of and protecting objects of the monument. If the BLM does not monitor a particular object of the monument, it will never know if the "working towards" has accomplished anything concrete for the health of a particular species.

First, even the best monitoring plan would be useless without a baseline from which to assess changes. Initiating a management action, for instance as to recreational use, prior to establishing a baseline for objects and values of the monument makes it scientifically impossible to determine the effect of that management action on the objects and values of the monument in order to protect them, especially if effects are potentially permanent. Objects of the monument may decline or go extinct and managers would have no way of knowing whether that was due to something outside the managers control or was the result of management action such as, for example, opening to recreational activities.

[15] 1995 B.A. in Biology (with highest honors), 1995 B.A. in Environmental Studies (with honors), and 2005 Ph.D. in Mathematical Ecology, all from the University of California, Santa Cruz. Curriculum Vitae attached to my Report on adequacy of analyses and likely impacts of management for the "Fish and Wildlife" and "Special Status Species" portions of BLM Draft C-CD RMPA/EA dated 3/15/2020, Exhibit A to FONC 4/1/2020 Comment Letter re Cotoni-Coast Dairies.

Each individual object of the monument needs to itemized in the monitoring plan and addressed separately in terms of monitoring and analyzing its health. Each monitoring target (object of the monument) needs quantifiable measures and analyses with a quantitative threshold that will trigger management action. Each target also needs a list and description of management actions available to correct the problem. The absence of quantifiable measures and analyses as well as the absence of quantitative thresholds to trigger management actions is a fatal flaw in the Monitoring Plan.

An example of the deficiency of the Monitoring Plan is the plan to monitor reptiles and amphibians. The monitoring plan as presented simply gives a basic description of a general technique for monitoring reptiles and amphibians (*i.e.*, drift fences and cover boards). No details are as to how the information collected is to be analyzed, what specific objects of the monument are expected to be able to be monitored with these methods, or what the threshold values are which initiate management action and what the potential corrective actions are.

Since the current management actions with the greatest potential to affect objects of the monument are the opening of recreational activities such as hiking, horseback riding, and biking, "the monitoring plan needs to monitor the level of each of these distinct activities separately. Each trail segment should be monitored for each of these distinct trail uses so that the effects of trail use can be located somewhat precisely to allow specific management actions and restorations. This would allow the feedback necessary for the adaptive management plan that would reduce recreation in areas for which action thresholds have been exceeded for the monitoring target (object of the monument) The adaptive part of such a plan would consist of seeing first how the monitoring target responded to different levels of recreation and then once the trigger is reached, how well the target recovers given different levels of reduction of recreational activity.

With similar reasoning, the number of cattle in a particular area and the amount of time they spend in that area should be monitored to allow for adaptive management actions. Oblique photographs of vegetation maybe useful for monitoring the effects of cattle grazing, so long as there is enough detail to monitor the effects or condition of the numerous specific species mentioned in the Monument Proclamation. All species in the Monument Proclamation need to be itemized and the specific monitoring plan for each one needs to be outlined. This does not preclude multiple species being monitored by similar or same monitoring technique. It does however mean that every species can be scientifically tied to a justified specific monitoring technique and the threshold for management action and potential management actions given for each species.

Additionally, no statistical justification has been given for the sampling design proffered for the 1 m^2 transects quadrants or for the number of cameras and their placement. Without a statistically defensible sampling design, no inference can be made about whether a species is in decline, stable, or growing, and whether a management action threshold has been triggered.

Also, the notion of using photographs either analyzed by humans or by AI needs to be field checked for its accuracy. Simply taking photographs and hoping that a general field biologist can identify all the species present, especially rare or threaten species, is bound to have a higher error rate and needs to be calibrated by field checks by certified botanist.

In general, much of the BLM Biological Monitoring Plan is not based on the best available science and in fact most of it has no references at all to peer-Review based science.

Jacob Pollock, Ph.D
Jacob Pollock

Summary Analysis
re
Use of Secchi Disks to Assess Water Turbidity in Cotoni-Coast Dairies Creeks

David Rubin, Ph.D[16]

The BLM Biological Monitoring Plan contains the below language on page 22 as part of Stream Surveys:

> Methods: Survey. Manual data collection. Habitat monitoring of the six main creeks on Cotoni-Coast Dairies. STIC meters will be installed to monitor water flow, temperature, and detect contaminants. Secchi disks will be used to assess water turbidity.

I have been asked to provide a Summary Analysis of the effectiveness of using Secchi disks to assess water turbidity in the six main creeks on Cotoni-Coast Dairies.

Sedimentation is an important habitat feature for salmonids. Under Stream Surveys at page 22, for turbidity measurements the Monitoring Plan proposes to use Secchi disks. In my opinion, a Secchi disk will not be adequate. It is just a black and white disk or solid white disk that is lowered into the water, to see how deep it is visible. It is *usually used in lakes, oceans, and deep rivers*. The six main creeks at Cotoni-Coast Dairies are not that deep. Therefore, Secchi disks should be replaced with electronic optical sensors that measure light attenuation or backscatter.

I perceive the following problems with using Secchi disks in any of the six main creeks on Cotoni-Coast Dairies:

> If the water is clear and shallow enough to see rocks and pebbles on the stream bed, the disk will remain visible all the way to the bed, so it won't give any result.
>
> If the water were turbid enough to give a measurement, it would be difficult or impossible to quantitatively relate a measurement to a specific turbidity such as the 27 milligram per liter value cited in the North Coast Regional Water Quality Control Board report. This is routinely done using electronic sensors.

The sampling schedule is also critical and not adequately addressed in the BLM Biological Monitoring Plan. Baseline samples need to be collected at a wide variety of discharges. In

[16] , Department of Earth & Planetary Sciences, UC Santa Cruz, Senior Scientist at USGS, 1975 – 2013, Visiting appointments at Paris Diderot University (2013), University of Tsukuba, Japan (1988, 1989, 2005); Stanford University (1976, 1987). Curriculum Vitae attached to my opinion letter on erosion, sedimentation, and turbidity regarding the BLM Draft C-CD RMPA/EA dated 3/14/2020, Exhibit C to FONC 4/1/2020 Comment Letter re Cotoni-Coast Dairies.

creeks with unsteady discharge such as the six identified to be surveyed at Cotoni Coast Dairies, sampling should at least capture the rising and falling limbs of multiple floods.

RMPA 4.7.1 addressing water resources includes the "Assumptions" that "[n]o water quality standards or waste discharge requirements would be violated during construction or operation of the proposed trail systems." Quantitative measurement of specific existing turbidity and future turbidity using electronic sensors is necessary to assure compliance with the RMPA's Assumption.

It would also be advisable to include the following threshold in the Monitoring Plan:

> Turbidity shall not be increased more than 20 percent above naturally occurring background levels, and will not exceed 27 milligrams per liter for a greater proportion of time than during natural background conditions, in any stream with the potential to support salmonids.

Most turbidity measurements are now done using electronic optical sensors that measure light attenuation or backscatter. The below link to the Fondriest Environmental Learning Center addressing Turbidity and Total Suspended Solids Measurement Methods provides a good background:

https://www.fondriest.com/environmental-measurements/measurements/measuring-water-quality/turbidity-sensors-meters-and-methods/#TurbidMM11

David Rubin, Ph.D

David Rubin

List of Animal and Plant Species Protected by the Presidential Proclamation

The Proclamation now obligates BLM to manage for 24 species as well as 13 biotic communities that are not otherwise federally protected.

The following federally listed species (4) were mentioned in the Proclamation:

Tidewater goby
Steelhead
Coho salmon
California red-legged frog

The following BLM California species (2) are listed in the Proclamation and are also listed as requiring protection on BLM lands.

White tailed kite
Townsend's big-eared bat

The following biotic groups/communities (13) must now be protected and managed for by BLM:

California sagebrush
Coyote brush scrub
Amphibians and reptiles
Bats
Red alder forests
Arroyo willow forests
Riparian areas
Riparian corridors
Wetlands – in riparian areas as well as meadows and floodplains
Grasslands
Scrublands
Woodlands
Forests

The following non-federally protected species (24) probably would not have received attention by BLM had this Monument proclamation not included their mention:

Wilson's warbler
Orange-crowned warbler
Downy woodpecker

Black swift
Tree swallow
Cooper's hawk
American kestrel
California vole
Dusky footed woodrat
Black-tailed jackrabbit
Gray fox
Bobcat
Mountain lion
Mule deer
California buttercup
Brown-headed rush
Redwood sorrel
Elk clover
Madrone
California bay
Monterey pine
Knobcone pine
Douglas fir
Coast live oak