United States Department of the Interior

FISH AND WILDLIFE SERVICE
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IN REPLY REFER TO:
ES/CO: PMJM HCP
Mail Stop 65412 LKWD

May 10, 2001

Mr. Ken Wolf
Elbert County Planning Department
215 Comanche
P.O. Box 7
Kiowa, Colorado 80117

Dear Mr. Wolf:

The U.S. Fish and Wildlife Service (Service) has reviewed the Draft Regional Habitat Conservation Plan for the Preble's Meadow Jumping Mouse in Unincorporated Elbert County, Colorado dated December 2000 (Draft Plan). We appreciate and support the efforts of Elbert County to conserve native habitats as well as sensitive and imperiled species. Our goal is to assist you in development of a Habitat Conservation Plan (HCP) which has a clear operating conservation program, can be successfully implemented, and for which a permit can be issued. In order for us to issue an Incidental Take Permit (ITP) under section 10 of the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 *et seq*.), we must ensure consistency with the issuance criteria for ITPs, the Service's 5-Point Policy, and compliance with the National Environmental Policy Act (NEPA). We are providing the following questions and comments to facilitate further discussion of the Draft Plan.

CONSISTENCY WITH SECTION 10 ISSUANCE CRITERIA

Section 10(a)(2)(B) of the ESA requires the following criteria to be met before the Service may issue an ITP:

1. The taking will be incidental to otherwise lawful activities and not the purpose of such activities.

2. The applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking.

3. The applicant will ensure that adequate funding for the Habitat Conservation Plan (HCP) and procedures to deal with unforeseen circumstances will be provided.

4. The taking will not appreciably reduce the likelihood of survival and recovery of the species in the wild.

5. The applicant will ensure that other measures that the Services may require as being necessary or appropriate will be provided.

6. The Services have received such other assurances as may be required that the HCP will be implemented.

The Service has concerns that the Draft Plan may not adequately address these issuance criteria. We have outlined our concerns below. The Service must determine that the applicant for the

permit will, to the maximum extent practicable, minimize and mitigate the impacts of the permitted taking. In doing this, the Service must consider two factors: adequacy of the minimization and mitigation program and whether it is the maximum that can be practicably implemented by the applicant. The record must contain some basis to conclude that the proposed program is the maximum that can be reasonably required of that applicant. This may require weighing the benefits and costs of implementing additional mitigation, the amount of mitigation provided by other applicants in similar situations, and the abilities of that particular applicant. In order for the Service to make the required determination, the HCP and NEPA documents must contain an analysis of alternatives that would require additional mitigation measures beyond those suggested in the proposed alternative and explain why they were not practicable. The HCP must describe and justify how it was determined that the proposed minimization and mitigation measures meet the "maximum extent practicable" criterion. The cost of the proposed mitigation should be specified and justification included as to why the proposed mitigation is the maximum practicable. In specific instances further explanation may be necessary. The definition of practicable should explain how consideration was given regarding what measures were available and capable of being done, as well as consideration of cost, existing technology, and logistics.

Additional interpretation regarding this issuance criterion is available in the Memorandum of Opinion and Order in the case of National Wildlife Federation v. Bruce Babbitt from the District Court for the Eastern District of California, filed August 15, 2000 (128 F.Supp.2d 1274 E.D. Cal. 2000) ("Natomas Basin").

Minimization of Take

Means to minimize take should be clearly defined and measureable. Some examples of potential measures to minimize take of Preble's meadow jumping mouse and its habitat are outlined below to aid in your deliberations.

Potential PMJM Minimization Measures

Development

- Setbacks of 100 meters (approximately 300 feet) from the 100-year floodplain for all new structures (including residences), hard surfaces (roads, trails, etc.), and other permanent features
- Limitations on construction design and timing, such as restricting disturbance of habitat during the active season for Preble's where possible
- Establishing maximum allowable percentage of disturbance in certain habitat types, and minimization of actual disturbance footprint in suitable habitat (bridge footings outside best habitat, etc.)
- Required implementation of BMPs for utility crossings (timing restrictions, revegetation standards, etc.)

Agriculture

- Livestock grazing restricted to specified levels within 100 meters of the 100-year floodplain
- Buffers around streams for haying operations

Mitigation

The HCP should identify how replacement habitat will be established, maintained, and monitored, as well as how restrictions will be enforced to ensure that the value of this habitat is maintained for Preble's. If done through restrictive easements, the document needs to identify who will hold, manage, and oversee the easements and how those activities will be funded.

Protective measures, such as conservation easements and/or deed restrictions, will be required on all lands designated for habitat replacement/mitigation. When habitat losses permitted under an HCP are permanent, protection of mitigation lands should also be permanent. In all cases, the mitigation habitat should be sufficiently close to occupied habitat that colonization is likely.

We question whether the mitigation ratios proposed in the Draft Plan are biologically adequate. The Draft Plan contains no scientific or biological reasoning for the ratios proposed. If lost habitat is going to be offset by preserving existing habitat that has little threat of being harmed in the near future, the ratios of preservation must be much higher than those proposed. Also, the proposal must include some element of enhancement, restoration, or creation, along with the preservation, or at minimum, a decrease in threat to the lands being preserved. It should be specified that the mitigation lands will remain protected and managed for their biological integrity as Preble's habitat in perpetuity. Typically, acceptable mitigation for loss of habitat involves enhancement or restoration of lands with little current value into suitable, high quality habitat.

The Service currently has two documents that provide guidance for mitigation ratios: (1) the draft Special 4(d) Rule for Preble's of December 1998 (draft 4(d)), and (2) those outlined in the Service's 1997 Region 6 Wetland Mitigation Guidance (R6 Guidance). While neither document is a required regulation, both provide useful guidance to further our goal of conserving and recovering Preble's. The draft 4(d) presented mitigation guidelines relating to a proposal that would allow local governments to use their authorities to permit relatively minor impacts to Preble's habitat, provided that appropriate mitigation was required. The draft 4(d) included a discussion of types of mitigation for Preble's and presented general requirements for mitigation ratios. The R6 Guidance proposes more biologically-based guidance, with different mitigation ratios for woody versus herbaceous plantings and for advance mitigation versus concurrent mitigation.

Document	**Restoration**	**Enhancement**	**Creation**
Draft 4(d) Rule	1.5 to 1.0	1.5 - 3.0 to 1.0	3.0 to 1.0
R6 Guidance			
Advance Woody	1.5 to 1.0	3.0 to 1.0	1.5 to 1.0
Advance Herbaceous	1.0 to 1.0	2.0 to 1.0	1.0 to 1.0
Concurrent Woody	2.0 to 1.0	4.0 to 1.0	2.0 to 1.0
Concurrent Herb.	1.5 to 1.0	3.0 to 1.0	1.5 to 1.0

The range of ratios proposed in the draft 4(d) indicates that all enhancement should not be counted equally. Both our experience in reviewing mitigation plans and the thinking behind the R6 Guidance suggest that a ratio for enhancement of 3.0 to 1.0 is more often appropriate than a ratio of 1.5 to 1.0. The Region 6 Wetland Mitigation Guidance emphasizes that enhancement at 1.5 to 1.0 is rarely adequate. In general, we believe that mitigation ratios for enhancement of at least 2.25 to 1.0 or higher should be incorporated into mitigation proposals to assure that conservation of Preble's is adequately addressed.

Funding

The issuance criteria for a ITP require that the applicant ensure adequate funding for the HCP to be carried out and procedures to deal with unforeseen circumstances be provided. The Draft Plan states that existing County staff will accomplish some portion of the actions required to implement the Plan. The HCP must describe how funding, oversight, and monitoring will occur. The Draft Plan states that all costs "can be integrated into, and funded as part of, Elbert County's annual budgets for County administration and [would] not require special appropriations or revenue sources." While this funding would be part of the County's annual budget, there needs to be a guarantee that the funding will, in fact, be appropriated on an annual basis, and that the funding would be adequate for mitigation, monitoring, or adaptive management. Additionally, while the Draft Plan indicates that no additional staff would be required to implement the Plan, page 12 of the draft EA states that the proposed alternative would "require additional staff effort to consider new criteria and apply new PMJM Protection Area regulations during the County's project review process."

CONSISTENCY WITH THE SERVICE'S FIVE-POINT POLICY

On June 1, 2000, the Service announced the availability of a Final Addendum to the Handbook for Habitat Conservation Planning and Incidental Take Permitting Process (addendum). This addendum, which is also known as the Five-Point Policy guidance, expanded the use of five concepts in habitat conservation planning: biological goals and objectives, permit duration, public participation, adaptive management, and monitoring provisions. The addendum more clearly defines several terms used in the development of HCPs, such as changed and unforeseen circumstances and the quantification of take. This policy also clarifies many aspects of the Service's "No Surprises Rule" and the permitting process for HCPs. We offer the following discussion points regarding each of these policies.

Biological Goals and Objectives

The addendum contains significant clarification regarding the required use of biological goals and objectives in HCPs. The policy states that the biological goals should be used to clearly and consistently define the **expected outcome** of an HCP. Explicit biological goals and objectives also help the Service to analyze how the HCP is consistent with the issuance criteria. The Draft Plan does not address how the proposed Biological Goal and Biological Objectives help to define the how the HCP meets the issuance criteria and how it will be implemented.

The Service recommends that Elbert County include more detailed discussion regarding biological goals and objectives in the HCP. In order to assist Elbert County, we provide the following points to help clarify what is required and identify issues that should be addressed or further expanded (quotes are from the addendum):

- Biological goals and objectives should be clear, measurable, and easily identifiable. "Explicit biological goals and objectives clarify the purpose and direction of an HCP's operating conservation program. They create parameters and benchmarks for developing conservation measures, provide the rationale behind the HCP's terms and conditions, promote an effective monitoring program, and, where appropriate, help determine the focus of an adaptive management strategy."

- For complex or regional HCPs, "... biological **goals** are the broad, guiding principles for the operating conservation program of the HCP. They are the rationale behind the minimization and mitigation strategies. For more complex HCPs, biological **objectives** can be used to step down the biological goals into manageable, and, therefore, more understandable units. ... Biological objectives are the different components needed to achieve the biological goal such as preserving sufficient habitat, managing the habitat to meet certain criteria, or ensuring the persistence of a specific minimum number of individuals. The specifics of the operating conservation program are the actions anticipated to obtain the biological objectives; therefore, we can use these objectives to strengthen the initial operating conservation program."

- "Biological objectives should include the following: species or habitat indicator, location, action, quantity/state, and timeframe needed to meet the objective. They can be described as a condition to be met or as a change to be achieved relative to the existing condition."

- "The biological goals and objectives may be either habitat or species based. Habitat-based goals are expressed in terms of amount and/or quality of habitat. Species-based goals are expressed in terms specific to individuals or populations of that species. Complex multispecies or regional HCPs may use a combination of habitat- and species-specific goals and objectives."

- The biological goals and objectives should define how the HCP will be implemented. The HCP "... may be framed as a series of prescriptive measures to be carried out (a

prescription-based HCP) or the ability to use any number of measures that achieve certain results (a results-based HCP). A prescription-based HCP outlines a series of tasks that are designed to meet the biological goals and objectives. This type of HCP may be most appropriate for smaller permits where the permittee would not have an ongoing management responsibility. A results-based HCP has flexibility in its management so that the permittee may institute the actions that are necessary as long as they achieve the intended result (i.e., the biological goals and objectives), especially if they have a long-term commitment to the conservation program of the HCP. HCPs can also be a mix of the two strategies."

Monitoring Provisions

The addendum contains significant clarification regarding the required use of monitoring provisions in HCPs. The policy reiterates that the HCP implementing regulations (50CFR 17.32 and 222.307) require that plans specify the monitoring measures to be used, and to impose necessary monitoring as a condition of each permit. It also "refines existing monitoring policy by organizing the types of monitoring being conducted into categories, including compliance monitoring, effect monitoring, and effectiveness monitoring. ...When properly designed and implemented, monitoring programs for HCPs should provide the information necessary to assess compliance and project impacts, and verify progress toward the biological goals and objectives. Monitoring also provides the scientific data necessary to evaluate the success of the HCP's operating conservation programs." It is unclear how the monitoring provisions in the Draft Plan would accomplish these requirements, especially regarding how the Effectiveness Monitoring will track specific and measurable biological goals and objectives, and how the monitoring provisions will tie in with an effective adaptive management program.

The Service recommends that Elbert County include in the HCP a more detailed discussion of how monitoring will be conducted. In order to assist Elbert County, we provide the following points to help clarify what is required and identify issues that should be addressed or further expanded (quotes are directly from the addendum):

- The HCP's monitoring provisions must provide enough information to "(1) Evaluate compliance; (2) determine if biological goals and objectives are being met; and (3) provide feedback information for an adaptive management strategy, if one is used."

- The monitoring provisions must accomplish four tasks: " (1) Assess the implementation and effectiveness of the HCP terms and conditions (*e.g.*, financial responsibilities and obligations, management responsibilities, and other aspects of the incidental take permit, HCP, and the IA, if applicable); (2) determine the level of incidental take of the covered species; (3) determine the biological conditions resulting from the operating conservation program (*e.g.*, change in the species' status or a change in the habitat conditions); and (4) provide any information needed to implement an adaptive management strategy, if utilized."

- The addendum defines the purpose of Compliance Monitoring as "verifying that the permittee is carrying out the terms of the HCP, permit", and Implementation Agreement (IA), if one is used. There should be no ambiguity as to whether the applicant is in compliance with the terms of the permit. All aspects of compliance should be clear and verifiable.

- The addendum states that Effects and Effectiveness Monitoring should be used to evaluate "the effects of the permitted action and determines whether the effectiveness of the operating conservation program of the HCP are consistent with the assumptions and predictions made when the HCP was developed and approved; in other words, is the HCP achieving the biological goals and objectives." The Draft Plan should clearly describe how the biological goals and objectives will be measured to define success.

- Effects and Effectiveness monitoring must, at minimum, include the following: "1. Periodic accounting of incidental take that occurred in conjunction with the permitted activity; 2. Surveys to determine species status, appropriately measured for the particular operating conservation program *(e.g.,* presence, density, or reproductive rates); 3. Assessments of habitat condition; 4. Progress reports on fulfillment of the operating conservation program *(e.g.,* habitat acres acquired and/or restored); and 5. Evaluations of the operating conservation program and its progress toward its intended biological goals."

- Complex and regional HCPs may also need to be more comprehensive and "include milestones, timelines, and/or trigger points for change." We believe that Elbert's HCP should contain these elements.

The Draft Plan proposes to evaluate success through monitoring of habitat. While the Service concurs that this is a scientifically defensible approach, there are no clear or measurable criteria which can be used to define whether the HCP is accomplishing its biological goals and objectives. The Draft Plan does not contain any elements of population monitoring, nor does it tie habitat quality and quantity to number of mice to demonstrate that viable populations are being maintained. There are several problems with only monitoring habitat. Population declines, particularly due to off-site, indirect effects (which should be covered), may not be discernable through habitat monitoring or may appear only after irretrievable damage has been done. The HCP should explain and justify why monitoring populations, or addressing the relationship between habitat quantity/quality and population density/distribution, is not practicable. If a strict habitat-based approach is to be accepted, the document needs to describe methods used to determine habitat quality and accurately measure changes in both habitat quality and quantity.

We also request clarification regarding the biological or scientific reasoning regarding the Draft Plan's proposal that effectiveness can be evaluated using aerial photos to show a 5% or greater decline in habitat in any PMJM protection area. How will this be accurately measured? The Draft Plan does not propose specific contingency planning if this decline occurs nor does it explain how it would be remedied. Due to the significant data gaps in Elbert County regarding the amount and quality of existing habitat, we believe the HCP needs to relate habitat quality back to Preble's numbers based on trapping unless acceptable habitat models are developed to evaluate habitat quality.

<u>Adaptive Management</u>

The addendum contains significant clarification regarding the required use of an adaptive management program in an HCP. The addendum defines adaptive management as "a method for examining alternative strategies for meeting measurable biological goals and objectives, and then, if necessary, adjusting future conservation management actions according to what is learned." The policy unequivocally states, "If we lack critical information regarding the biological needs of a species proposed to be covered under an HCP, we will not issue the permit until such information is obtained or an acceptable adaptive management strategy is incorporated into the HCP to address the uncertainty." Adaptive management is necessary for those plans "that would otherwise pose a significant risk to the species at the time the permit is issued due to significant data or information gaps."... "We believe that an HCP that fails to address significant data gaps will not meet the issuance criteria of the ESA." The Service believes that in Elbert County, significant uncertainty, as well as important data gaps, exist for both the identification of suitable, potentially occupied habitat and the survival requirements of the species.

The Service recommends that Elbert County include more detailed discussion regarding adaptive management in the HCP. In order to assist Elbert County, we provide the following points to help clarify what is required and identify issues that should be addressed or further expanded (quotes are directly from the addendum):

- "Possible significant data gaps that may require an adaptive management strategy include, but are not limited to, a significant lack of specific information about the ecology of the

species or its habitat (*e.g*., food preferences, relative importance of predators, territory size), uncertainty in the effectiveness of habitat or species management techniques, or lack of knowledge on the degree of potential effects of the activity on the species covered in the incidental take permit. Often, a direct relationship exists between the level of biological uncertainty for a covered species and the degree of risk that an incidental take permit could pose for that species. Therefore, the operating conservation program may need to be relatively cautious initially and adjusted later based on new information, even though a cautious approach may limit the number of alternative strategies that may be tested."

- In order for an adaptive management strategy to be useful, it should contain "key components" including careful planning through identification of uncertainty, incorporating a range of alternatives, implementing a sufficient monitoring program to determine success of the alternatives, and a feedback loop from the results of the monitoring program that allows for change in the management strategies."

- The addendum states that when dealing with a regional or long-term HCP or a high degree of uncertainty exists, the adaptive management program should contain explicit and well defined elements such as " milestones that are reviewed at scheduled intervals during the lifetime of the incidental take permit and permitted action. If a relatively high degree of risk exists, milestones and adjustments may need to occur early and often."

- It is necessary to tie the adaptive management program to the monitoring provisions and must be able to "adequately detect the results of the adaptive management strategy. Integration of the HCP's monitoring program into the adaptive management strategy is essential. The monitoring program plays an essential role of determining whether the chosen strategy(ies) is providing the desired outcome (*i.e*., achieving the biological goals of the HCP)."

- An "adaptive management strategy must define the feedback process that will be used to ensure that the new information gained from the monitoring program results in effective change in management of the resource."

- The adaptive management program must also tie back to the Section 10 Issuance Criteria and HCP implementation. "The HCP, incidental take permit, and IA, if any, must describe the agreed upon range of management and/or mitigation actions and the process by which the management and funding decisions are made and implemented."

Not all the scientific information needed to develop comprehensive long-term conservation strategies for Preble's is currently available. Where these data gaps occur, not all the questions regarding the long-term effects of implementing this HCP can be answered. This significant uncertainty is best addressed by incorporating adaptive management measures into the HCP. Such an approach would allow management strategies to be adjusted based on an analysis of the effectiveness of the minimization and mitigation measures. The adjustment may be more or less restrictive. The primary reason for using adaptive management in HCPs is to allow for changes in mitigation strategies that may be necessary to reach the long-term goals of the HCP and to ensure the likelihood of survival and recovery of the species in the wild. Under adaptive management, the minimization and mitigation activities of the HCP are monitored and analyzed to determine if they are producing the required results. If the desired results are not being achieved, then adjustments in the mitigation strategy can be considered through an adaptive management clause of the HCP. The Service supports this type of approach in this HCP. The Draft Plan contains no alternatives, nor does it call for feedback loops to address the significant uncertainty that exists. We recommend that Elbert County work with the Service to develop these items.

Unforeseen, Changed Circumstances, and "No Surprises"

- The Five-Point Policy is explicit that an HCP must address Unforeseen Circumstances. "The section 10 regulations require that permit applicants develop procedures to address unforeseen circumstances (50 CFR 17.22(b)(1)(iii)(B), 17.32(b)(1)(iii)(B) for FWS and 50 CFR 222.307(g) for NMFS) and make the existence of these procedures a precondition to permit issuance."

The No Surprises clause on page 21 of the Draft Plan does not accurately reflect a correct interpretation of the Services "No Surprises" Policy.

- The Five-Point Policy defines Unforeseen Circumstances and Changed Circumstances and how it relates to the Service's "No Surprises" Policy.

  "The No Surprises assurances apply only to incidental take permits issued in accordance with the requirements of the Services' regulations where the HCP is properly implemented. The assurances extend only to those species adequately covered by the HCP. The term ''No Surprises'' refers to regulatory assurances, *not* biological assurances, and applies only to the extent of mitigation required by the incidental take permit in response to unforeseen circumstances or changed circumstances not provided for in the HCP."

Expenses incurred through adapting the management cannot be covered in a "No Surprises" manner (ie. the County only adapting management if it is at no cost to them and the Service being held responsible for all additional costs). If this is the proposed strategy, then more restrictive minimization and mitigation measures with greater certainty of achieving the goals of the HCP should be identified, agreed to and implemented. "No Surprises" protection should apply only to extraordinary circumstances as discussed in the Habitat Conservation Handbook.

The Draft Plan (page 20), indicates that a recovery plan for the Preble's would be covered under unforeseen circumstances. We do not concur that a Recovery Plan is unforeseen. The Recovery Team has been meeting monthly for over a year and the Service expects to have a draft Recovery Plan out for public review later this year. It is anticipated that the Preble's Recovery Plan will take an approach to recovery that involves identification of designated recovery sites distributed among hydrological units throughout the known range of the species. The designated recovery sites will likely need to meet specific criteria regarding the amount of habitat and number of mice, as well as protection from direct and indirect threats. This Recovery Plan will also likely call for maintenance and monitoring of designated Preble's populations across its range and require surveying to determine size and distribution of populations in areas with significant data gaps, such as Elbert County. The HCP cannot reduce the likelihood of recovery of Preble's. It should consider Recovery Planning Goals foreseeable and that they will apply to Elbert County. The Draft Plan's proposed definition of habitat and proposed mitigation ratios, combined with the questionable mapping, do not appear to be consistent with the recovery of Preble's.

Changed Circumstances and Contingency Planning

The Draft Plan states that "Elbert County shall not be obligated to take any specific action in response to changed circumstances." This statement is inconsistent with the principles of the HCP program and the laws and regulations that govern it. The Five-Point Policy is clear that changed circumstances are not considered unforeseen under the "No Surprises" Policy. Changes in circumstances that can be reasonably anticipated during the implementation of an HCP must be planned for in the HCP and the HCP must incorporate measures to be implemented if the events occur. "The No Surprises rulemaking expanded on the HCP program by requiring contingency planning for changed circumstances that are foreseeable." Foreseeable events which may occur in Elbert County that can be reasonably planned for in the HCP include drought, flooding, fire, and transportation corridor accidents. These events must be planned for and contingency planning put in place to deal with these events. Without this contingency planning, the "No Surprises" Policy

does not apply if such events occur. Additionally, page 12 of the Draft Plan indicates that no catastrophic event will take more that one of the five potential populations of Preble's at any one time. What evidence is this statement based on. Flooding by a major rain event could effect all streams in Elbert County. There must be a discussion of what actions are proposed in order to remedy such foreseeable situations.

Page 20 of the Draft Plan states that the "primary sources of uncertainty about the PMJM in Elbert County are (1) whether all of the identified PMJM Protection Areas actually contain populations of PMJM, and (2) whether the avoidance, minimization, and mitigation strategies outlined in [the Draft Plan] will be successful" in reaching the biological goals and objectives. The Draft Plan indicates that if it does fail to be effective, that this would represent unforeseen circumstances. The Service believes that this is foreseeable, should be included in the changed circumstances section, and would need to have an adequate contingency plan.

It appears that based upon the discussion on pages 23-24 of the Draft Plan, that the County plans to begin drafting the proposed new regulations and policies needed to implement the HCP within 90 days of ITP issuance. The Service cannot issue an ITP based upon implementing regulations that may or may not be adopted in the future. The Service can either issue an ITP that would not become valid until such time as the regulations are in place, or wait until the regulations are final before issuing the ITP.

Quantification of Take

- The Five-Point Policy states that an HCP must quantify the proposed incidental take and the consequences of that take. This analysis ties back to the section 10 Issuance Criteria. "Section 10(a)(2)(A) requires that an HCP specify the impact which will likely result from the take to be permitted. ... While evaluating an HCP, we use the amount of incidental take as a main indicator of the impact the proposed project will likely have on the species. Identifying the amount of incidental take contributes to the analysis of whether the proposed incidental take permit will appreciably reduce the likelihood of survival and recovery of the species."

- The Five-Point Policy identifies two main ways of quantifying the amount or extent of proposed take within an HCP: (1) "... precisely quantifying the number of **individuals** that are anticipated to be taken..." or (2) "...estimating the amount or extent of take in terms of the amount of **habitat** altered. What is most important is that we are able to assess the impact of the anticipated take on the species." Regardless of how the incidental take is quantified, it must be indicated in the biological opinion the Service will complete for the issuance of the permit and in the permit itself."

- The HCP addresses changes in land use, but does not address current land uses that may be resulting in take, such as haying in Preble's habitat or certain types of agriculture in occupied habitat. The HCP should identify how this take will be addressed, or if it is not proposed to be covered by the permit.

- The HCP should also address activities occurring outside of Preble's habitat which have indirect effects upon Preble's and its habitat. Such activities might include water diversions affecting downstream habitat, development causing increased runoff into riparian zones, increases in non-native and native competitors and predators associated with human development, etc.

COMPLIANCE WITH NEPA AND ADEQUACY OF THE DOCUMENT

An adequate NEPA document must address several things, including: physical considerations such as meteorology, topography, soils, hydrology, geology, and air and water quality; biological considerations such as vegetation and wildlife; and social considerations such as economic, land use, aesthetics, cultural resources, and transportation.

The Service has concerns as to whether an Environmental Assessment (EA) will adequately address the requirements of NEPA. An EA can result in one of two scenarios: either a Finding of No Significant Impact (FONSI) can be made or a determination that an Environmental Impact Statement (EIS) must be prepared. When making a decision on whether to prepare an EIS, the following criteria must be considered: controversial environmental effects; significant cumulative effects; public involvement; precedent-setting actions with wide-reaching or long-term implications; major alterations in natural environmental quality; conflicts with proposed or adopted local, state, interstate or federal land use plans or policies; adverse effects on designated or proposed natural areas; and degradation of important aesthetic resources. Another aspect that must be considered is whether the "proposed action is, or is closely similar to, one which normally requires the preparation" of an EIS. In this case, past efforts similar to Elbert County's regional HCP have resulted in the preparation of EISs to adequately analyze the proposed actions and the various alternatives.

The Purpose and Need statements contained within the Draft Plan do not reflect what is required by NEPA and should be revised. These statements should "specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action" (NEPA Regulations, 1502.13). The Purpose statement should clearly explain what is to be accomplished by taking an action. In the case of a regional planning effort, an example might be that "The HCP and EA or EIS are being prepared to support an application for and proposed approval of an ITP under section 10 (a)(1)(B) of the ESA." A Need statement describes the situation compelling an agency to take an action, usually in terms of a problem or opportunity. Again, an example in the case of a regional planning effort might be that under the status quo, individual landowners and public land managers must apply for individual ITPs from the Service, when proposing adverse impacts to the mouse or its habitats. This may be time consuming, costly, and not adequately address the species needs on a large scale basis. Therefore, because of continued economic growth and development, a comprehensive HCP under ESA will most effectively enhance the recovery efforts for the Preble's and preserve its critical habitat. A regional planning effort is a long term approach which helps to avoid less effective and more costly process of project-specific ITPs.

The Service does not believe that the cumulative impacts analysis is addressed adequately. A cumulative impact is the "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" (NEPA Regulations 1508.7). This definition includes both direct and indirect effects, including "growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems" (NEPA Regulations 1508.8).

The Service believes that the document should contain a clearer analysis of the direct impacts within Elbert County, including standard units of impact for different proposed activities that can be compared and quantified. The Service also recommends that the draft NEPA document contain a more thorough discussion of cumulative impacts, including the effects of foreseeable development within the incorporated towns of Elbert County, as well as development in adjacent counties.

When issuing an ITP under section 10, the Service is conducting a Federal action which has been deemed to qualify as an "undertaking" as defined by section 106 of the National Historic Preservation Act (NHPA). Therefore, the NEPA document must specifically address compliance with NHPA.

OTHER MAJOR ISSUES

- The Draft Plan defines the boundaries of the areas in Elbert County that will be protected as Preble's habitat in terms of impacts within "lands located (1) within the 100-year floodplain...(2) within 200 feet from the outer edge of the 100-year floodplain, or 300 feet

from the center of the stream, or (3) within a mapped area submitted in writing to [the Service] and approved by [the Service] as containing all significant and contiguous PMJM habitat within a defined property, whichever is less..." What scientific evidence is there to support this definition and what was the biological basis or reasoning behind it?

Research has shown that Preble's use riparian habitats, the intervening slopes between riparian and upland habitats, and upland habitats. The Preble's Recovery Team believes that the best approximation of these habitats is the 100-year floodplain plus 100 meters. The 100-year floodplain is the best approximation of the riparian zone, incorporating vegetation, geomorphology, and hydrology. To ensure sufficient upland habitats are incorporated, an additional 100 meters beyond the boundaries of the 100-year floodplain are incorporated. This additional distance includes upland habitats and adjoining slopes that are believed to be critical to Preble's persistence. The distance of 100 meters was selected because Preble's have been known to move great distances from activity centers. Telemetry studies have shown Preble's frequent upland areas, often more than 100 meters from the floodplain, although in most instances the use is within 100 meters of the 100-year floodplain. If the HCP uses a different standard to define Preble's habitat, the area must include the alluvial floodplain, transition slopes, and pertinent uplands and the document should show scientific/biological evidence the area provides all the necessary resources for a viable population of Preble's to nest, breed, have cover, travel, feed, and hibernate.

- The Service is concerned with the document's apparent confusion over the definition of take. Section 9 of the Act and Federal regulation pursuant to 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of the ITP. The Draft Plan should clarify those activities for which take is proposed to be covered and those activities which would not constitute take. The purpose of the take statement (ITP) in an HCP is to authorize and cover take, not to exempt it. Take exemption can only be accomplished through a special 4(d) Rule.

- The Draft Plan is inaccurate in its use of "significance on a population level" as a measure of take. As defined above, take is not dependent upon such a threshold. Take is measure on the scale of harm, harassment, injury, or death of *individuals*. The Service concurs that population scale conservation and landscape level analysis is important, but this does not negate the need to cover all incidental take as defined by the ESA. For example, page 14 of the Draft Plan states that there is no evidence in the science team report that development on parcels of 60 acres or larger results in habitat modification that would cause "take" of Preble's. The Plan ties this conclusion to its argument that this is insignificant at the population level. The relevant factor, however, is whether the proposed development on *any* size parcel would reach the threshold of potentially adversely affecting even a single individual.

- The Service is concerned that unclear wording and intention within the document would result in the HCP being difficult to assess and enforce. We believe that the Draft Plan should contain clear definitions for all words and phrases, especially definitions of such words as "practicable", "reasonably", and "significant".

- The Service believes there is a need for significant modification of the mapping in the Draft Plan. We do not concur that this mapping adequately identifies all stream reaches that contain suitable and potentially occupied habitat. The Draft Plan indicates that this mapping constitutes the best available science as proposed by the Preble's meadow jumping mouse Science Team. In an attempt to clarify whether this mapping does, in fact, represent the best available data, the Service inquired of Chris Pague, former lead of the Science Team, how the past habitat mapping in Elbert County was conducted. Mr. Pague's response is attached as **Appendix 1**.

- Please specify if observation and trapping information will be used to assist in mapping habitats/species use. There needs to be some attempt to determine which habitat is actually occupied. Trapping information should be part of the supporting information.

- An analysis of the trapping effort that has been done to date should be clearly laid out in the HCP. The document should specify how many attempts at trapping have been made, how many were positive or negative, and the level of effort for each survey (ie. number of trap nights).

- If the agreed to level of habitat loss (and associated take) is exceeded, the increased take is not permitted and all activities resulting in that take should immediately stop. An increase in the amount of permitted take will require amendment of the HCP through negotiation and agreement with the Service, possibly requiring additional minimization and mitigation measures that will be the responsibility of the applicant. Any changes to the permit will require the Service to readdress NEPA and section 7 of the Act, as well as re-evaluate unforeseen and changed circumstances and the level of acceptable take.

- Temporary disturbance/habitat loss is not adequately addressed. Temporary unavailability of habitat while replacement habitat is being developed (growing shrubs, etc.) may result in take, which must be permitted, minimized, and mitigated. While such take may not rise to the level of jeopardy, all incidental take must be permitted through the Incidental Take Permit. Additionally, these effects should be considered in an evaluation of the cumulative effects of these permitted actions.

ADDITIONAL POINTS OF CLARIFICATION

- What is the basis of the estimate of 7400 acres of potential or actual current Preble's habitat within unincorporated Elbert County on page 4 of the Draft Plan?

- The Draft Plan is inconsistent regarding proposed new regulations or policies for Elbert County. Page 1 of the document indicates that "the County intends to adopt and apply four new policies", while page 13 states "Elbert County proposes to adopt five new policies." Also, while the document states that the County "intends" and "proposes" to adopt new policies that will implement the proposed HCP, it does not contain specific or clear contingency planning for the possibility that some or all of these policies may fail to be put in place.

- Please clarify the inconsistency of whether an Implementation Agreement will be used. Page 3 of the Draft Plan indicates there will be an Implementation Agreement while page 22 states that an Implementing Agreement will not be required.

- The Draft Plan does not appear to address activities on lots from 0-3 acres in size and over 35 acres in size. Does this mean there will be no take on these lands or that no take is covered by the HCP? Will there be the need for building or grading permits on these or any other lands in the County?

- The document addresses over-grazing on parcels less than 35 acres, but does not mention grazing on larger parcels. Does this indicate that take will not occur on parcels over 35 acres in size or that take is not covered?

- How do the incorporated towns of Elizabeth and Kiowa fit in to the scope of the Draft Plan? Will their exclusion fragment the proposed Plan or preclude options for management in the Plan? Will their exclusion affect the viability of the Draft Plan? More discussion regarding the impacts of exclusion should be included.

- The Identification of the Defined Time Period on page 5 of the Draft Plan is unclear as to renewal, amendment, or modification of the HCP. Renewal of the HCP, amendments, or modifications also require Service concurrence and approval.

- Page 5 of the Draft Plan states that "Elbert County seeks authority to extend the benefits of any Section 10 Permit to other parties." Under what circumstances will the County extend benefits and how will that be formally accomplished?

- The "Determination of Proposed Activities" on page 7 of the Draft Plan must also include Federal laws and regulations.

- The Draft Plan mentions "Existing and Traditional" as it applies to agricultural activities several times. This term must be clearly defined and the Draft Plan should also address the effects of changing from one "traditional" activity to another on a given piece of land.

- What is the biological justification regarding calculation of take before and after mitigation in Table 1?

- Table 1 of the Draft Plan is unclear. The Issuance Criteria for a Section 10 permit require that habitat loss be minimized and mitigated to the maximum extent practicable. All habitat loss, even temporary loss, must be mitigated. The table also does not address cumulative effects of the proposed actions. We recommend that the table be modified to be more clear regarding the reasoning for percentages given and define the cumulative impacts of all activities taken over time.

- Page 11 of the Draft Plan indicates that there is "no reason to expect any indirect or secondary impacts different from those occurring now" and that it is "unlikely that the PMJM within any stream will be adversely affected" by indirect or secondary impacts. Please explain the scientific reasoning behind these statements as well as the justification for the reasoning that those impacts currently occurring are not detrimental to existing Preble's or its habitat.

- Please provide the biological reasoning or scientific evidence regarding the statement that the cumulative impact of modification of 4% of the available habitat for Preble's per mile is not significant.

- Regarding Elbert County's current Regulations and Policies:
  a. How does Elbert County decide which 20% should be open space?
  b. How are "environmentally sensitive areas" defined?
  c. How are "significant wildlife habitat areas" defined?
  d. How are "critical habitat" areas defined?
  e. How are "significant stands" defined?

- Page 14 of the Draft Plan states that the Science Team report indicates that overgrazing on small lots is the only adverse impact of agricultural activities on Preble's or its habitat. The Service does not agree that this is a correct interpretation of the Science Team report nor that this is the only potentially adverse effect of agricultural activities. While we do concur that reduction of overgrazing is of significant benefit to Preble's

habitat, we request clarification regarding the scientific basis/reasoning for the limit of 1 animal per 5 acres and why this limit (or any other) would be placed on parcels of only 35 acres or less and not applicable on all agricultural lands.

- Page 16 of the Draft Plan discusses Emergency Maintenance, Repair, and Replacement. The Service agrees with the need to protect human health and safety. However, we request clarification regarding what measures, which may take Preble's or its habitat, would be covered to protect property or "reduce financial loss." Many emergency situations are foreseeable and should be addressed under changed circumstances, including contingency planning for such events and adequate mitigation.

- Compliance Monitoring Provisions 10-13 of the Draft Plan should be incorporated into the Effectiveness Monitoring Provisions.

- Exhibit C, paragraph 1 states that because activities 1-6 "will affect only a very small percentage of the potential contiguous PMJM population [on] any stream reach, it is likely that any PMJM using the directly affected habitat will be able to continue their activities in nearby habitat areas." Please clarify the scientific evidence used to make this conclusion. Principles of conservation biology indicate that when habitat is occupied, especially if it is at carrying capacity, direct effects to that habitat not only affect the displaced animals but also, affects the animals occupying that neighboring habitat through competition and crowding stress.

- For Activities 7-11, Exhibit C assumes that only 50% of suitable habitat within Elbert County is actually occupied and uses this for the calculation of take. The document states the reasoning for this is that "most of the potential habitat has not been trapped." The Service strongly disagrees with this reasoning. Without scientific evidence to the contrary, it must be assumed that all suitable habitat is occupied.

- How was the estimate of 750,000-1 million dollars on page 9 of the draft EA determined?

- The cumulative impacts section of the draft EA mentions the potential effects of excluding the City of Kiowa from the HCP, but does not discuss the impact of such fragmentation on Preble's populations. A similar discussion should also be included for impacts of fragmentation resulting from the exclusion of the Town of Elizabeth from the HCP.

- Page 13 of draft EA refers to "structures" under Activity 2. Please clarify the types of structures included.

- Please define "traditional," "existing," and "related activities" referred to under activity 3 on page 14 of draft EA.

- Pleas define the "cyclical nature of agricultural activities" referred tp on pages 15-16 of draft EA.

- Pages 16 and 20 of the draft EA refer to "observations and trapping." Please cite.

- Page 19, under Activity 6, states that there is "no evidence that routine operation of existing improvements" and "no evidence that maintenance, repair, and replacement of improvements" have lead to take of Preble's in Elbert County. Later in that paragraph, the document acknowledges that these activities "might inadvertently modify PMJM habitat or kill a PMJM." Based upon the best available science there is no conclusive evidence to believe that there are no adverse effects to mice. Please state the evidence used to support the conclusion that these activities would not constitute take.

Memorandum of Understanding on Section 7 Coordination

The Service concurs that the concept of streamlining permits completed under section 7 of the ESA within an area covered by an authorized and permitted HCP is a good idea. However, we are not certain that the Memorandum of Understanding provided with the Draft Plan would be adequate to accomplish this. The mechanism for accomplishing such streamlining is undefined and would require significant coordination with the Department of Interior Solicitor's Office. It is likely that this streamlining could take the form of a programmatic agreement or programmatic section 7 consultation with one or more of the relevant action agencies that have permitting authority for specific actions covered in the Draft Plan.

We hope these comments and questions will assist you in the preparation of the next draft of the proposed Plan and will gladly meet with you to discuss these comments. Thank you for the opportunity to review and comment on the referenced document. If you have any questions, please contact Kathleen Linder of this office at (303) 275-2370.

Sincerely,

/s/

LeRoy W. Carlson
Colorado Field Supervisor

cc: B. McCue
J. Mizzi
T. Graf, SOL/DOI
N. Neelan, Jefferson County
B. Fox, Douglas County
P. Fogg, Boulder County
M. Bonar, El Paso County
PMJM Steering Committee
Linder
Ref:KAL\Elbert\Elberthcpcomments.wpd

APPENDIX 1

The following inquiry regarding habitat mapping in Elbert County and response was accomplished via email:

Chris Pague" <cpague@TNC.ORG>
04/25/2001 06:54 AM
To: <Kathleen_Linder@fws.gov>
Subject: RE: Elbert County Habitat Maps

Kathleen: Thank you for the inquiry. I am happy to reply. My answers to your questions will be in caps below.
Chris

-----Original Message-----
From: Kathleen_Linder@fws.gov
Sent: Mon 4/23/2001 4:12 PM
To: Chris Pague
Subject: Elbert County Habitat Maps

Chris, I need to ask you for clarification regarding past habitat mapping in Elbert County. I am reviewing the draft Regional Habitat Conservation Plan for the Preble's meadow jumping mouse in unincorporated Elbert County (Plan), dated December 2000. This Plan proposes to use the map of "Mouse Protection Areas/Potential Mouse Protection Areas" produced by Colorado Natural Heritage Program (CNHP) on December 16, 1998, to define areas that will be considered potential Preble's habitat. We would greatly appreciate your responses to the following questions:

1. What data was used to create the December 16, 1998 map produced by CNHP? Would this data represent the best available scientific data available as of December 2000?

THE MAPS THAT WERE USED WERE, TO THE BEST OF MY MEMORY, CREATED BY COLORADO DEPARTMENT OF NATURAL RESOURCES. CNHP SIMPLY PRODUCED THEM FOR DNR. THE PMJM SCIENCE TEAM WAS ASKED TO PROVIDE ANY PERTINENT INFORMATION. AT THAT TIME ONLY A SINGLE OCCURRENCE OF PMJM WAS KNOWN FROM ELBERT COUNTY -- IN HAY GULCH.

THE PMJM SCIENCE TEAM HAD VERY LITTLE ADDITIONAL DATA, IN FACT VERY LITTLE EXPERIENCE IN THE COUNTY. TO PROVIDE BROAD GUIDANCE, A "DRIVE-THROUGH" OF THE COUNTY SOUTH OF I-70 WAS CONDUCTED, VIEWING RIPARIAN HABITAT AND CONDITION FROM COUNTY ROAD BRIDGE-CROSSINGS (APPROX. 45 LOCATIONS). FROM THOSE OBSERVATIONS I MADE QUALITATIVE ASSESSMENTS OF THE POTENTIAL FOR PMJM HABITAT. THAT INFORMATION WAS PROVIDED TO DNR FOR INCLUSION IN THEIR PROPOSAL TO USFWS FOR THE 4D RULE. THOSE QUALITATIVE ASSESSMENTS WERE PRESENTED TO THE PMJM SCIENCE TEAM IN DISCUSSIONS ABOUT POTENTIAL HABITAT, CONSERVATION ZONES, AND PMJM DISTRIBUTION. THE REPORT THAT RESULTED FROM THOSE SCIENCE TEAM INTERACTIONS SUMMARIZES THE RESULTS OF THOSE DISCUSSIONS(SEE BELOW).

SINCE THE TIME OF THE REF'D REPORT, PMJM HAS BEEN CAPTURED IN ADDITIONAL STREAM REACH(ES) FROM THOSE IN THE PROPOSED 4D MAP.

THE PMJM SCIENCE TEAM REPORT FOR ELBERT COUNTY IDENTIFIED SEVERAL STREAM SYSTEMS WITH NOTABLE POTENTIAL FOR PMJM HABITAT, INCLUDING, BUT NOT LIMITED TO KIOWA, COMANCHES, RUNNING, WEST BIJOU, EAST BIJOU. THESE WERE PRESENTED WITH THE INTENT OF BEING OCCUPIED HYDROLOGICAL UNITS AS INDICATED IN THE FOLLOWING QUOTE FROM THE REPORT (PAGUE AND GRUNAU 2000, PREBLE'S MEADOW JUMPING MOUSE: SITE CONSERVATION PLANNING RECOMMENDATIONS FOR ELBERT COUNTY, COLORADO):
"Consequently, the following streams and their tributaries are considered to have high potential for new or expanded occurrences of PMJM: Running Creek, Kiowa Creek, Comanche Creek, West Bijou Creek, and East Bijou Creek. PMJM often occurs in small patches of available vegetation; therefore, other drainages may be occupied as well."

MY CONCLUSION AND THAT FROM DISCUSSIONS WITH THE PMJM SCIENCE TEAM IS THAT THERE IS NO ACCURATE MAP OF THE POTENTIAL HABITAT FOR PMJM IN ELBERT COUNTY, AND THAT THE 4D PROPOSAL MAP WAS NOT INTENDED TO REPRESENT ALL POTENTIAL HABITAT. THE STATEMENT FROM THE REPORT (ABOVE) STILL APPLIES.

2. What were the original assumptions used to generate this map?

I AM NOT SURE ABOUT ORIGINAL ASSUMPTIONS SINCE THE MAP WAS GENERATED USING MULTIPLE SOURCES OF INFORMATION AND PRODUCED IN DNR. EARLY DISCUSSIONS WITH ME ABOUT THE PROCESS USED TO GENERATE THE MAP INDICATED THAT THE 4D RULE WAS AN INTERIM STRATEGY TO FACILITATE ONGOING ACTIONS AND PLANS FROM COUNTIES AND THEIR RESIDENTS WHILE PROVIDING SOME PROTECTION FOR PMJM IN KEY AREAS.

3. Given your extensive experience with the Preble's Science Team and the Preble's Recovery Team, do you feel that this map adequately represents all potentially suitable and/or occupied habitat currently available in Elbert County?

I REFER TO THE QUOTE FROM THE ELBERT COUNTY REPORT (ABOVE) THAT SUGGESTS THAT POTENTIAL HABITAT EXISTS IN MANY STREAM REACHES IN ELBERT COUNTY. THIS CONCLUSION WAS BASED ON INFORMATION FROM SCIENCE TEAM MEMBERS IN CONDUCTING DRIVE-THROUGHS (IN MY CASE) AND CONDUCTING RESEARCH OR SURVEYS FOR OTHERS. ALL INFORMATION WAS ANECDOTAL OR SUBJECTIVE. NONE OF THE INFORMATION HAS BEEN PUBLISHED EXCEPT AS SUMMARIZED IN THE COUNY REPORT AS NOTED ABOVE. NO COMPREHENSIVE VEGETATION MAPPING (FOR RIPARIAN SYSTEMS) EXISTED AT THE TIME OF THE REPORT, BUT MAY BE AVAILABLE THROUGH MORE RECENT WORK FROM THE COLORADO DIVISION OF WILDLIFE (I AM UNSURE OF THE STATUS OF SUCH MAPPING). SUCH VEGETATION MAPPING (INTENDED TO IDENTIFY POTENTIAL HABITAT FOR PMJM) IN EL PASO COUNTY REVEALED EXTENSIVE AREAS OF POTENTIAL HABITAT IN MANY HEADWATER TRIBUTARIES AND SIDE DRAINAGES OF MONUMENT CREEK. [HOWEVER, IT IS IMPORTANT TO NOTE THAT POTENTIAL HABITAT DOES NOT EQUAL OCCUPIED HABITAT AND THAT MUCH OF THE PREDICTED HABITAT IN EL PASO COUNTY REMAINS UNSURVEYED.] SINCE THE PHYSIOGRAPHY OF ELBERT COUNTY AND EL PASO COUNTIES IS SIMILAR IN THE HEADWATERS OF PALMER DIVIDE STREAMS, IT SEEMS REASONABLE TO PREDICT THAT VEGETATION MAPPING WOULD REVEAL ADDITIONAL POTENTIAL HABITAT FOR PMJM TO THAT INDICATED IN THE 4D PROPOSAL MAP.

Thank you for your help in this matter, Kathleen Linder