

APPENDIX K.

FINALIZED CONSERVATION MEASURES AND BEST MANAGEMENT PRACTICES (BMPs) FOR T&E SPECIES OF UTAH FROM THE LAND USE PLAN PROGRAMMATIC BAS AND SECTION 7 CONSULTATIONS - JANUARY 2006

K.1 BALD EAGLE (*HALIAEETUS LEUCOCEPHALUS*) CONSERVATION MEASURES

K.1.1 CONSERVATION STRATEGIES

The conservation strategy for the bald eagle is a multi-tiered strategy. The first tier includes the existing protections of the LUP, which are listed in Chapter 3. The second tier includes BLM-Committed Conservation Measures identified below, which have been developed in coordination with the USFWS, and are considered part of the proposed action in this BA. These measures will be incorporated into existing LUPs through routine maintenance action, which includes appending these measures to the existing plan and implementing them. The third tier includes Best Management Practices (BMPs) which are listed below and consist of optional measures and practices which will serve to further protect and conserve the species when implemented.

K.1.2 BLM-COMMITTED CONSERVATIONS MEASURES

1. BLM-Committed Conservation Measures are species-specific measures that will avoid or minimize the potential for adverse impacts that may result from the implementation of BLM-authorized activities on the bald eagle. These conservation measures will be implemented for all BLM authorized activities that may affect the bald eagle by disturbing nesting, breeding, or known concentration areas thereby, reducing habitat value for the species. This list is not comprehensive, and alterations may be made through appropriate levels of further Section 7 Consultation/Coordination with USFWS.
 - BLM will place restrictions all authorized (i.e., permitted) activities that may adversely impact bald eagles, their breeding habitats, and known winter concentration areas to minimize or avoid impacts. Restrictions have been taken from guidance published in the *Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances* (USFWS 2002), and they include, but may not be limited to seasonal/daily timing limitations, and/or spatial buffers as follows:
 - Activities or habitat alterations that may disturb nesting bald eagles will be restricted from *January 1st*, to *August 31st* within 1.0 mile of Bald eagle nest sites. Exceptions may be granted where no nesting behavior is initiated prior to June 1st.
 - Activities or habitat alterations that may disturb bald eagles will be restricted within 0.5 mile of known winter concentration areas from *November 1st*, to *March 31st*. Additionally, where daily activities must occur within these spatial buffers, and are approved through subsequent consultation, activities should be properly scheduled to occur after 9 a.m. and terminate at least one hour before official sunset to ensure that bald

eagles using these roosts are allowed the opportunity to vacate their roost in the morning and return undisturbed in the evening.

2. Where activities are authorized within breeding habitats or known winter concentration areas, monitoring efforts would document what, if any, impacts occur during project implementation, and to what extent the species was affected. The results of these monitoring efforts would be carried forward in the design and implementation of future projects as part of the adaptive management process.
3. For all project-related survey and monitoring actions:
 - Reports must be provided to affected field offices within 15 days of completion of survey or monitoring efforts. Reports must follow field office guidance for BLM-specified formats for written and automated databases.
 - Any detection of bald eagle presence during survey or monitoring efforts must be reported to the authorized officer within 48 hours of detection.
4. No future ground disturbing activities will be authorized or permitted within 0.5 mile of active bald eagle nest sites year-round. Deviations may be made only after appropriate levels of Consultation and coordination with the USFWS.
5. Appropriately timed surveys in suitable bald eagle nesting habitat, or identified concentration areas, shall be conducted in accordance with USFWS protocols prior to any activities that may disturb bald eagles. Surveys would only be conducted by BLM-approved individuals or personnel.
6. BLM shall in coordination with cooperating agencies and/or partners (e.g., UDWR, USFWS, etc.), verify annual status (active vs. inactive) of all known bald eagle nests, and other identified concentration areas on BLM administered lands.

K.2 BEST MANAGEMENT PRACTICES (BMPs)

Best Management Practices are species-specific management practices which are to be considered at an implementation level, on a case-by-case basis, and implemented where possible, to further protect, conserve, and assist in recovery of the bald eagle. Each BMP should be appropriately considered, and each may be modified to accommodate implementation for any project that may potentially support bald eagles. These practices are non-binding, and will be implemented or imposed at the discretion of the BLM where feasible to promote the conservation and recovery of the bald eagle.

1. When project proposals that may affect threatened and endangered species are received, BLM should coordinate with the USFWS at the earliest possible date so that the USFWS can provide necessary information to minimize, or avoid, the need to redesign projects at a later date to include conservation measures that may be determined as appropriate by the USFWS.
2. BLM administered lands within 1.0 mile of bald eagle nests, or identified communal winter roosts, should not be exchanged or sold. If it is imperative that these lands be transferred out of BLM ownership, then every effort should be made to include conservation easements or voluntary conservation restrictions to protect the bald eagles and support their conservation.
3. Proponents of BLM authorized actions should be advised that roadside carrion can attract foraging bald eagles and potentially increase the risk of vehicle collisions with individuals

feeding on carrion. When carrion occurs on the road, appropriate officials should be notified for necessary removal.

4. Power lines should be built to standards and guidelines identified by the Avian Protection Plan (APP) Guidelines (APLIC and USFWS 2005).
5. BLM should make educational information available to project proponents and the general public pertaining to the following topics: appropriate vehicle speeds and the associated benefit of reduced vehicle collisions with wildlife; use of lead shot (particularly over water bodies); use of lead fishing weights; and general ecological awareness of habitat disturbance.
6. Since bald eagles are often dependent on aquatic species as prey items, BLM should periodically review existing water quality records (e.g., UDEQ, UDWR, USGS) from monitoring stations on, or near, important bald eagle habitats (i.e., nests, roost, concentration areas) on BLM lands for any conditions that could adversely affect bald eagles or their prey. If water quality problems are identified, the BLM should contact the appropriate jurisdictional entity to cooperatively monitor the condition and/or take corrective action.
7. BLM initiated or approved projects with the potential to disturb bald eagles should be implemented in the least amount of time, and during periods least likely to affect the bald eagle.

K.3 COLORADO RIVER FISHES CONSERVATION MEASURES

The conservation strategy for the endangered Colorado River fish is a multi-tiered strategy. The first tier includes the existing protections of the LUP, which are listed in Chapter 3. The second tier includes the species specific, BLM-committed Conservation Measures identified below, and the third tier includes the optional Best Management Practices (BMPs) listed below.

K.3.1 BLM-COMMITTED CONSERVATION MEASURES

BLM-committed Conservation Measures are species-specific measures that will avoid or minimize the potential for adverse impacts of BLM-authorized activities on the endangered Colorado River fish. These nondiscretionary, binding measures will be incorporated into the LUPs through maintenance action. Conservation Measures will be implemented for all BLM authorized activities that "*may affect*" the endangered Colorado River fishes or their designated critical habitats. This list is not comprehensive, in that other modified versions of these measures could be imposed for any BLM-authorized activity following further analysis and review, including project-level Section 7 Consultations with the USFWS.

1. BLM will ensure that monitoring of impacts of site-specific projects authorized by the BLM result in the preparation of a report describing the progress of each site-specific project, including implementation of the associated reasonable and prudent measures. This will be a requirement of project proponents, and will be included as a condition of approval (COA) on all future proposed actions that have the potential for take. Reports should be submitted annually to the USFWS - Utah Field Office, beginning after the first full year of implementation of the site-specific project, and shall list and describe:
 - a. Any unforeseen direct or indirect adverse impacts that result from activities of each site-specific project;

- b. Estimated levels of impact or depletion, in relation to those described in the original project-level Consultation effort, in order to inform the Service of any intentions to reinitiate Section 7 Consultation; and
 - c. Results of annual, periodic monitoring which evaluates the effectiveness of any site-specific terms and conditions that are part of the formal Consultation process. Include items such as assessment of whether implementation of each site-specific project is consistent with that described in the BA and whether the project has complied with terms and conditions.
2. The BLM shall notify the USFWS immediately of any impacts detected during project implementation within 0.5 mile of the project site. Any implementation action that may be contributing to the introduction of toxic materials or other causes of fish mortality must be immediately stopped until the situation is remedied. If investigative monitoring efforts demonstrate that the source of fish mortality is not related to the authorized activity, the action may proceed only after notification of USFWS authorities.

K.3.2 BEST MANAGEMENT PRACTICES (BMPs)

Best Management Practices are species-specific measures and practices which are to be considered, and applied, at the project-specific level or scale, on a case-by-case basis and implemented where possible to further protect, conserve, and assist in the recovery of the endangered Colorado River fishes. Each BMP should be appropriately considered and may be modified where necessary to accommodate implementation. These practices are non-binding and will be implemented or imposed at the discretion of the BLM. These BMPs are discretionary in order to provide flexibility in management for unusual situations, while striving to implement protective measures to recover the species.

Note: If these BMPs are specifically applied as binding terms or conditions of approval to individual projects at the implementation level, they shall not be waived unless approved by BLM in coordination or consultation with USFWS.

1. BLM will avoid, where possible, those habitats which are considered most representative of prime habitat for the species. No surface occupancy will be allowed within ¼ mile of the channel centerline of the Colorado, Green, Duchesne, Price, White, and San Rafael Rivers. In addition, no surface occupancy would be allowed within floodplains or riparian areas (unless there is no practical alternative or the development would enhance riparian/aquatic values). These unoccupied potential habitats will be protected in order to preserve them for future management actions associated with the recovery of the Endangered Colorado River Fish, as well as approved reintroduction, or relocation efforts. If activities were to occur in these areas, construction and mitigation would be designed to maintain and improve or restore riparian and aquatic conditions. If conditions could not be maintained, offsite mitigation strategies will be developed to augment destruction of habitat degradation.
2. BLM will ensure projects are designed to avoid direct disturbance to populations and known habitat wherever possible. These designs should include the protection against toxic spills into rivers and floodplains, reduction in sedimentation, minimization of destruction of riparian vegetation, and pre-activity flagging of critical areas for avoidance.

3. Prior to surface disturbing activities, specific principles should be considered to control erosion. These principles include:
 - a. Conduct long-range transportation planning for large areas to ensure that roads will serve future needs. This will result in less total surface disturbance.
 - b. Avoid surface disturbance in areas with high erosion hazards to the greatest extent possible. Avoid midslope locations, headwalls at the source of tributary drainages, inner valley gorges, excessively and wet slopes such as those near springs. In addition avoid areas where large cuts and fills would be required.
 - c. Locate roads to minimize roadway drainage areas and to avoid modifying the natural drainage areas of small streams.
4. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and associated sedimentation to adjacent streams.
5. Design stream-crossings for adequate passage of fish (if present), minimum impact on water quality, and at a minimum, the 25-year frequency runoff.

K.4 MEXICAN SPOTTED OWL (*STRIX OCCIDENTALIS LUCIDA*) (MSO) CONSERVATION MEASURES

The conservation strategy for MSO is a multi-tiered strategy. The first tier includes the existing protections of the LUPs, which are listed in Chapter 3. The second tier includes BLM-Committed Conservation Measures identified below, which have been developed in coordination with the USFWS, and are considered part of the proposed action in this BA. These measures will be implemented as maintenance actions for the existing LUPs. As such, Conservation Measures are nondiscretionary and are considered binding. The third tier includes Best Management Practices (BMPs) which are listed below and consist of other optional measures and practices which will serve to further protect and conserve the species when implemented. The purpose of this tier is to provide normal operating procedures that allow flexibility of management, and practicality in implementing protective measures for the conservation and recovery of the species.

K.4.1 BLM-COMMITTED CONSERVATION MEASURES

BLM-Committed Conservation Measures are species-specific measures that will minimize or avoid the potential for adverse impacts that may result from the implementation of BLM-authorized activities. These nondiscretionary measures will be incorporated into the LUPs through maintenance action. Conservation Measures will be implemented for all BLM authorized (permitted) activities that are determined to "may affect" the individuals, or designated critical habitat of MSO. This list is not comprehensive, and alterations may be made through appropriate levels of further Section 7 Consultation/Coordination with USFWS.

1. BLM will place restrictions on all authorized (permitted) activities that may adversely affect the MSO in identified PACs, breeding habitat, or designated critical habitat, to reduce the potential for adverse impacts to the species.

- Restrictions have been taken from guidance published in the *Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances* (USFWS 2002b), and they include:
 - Surveys, according to USFWS protocol, will be required prior to any disturbance related activities that have been identified to have the potential to impact MSO, unless current species occupancy and distribution information is complete and available. All surveys must be conducted by USFWS certified individuals, and approved by the BLM authorized officer.
 - Spatial buffer of 0.5 mile around MSO nests to protect the species from disturbance.
 - Seasonal restriction from March 1 to August 31, in PACs, breeding habitats, or designated critical habitat, to avoid disturbance to breeding MSO.
 - ❖ If the action occurs entirely outside of the MSO breeding season (March 1 – August 31), and leaves no permanent structure or permanent habitat disturbance, the action may proceed without an occupancy survey.
 - ❖ If action will occur during the season restriction (March 1 through August 31), surveys according to USFWS protocol for MSO, will be required prior to commencement of activities, and if owls are detected, BLM will reinstate Section 7 Consultation with the USFWS.
- 2. BLM will, as a condition of approval (COA) on any project proposed within identified PACs, designated critical habitat, or within spatial buffers for MSO nests (0.5 mile), ensure that project proponents are notified as to their responsibilities for rehabilitation of temporary access routes and other temporary surface disturbances, created by their project, according to individual BLM Field Office standards and procedures, or those determined in the project-specific Section 7 Consultation.
- 3. BLM will require monitoring of activities in designated critical habitat, identified PACs, or breeding habitats, wherein it has been determined that there is a potential for take. If any adverse impacts are observed to occur in a manner, or to an extent that was not considered in the project-specific Section 7 Consultation, then Consultation must be reinstated.
 - Monitoring results should document what, if any, impacts to individuals or habitat occur during project construction/implementation. In addition, monitoring should document successes or failures of any impact minimization, or mitigation measures. Monitoring results would be considered an opportunity for adaptive management, and as such, would be carried forward in the design and implementation of future projects.
- 4. For all survey and monitoring actions:
 - Reports must be provided to affected field offices within 15 days of completion of survey or monitoring efforts. Report must follow BLM-specified formats for written and automated databases.
 - Any detection of MSO during survey or monitoring activities would be reported to the authorized officer within 48 hours.
- 5. BLM will, in areas of designated critical habitat, ensure that any physical or biological factors (i.e., the primary constituent elements), as identified in determining and designating such habitat, remains intact during implementation of any BLM-authorized activity.

K.4.2 BEST MANAGEMENT PRACTICES (BMPs)

Best Management Practices are optional, species-specific measures and practices which are to be considered at the project-specific level, on a case-by-case basis, and implemented at the discretion of the BLM in, or near, identified MSO PACs, breeding, or designated critical habitats, to further protect, conserve and assist in recovery of the species.

BMPs listed in this section were primarily taken, or adapted, from the USFWS "*Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances*" (USFWS 2002b).

1. For all BLM actions that may adversely affect the primary constituent elements in any suitable Mexican spotted owl habitat, BLM should implement measures to minimize habitat loss or fragmentation, including rehabilitation of access routes created by the project through such means as raking out scars, revegetation, gating access points, etc.
2. Water production associated with BLM authorized actions, should be managed to ensure maintenance or enhancement of riparian habitats.
3. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in canyon habitat suitable for Mexican spotted owl nesting.
4. Prior to surface disturbing activities in MSO PACs, Breeding habitats, or designated critical habitats, specific principles should be considered to control erosion. These principles include:
 - Conduct long-range transportation planning for large areas to ensure that roads will serve future needs. This will result in less total surface disturbance.
 - Avoid surface disturbance in areas with high erosion hazards to the greatest extent possible. Avoid mid-slope locations, headwalls at the source of tributary drainages, inner valley gorges, excessively wet slopes such as those near springs. In addition avoid areas where large cuts and fills would be required.
 - Locate roads to minimize roadway drainage areas and to avoid modifying the natural drainage areas of small streams.
5. Project developments should be placed to avoid direct or indirect loss or modification of MSO nesting and/or identified roosting habitats.
6. Additional Conservation Measures and BMPs developed through coordination and consultation with the USFWS, that may help to reduce direct mortality in breeding, roosting, or designated critical habitats for MSO, should be observed. Including those listed in the *Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances* (USFWS 2005b).

K.5 JONES CYCLADENIA (*CYCLADENIA HUMILIS* VAR. *JONESII*) CONSERVATION MEASURES

The *Cycladenia humilis* var. *jonesii* multi-tiered conservation strategy in this BA includes:

1. The existing protections which are referenced in this BA, and listed in the Price and Moab Land Use Plans (LUPs).

2. BLM-committed Conservation Measures identified in section 6.1.1 of this BA which have been developed in coordination with the species experts, BLM field biologists and the USFWS, and are considered part of the proposed action.
3. Best Management Practices (BMPs) as described in section 6.1.2 of this BA will help to conserve and protect the species where implemented. These suggested practices/measures are optional, and are provided to give flexibility in management and will allow for site-specific implementation of protective measures for the conservation and recovery of *Cycladenia humilis* var. *jonesii* on a case-by-case basis.

K.5.1 BLM COMMITTED CONSERVATION MEASURES

1. These BLM-committed conservation measures are specie-specific actions will be implemented in habitat for the specie, and will further protect, conserve and minimize potential adverse impacts to *Cycladenia humilis* var. *jonesii* as a result of BLM authorized activities. Upon approval of the biological opinion from the USFWS, the BLM committed conservations measures will be incorporated into the Land Use Plans (LUP's) through maintenance action.
2. Currently, no critical habitat has been identified for *Cycladenia humilis* var. *jonesii*. If critical habitat is proposed and designated under section 4 of the ESA (CFR 50 402.02), these areas will be protected from future surface disturbing activities that would adversely modify or destroy the designated critical habitat, as determined in future project-level Consultations.
3. The BLM will continue to conduct project specific site inventories in areas that are proposed for energy and mineral developments that will result in surface disturbances. The inventories will include the presence/absence of *Cycladenia humilis* var. *jonesii* as well as suitable habitat areas. The BLM will work with the lessee to minimize the construction of new roads, pipelines, and other developments that require surface disturbances. This will assist in minimizing the effects of such activities on *Cycladenia humilis* var. *jonesii* that could increase erosion and destroy suitable habitat. It will also reduce the available access to the remote locations of many of the populations of the specie.
4. Areas in the vicinity of populations, considered for prescribed burns shall be surveyed for populations of threatened and endangered species and viable habitat.
5. Road construction, maintenance and right of way corridors shall be restricted in known populations of *Cycladenia humilis* var. *jonesii*. Areas considered for disposal that contain suitable habitat for *Cycladenia humilis* var. *jonesii* shall be surveyed for populations of the species prior to disposal. Lands should not be disposed of unless it is determined that the action will pose no threat to the conservation and recovery of *Cycladenia humilis* var. *jonesii*.
6. The Bureau of Land Management will encourage the avoidance of suitable habitats and known populations of *Cycladenia humilis* var. *jonesii* during herding, trailing, salting, and watering of livestock and wildlife.
7. Environmental assessments should continue to be required before permits are issued. The environmental assessments should include the presence or absence of threatened, endangered, or special status species and their suitable habitats.

K.5.2 BEST MANAGEMENT PRACTICES (BMPs)

Best Management Practices (BMPs) are specie specific measures and practices which are considered at the project-specific level on a case by case basis. BMPs should be implemented where possible, to reduce potential adverse affects, and advance the conservation and recovery of *Cycladenia humilis* var. *jonesii*. The following BMPs are optional, to allow flexibility for resource managers to implement protective measures for *Cycladenia humilis* var. *jonesii*.

1. Archeologists and paleontologists should be educated in the identification of *Cycladenia humilis* var. *jonesii* in order to avoid trampling during excavations.
2. Surface use restrictions should be imposed in and around known populations of *Cycladenia humilis* var. *jonesii*.
3. The location of existing or potential habitat should also be analyzed when a wildfire determination is being made to either let it burn or suppress the fire.
4. OHV use should be designated as limited to existing roads and trails where known *Cycladenia humilis* var. *jonesii* populations exist.
5. The use of herbicides, chemical treatments and habitat manipulations should be restricted within *Cycladenia humilis* var. *jonesii* populations and habitat.
6. The herding and trapping of wild horses and burros in *Cycladenia humilis* var. *jonesii* populations and habitat should be avoided to reduce additional trampling caused by such activities.

The following table summarizes the affect determinations for the Price and Moab field offices as concluded from the BA.

K.6 SOUTHWESTERN WILLOW FLYCATCHER (*EMPIDONAX TRAILII EXTIMUS*) CONSERVATION MEASURES

The conservation strategy for the SWWF is a multi-tiered strategy. The first tier includes the existing protections of the LUP, which are listed in Chapter 3. The second tier includes BLM-Committed Conservation Measures identified below, which have been developed in coordination with the USFWS, and are considered part of the proposed action in this BA. These measures will be implemented as maintenance actions for the existing LUPs. As such, Conservation Measures are nondiscretionary and are considered binding. The third tier includes Best Management Practices (BMPs) which are listed below and consist of other identified measures and practices which will serve to further protect and conserve the species when implemented. The purpose of this tier is to provide normal operating procedures that allow flexibility of management, and practicality in implementing protective measures for the conservation and recovery of the species.

K.6.1 BLM-COMMITTED CONSERVATION MEASURES

BLM-Committed Conservation Measures are species-specific measures that are intended to avoid or minimize the potential for adverse impacts that may result from the implementation of BLM-authorized activities on special status species like the SWWF. These nondiscretionary

measures will be appended to the LUPs as maintenance actions and as such, will be binding. Conservation Measures will be implemented for all BLM authorized activities conducted in or near SWWF habitat. This list is not comprehensive, in that other modified versions of these measures could be imposed for any BLM-authorized activity, following further analysis and review, including project-level initiation of formal Section 7 consultation with the Service:

1. BLM Field Offices will designate individuals to monitor ground disturbing activities conducted in SWWF habitat. The qualified biologist will monitor activities to ensure that project specific mitigation measures are successful.
2. Surveys will be required prior to operations that disturb habitat unless species occupancy and distribution information is complete and available. Only a BLM approved individual should conduct such surveys. In the event species occurrence is verified, the proponent may be required to modify operational plans, at the discretion of the authorized officer, to include appropriate measures for minimization of effects to the SWWF and its habitats.
3. BLM shall initiate early coordination with the USFWS, and continue to conduct formal Section 7 Consultation for any planned or authorized activity which is determined to have the potential to result in an adverse impact on the SWWF or its habitat.
4. BLM will monitor and restrict, when and where necessary, authorized or casual use activities that may adversely impact SWWF or their habitats, including but not limited to, recreation, mining, and oil and gas activities. Monitoring results should be considered in the design and implementation of future projects.
5. To monitor the impacts of site-specific implementations or projects authorized by the BLM LUPs that are determined "likely to adversely affect" SWWF, the BLM shall prepare a short report describing the progress of each of these projects, including success of the implementation of all associated mitigation measures. The report shall be submitted annually to the US Fish and Wildlife Service's Utah Field Office by March 1 beginning after the first full year of implementation of the Proposed Action, and shall list and describe the following:
 - a. Any unforeseen adverse effects resulting from activities of each site-specific project (may also require reinitiation of formal Consultation);
 - b. When, and if, any level of anticipated incidental take is approached (as allowed by separate Incidental Take Statements of site-specific Formal Section 7 Consultation efforts);
 - c. When, or if, the level of anticipated take (as allowed by separate Incidental Take Statements from site-specific formal consultations) is exceeded; and
 - d. Results of annual, periodic monitoring which evaluate the effectiveness of the reasonable and prudent measures or terms and conditions of the site-specific Consultation. The report will also include items such as assessment of whether implementation of each site-specific project is consistent with that described in the BA.

K.6.2 BEST MANAGEMENT PRACTICES (BMPs)

Best Management Practices are species-specific practices which are to be considered at an implementation level, on a case-by-case basis, and implemented wherever possible, to further protect, conserve, and assist in recovery of the SWWF.

Each BMP should be appropriately considered, and each may be modified to accommodate its implementation for any project in riparian habitat that may potentially support SWWF.

These practices are non-binding, and will be implemented or imposed at the discretion of the BLM only where feasible unless applied as term and condition/condition of approval/required mitigation on any subsequent Section 7 consultation or individual permit.

1. BLM will avoid, where possible, those habitats which are considered most representative of prime habitat for the species. These unoccupied potential habitats should be protected in order to preserve them for future management actions associated with the recovery of the SWWF.
2. BLM will ensure projects are designed to avoid direct disturbance to populations and suitable habitats wherever possible. These designs should include the consideration of water flows, slope, buffers, possible fencing, and pre-activity flagging of critical areas for avoidance.
3. The BLM should complete a comprehensive assessment locating those OHV use areas that interface with SWWF populations. Comparison of SWWF population GIS layers with OHV use layers would give BLM personnel another tool to manage and/or minimize impacts from OHV use near known populations. Based on the information that is developed via GIS applications, appropriate actions should be taken to prevent OHV use in occupied territories. In affected areas, such actions may include emergency closures of roads or trails within known populations, or gating of roads known to allow public access to populations located on BLM lands.
4. The BLM will continue to assess illegal and unauthorized OHV use and activity upon BLM administered lands. In order to protect, conserve, and recover the SWWF in areas of heavy unauthorized use, temporary closures, or use restrictions, beyond those which are already in place, may be imposed.
5. All surface disturbing activities should be restricted within a 0.25 mile buffer from suitable riparian habitats. Unavoidable ground disturbing activities in occupied SWWF habitat should only be conducted when preceded by a current year survey in areas where the project is to proceed, and should only occur between August 16 and April 30 (the period when SWWF are not likely to be breeding).
6. When conducting horse gathering operations in the vicinity of habitat for SWWF, proper consideration of nesting birds should be given, including consultation with the Service if such activity may affect SWWF or habitat.
7. Limit disturbances to and within suitable habitat by staying on designated routes.
8. Restrict new roads and/or access into, or through, riparian habitat where these may be created by new proposals or projects.
9. Ensure that water extraction and disposal practices, where a federal nexus exists, do not result in change of hydrologic regime that would result in loss or undue degradation of riparian habitat.
10. Ground disturbing activities will require monitoring throughout the duration of the project to ensure that adverse impacts to SWWF are avoided. As monitoring is relatively undefined, project specific requirements must be identified.

11. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in SWWF habitat.
12. Permanent surface disturbances will be avoided within 0.5 mile of potentially suitable SWWF habitat.
13. Native species will be preferred over non-native for revegetation projects in disturbance areas.
14. BLM will provide educational information to project proponents and the general public pertaining to the ecological awareness of habitat disturbance.
15. BLM will coordinate with other agencies and private landowners to identify voluntary opportunities to modify current land stewardship practices that may impact the SWWF and its habitats.