

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 CONCLUSIONS OF THE ENVIRONMENTAL ANALYSIS

The conclusions and recommendations presented in this chapter are those of the FERC environmental staff. Our conclusions and recommendations were developed in consultation with the appropriate regional offices of the COE, FWS, NRCS, and the ILDOA, as cooperating agencies.

Our review of the information provided by Rockies Express and further developed from data requests; field investigations; scoping; literature research; alternatives analysis; and contacts with federal, state, and local agencies and individual members of the public indicates that the REX East Project would result in mostly temporary, short-term, long-term and potentially permanent environmental impacts during construction and operation. We also conclude that with construction and operation of the REX East Project would result in a significant unavoidable long-term, and potentially permanent impact to upland forest and forested wetland vegetation, which is habitat for the federally listed Indiana bat and many species of migratory birds. However, the mitigation measures proposed by Rockies Express and staff's recommended mitigation would ensure that forest tracts along the Project area are adequately minimized and/or mitigated to acceptable levels. We conclude that if the REX East Project was constructed and operated in accordance with applicable laws and regulations, Rockies Express' proposed mitigation, and the additional mitigation recommendations presented below, the Project would result in mostly limited adverse environmental impact, and would be an environmentally acceptable action.

As part of our review, we developed specific mitigation measures to further reduce the environmental impact that would otherwise result from construction and operation of the Project. The additional studies or field investigations that we recommend would result in site-specific mitigation and further reduce impacts; therefore, we are recommending that these mitigation measures be attached as conditions to any Certificate issued by the Commission. These mitigation measures are presented in section 5.2. A summary of the anticipated Project impacts and our conclusions is provided below by resource area.

5.1.1 Alternatives

As an alternative to the proposed action, we evaluated the No Action or Postponed Action Alternatives, system alternatives, route alternatives, route variations, and aboveground facility site alternatives. While the No Action or Postponed Action Alternative would eliminate the short-term, or long-term and potentially permanent environmental impacts identified in the EIS, the objectives of the Project would not be met, and new sources of Rocky Mountain natural gas would not be available to supply the midwestern and eastern U.S. markets.

Our analysis of system alternatives included an evaluation of whether existing and proposed natural gas systems would meet the proposed Project objectives, which would have to be able to transport 1.8 bcf of natural gas from the Rocky Mountain basins directly to markets in the Midwest and East. We are unaware of any existing pipeline systems that could be expanded to meet the purpose of the REX East Project; therefore we conclude that the use of existing pipeline systems is not a viable alternative.

We evaluated nine major route alternatives to determine if impacts could be avoided or reduced on environmentally sensitive resources, such as population centers, recreation and designated scenic areas, and wildlife and natural habitat management areas that would be crossed by the Project. Two of these are alternative routes for crossing the Mississippi River, both of which offer a range of advantages and disadvantages to the Project route. Another is an alternative route through Deer Creek Lake State Park, which we conclude is environmentally preferable and we recommend it be incorporated into the

Project route. We conclude that the other major route alternatives – including two alternative routes north of Indianapolis, an alternative route south of Caesar Creek Lake, and alternative crossings of the Little Miami River, Big Darby Creek, and Wabash River – do not offer clear environmental advantages over the Project route and we do not recommend them.

We evaluated route variations for minimizing impacts at 17 different segments of the Project route. The evaluation of these variations was based on comment letters received from landowners or other stakeholders. We conducted field visits, collected information from Rockies Express, and used various desktop resources, including aerial imagery, to identify technically feasible variations that could minimize environmental impacts. Of the 17 segments we evaluated, we have recommended that 14 be incorporated into a revised Project route (see table 3.7-1). The variations would increase the overall project length by less than one mile. Because some of the recommended changes to the Project route were recently developed, we are seeking input from affected landowners before adopting these recommendations into the final EIS.

We considered alternative aboveground site locations for compressor and meter stations to avoid or minimize impacts to forested land, wetlands, and waterbodies, and to locate the facility as far as practicable from NSAs. For most of the compressor and meter stations, the Project compressor and meter station sites are on agricultural land, far from NSAs and residential developments, and would not adversely affect sensitive environmental resources.

Of the seven compressor stations proposed for the Project, we received landowner comments on two locations: the Hamilton and Bainbridge Compressor Stations. For the other five sites, we did not receive any landowner comments or identify any significant issues which would require further evaluation of alternative locations. The change to the Hamilton Compressor Station site is discussed further in section 3.6.1 to address landowner comments that we received on the original proposed location. The change to Bainbridge Compressor Station site is discussed in section 3.6.2, as are two alternative locations for the site added in response to landowner concerns about potential noise impacts from operation of the station. We are requesting additional information from Rockies Express and from affected landowners on the proposed and alternative sites.

5.1.2 Geology

Most of the Project would be located in the Central Lowlands and Appalachian Plateau physiographic provinces. The majority of the pipeline route would cross areas of unconsolidated glacial deposits, but 13 percent of the route would be in areas of shallow bedrock that may require trenching or blasting. Several sand and gravel pits and quarries are located within 1,500 feet of the Project, but construction of the Project would not prevent operation of these facilities. Seven oil or gas wells are located within the pipeline construction right-of-way. To mitigate impacts to these wells, we recommend that Rockies Express file site-specific protection plans for oil and gas wells located in the construction right-of-way/work area, prior to construction.

Seismicity, landslides, subsidence, and flooding are geologic hazards identified in the Project area. Although the pipeline does not cross any active faults, it could be affected by the New Madrid and Wabash Valley seismic zones. However, due to the low intensity of potential seismic events, as well the use of arc-welding techniques and design in accordance with CFR Parts 192 and 193, we do not expect seismic hazards to pose significant risks to the Project. Approximately 27.5 percent of the proposed route lies in areas susceptible to moderate to severe landslides. In such areas, Rockies Express would employ mitigation measures outlined in its Plan and Procedures.

Subsidence could occur in the Project areas due to karst features or abandoned underground mines. About 23 percent of the pipeline route has the potential for karst features from 10 to 200 feet below the ground surface (see table 4.1.3-2). To address karst-related subsidence, we recommend that Rockies Express file, prior to the start of construction, a plan for the identification of karst features and mitigation for crossing any such features. In order to further minimize impacts on pipeline construction in karst terrain, we recommend that prior to construction, Rockies Express file a contingency plan for HDD technology in the karst areas identified on table 4.1.3-2. The plan would include pre-construction identification of the potential for subsurface karst features, and if a solution void is intercepted during an HDD, a plan to limit the amount of mud lost to successfully complete the drill.

To address subsidence from underground mines, we recommend that Rockies Express file prior to the start of construction a plan for monitoring areas where the pipeline would cross underground mines. This monitoring should continue for the life of the Project.

Blackburn Island, on the Mississippi River is prone to seasonal flooding. This island is proposed to be used as a staging area for the HDD rigs and will be utilized during construction. In order to mitigate impacts of a flooding event during construction, we recommend that, prior to the start of construction, Rockies Express include measures in its site-specific HDD contingency plan for the Mississippi River to address the potential for a flooding event during construction on Blackburn Island. Also see section 5.1.4 (Water Resources) and section 5.1.9 (Land Use) for further discussion of the Mississippi River.

It is possible that during construction, paleontological resources may be encountered, although the areas disturbed would be relatively small and are not thought to contain high densities of fossils. We recommend that Rockies Express file, prior to construction, a plan for the identification of paleontological material found during construction and criteria for the determination of significance.

Based on Rockies Express' proposal, including implementation of its Plan and Procedures, and our recommended mitigation measures, we believe impacts to geological resources will be adequately minimized and would not be significant.

5.1.3 Soils

Soil types crossed by the Project were analyzed using the STATSGO database. The specific soil characteristics evaluated were the potential for erosion by wind and water, shallow bedrock, prime farmland designation, compaction, and the percentage of stones/rocks, droughty soil, and hydric soil present. Approximately 28 percent of the soils crossed by the Project are highly susceptible to water erosion, and 0.5 percent are highly susceptible to wind erosion. To minimize soil erosion, Rockies Express would employ mitigation measures as identified in its Plan and Procedures. About 65 percent of the Project route would cross prime farmland soils. Rockies Express developed the AIMPs to minimize the impacts of the pipeline on these agricultural soils. See section 5.1.9 (Land Use and Visual Impacts) for further discussion and staff's recommendation regarding state AIMPs.

Soil compaction is also a concern in some areas of the Project, particularly those containing fine-grained poorly-drained soils. To mitigate compaction in agricultural areas during wet weather, we recommend that prior to construction, Rockies Express prepare an Agricultural Wet Weather Contingency Plan. In addition to erosion and compaction, mixing of topsoil with subsoil during construction could have negative impacts on soil resources. To reduce the likelihood of mixing topsoil with subsoil, Rockies Express would implement topsoil segregation procedures as outlined in its Plan and AIMP.

Based on Rockies Express' proposal, including implementation of its Plan and Procedures, and our recommended mitigation measures, we believe impacts to soils will be adequately minimized and would not be significant.

5.1.4 Water Resources

Along the REX East Project route, groundwater is a significant source of drinking water in selected areas and is used for agricultural irrigation and in industry. One sole source aquifer (the Miami Valley Sole Source Aquifer in Ohio) would be crossed by the Project. Twenty-five wells and six springs have been identified within the vicinity of the pipeline. No public water supply wells were identified within 150 feet of Project facilities. Because surveys are ongoing for active wells and springs, the data that have been filed with the Commission are incomplete. Therefore, we recommend that prior to construction, Rockies Express file locations by milepost of all springs, seeps, and wells identified within 150 feet of construction work areas.

Rockies Express would minimize or avoid groundwater impacts during construction by implementing measures outlined in its Plan and Procedures. In order to effectively evaluate impacts on WPAs, we recommend that prior to the end of the draft EIS public comment period, Rockies Express file the distance of each WPA from the pipeline construction work areas and document consultations with applicable municipalities. In addition, we are recommending that Rockies Express file a report identifying all water supply wells damaged by construction and how they were repaired, within 30 days of placing the pipeline facilities in service.

The REX East Project would cross 1,462 surface waters in two major watersheds: the Upper Mississippi Regional Watershed and the Ohio Regional Watershed. The Project would cross 51 waterbodies designated as sensitive by state agencies (see table 4.6.2-1). Crossing methods proposed for these waterbodies include dry open-cut crossings, dam-and-pump, and HDD. Rockies Express has committed to filing site-specific crossing plans for these waterbodies. However, several crossing plans have not yet been provided for our review. In order for us to complete our evaluation of impacts on these waterbodies, we recommend that Rockies Express file prior to the end of the draft EIS public comment period, revised site-specific crossing plans that identify specific restoration and mitigation measures applicable to each waterbody crossing and any applicable agency consultations.

Impacts to surface water resources may result from clearing and grading of stream banks, instream trenching, trench dewatering, and backfilling. The greatest potential impact on surface waters would result from the temporary suspension of sediments during instream construction. Rockies Express may require blasting activities in or adjacent to 53 perennial waterbodies along the Project right-of-way. Instream blasting could injure or kill aquatic organisms, displace organisms during blast-hole drilling operations, and temporarily increase stream turbidity. The HDD method could potentially impact surface waters if drilling fluids were released (frac-out) during drilling. Therefore, we recommend that Rockies Express file a revised HDD contingency plan that indicates the agencies that would be contacted if a frac-out occurs. We also recommend that Rockies Express file the results of its HDD geotechnical feasibility investigations prior to the end of the draft EIS comment period. Rockies Express would minimize the potential effects of hydrostatic testing on surface water resources by adhering to the measures in its Procedures.

The Project crosses five waterbodies designated on the NRI, and Rockies Express is consulting with the NPS regarding construction across these waterbodies. In order for us to further evaluate impacts on NRI designated waterbodies, we recommend that Rockies Express file, before the close of the draft EIS comment period, site specific crossing plans for NRI-designated waterbodies, and documentation of consultation with the NPS and other applicable agencies regarding these plans.

The Project would also cross two designated Wild and Scenic Rivers in Ohio: the Little Miami River and Big Darby Creek. Rockies Express proposes to cross these waterbodies via HDD; however, there is concern that this method would not be successful due to geologic features at the proposed locations. Therefore, we recommend that Rockies Express develop a contingency plan for crossing the Little Miami River and Big Darby Creek that identifies alternative pipeline route variations and crossing locations of the waterbodies, should the HDD crossing of either of these waterbodies fail. We also recommend that Rockies Express successfully complete the HDD crossing of the Little Miami River prior to constructing between MP 432.0 and MP 467.2; and complete the HDD crossing of the Big Darby Creek, prior to constructing between MP 494.1 and MP 533.9.

The Mississippi River would also be crossed via HDD. This crossing would require dredging to take place around Blackburn Island to create sufficient draft for working barges. In order for us to further evaluate impacts associated with dredging, we recommend that prior to the end of the draft EIS comment period, Rockies Express file an updated Dredge Material Disposal Plan, which includes the disposal location of the material. In addition, because the Mississippi and Illinois Rivers are navigable and are regulated by both the COE and the U.S. Coast Guard, we recommend that prior to the start of construction, Rockies Express file its revised SPCC Plan to include the COE and U.S. Coast Guard to the list of agencies contacted in the event a spill or leak occurs within these rivers.

For further discussion and staff recommendations regarding impacts on Big Darby Creek, Little Miami and Mississippi Rivers, see sections 5.1.9 (Land Use and Visual Resources) and 5.1.13 (Reliability and Safety).

Due to agency concerns at the White River and Big Walnut Creek crossings, we recommend that Rockies Express investigate the feasibility of using the HDD method at these crossings in consultation with FWS and IDEM, and file its results prior to the close of the draft EIS comment period.

The REX East pipeline route would cross approximately 4.7 miles of wetlands, totaling 66.6 acres including: 8.0 acres in Missouri, 10.8 acres in Illinois, 15.1 acres in Indiana, and 32.7 acres in Ohio. The primary impact of pipeline construction and right-of-way maintenance activities on wetlands would be the long-term and permanent conversion of wetland vegetation. These effects would be greatest during and immediately following construction. Generally, the wetland vegetation community that would be impacted by the construction of the Project would transition back into a community functionally similar to pre-construction wetlands. Impacts to herbaceous and scrub-shrub wetlands generally would be temporary or short-term. There would be impacts to 9.3 acres of forested wetlands, which would likely be long-term or potentially permanent due to the slow regeneration time of forested areas.

Rockies Express would implement wetland mitigation measures that are designed to minimize the overall area of wetland disturbance, minimize the duration of wetland disturbance, reduce the amount of wetland soil disturbance, and enhance wetland restoration following construction. In addition, Rockies Express has attempted to avoid and minimize impacts on wetlands to the extent practicable by collocating the proposed pipeline route adjacent to existing corridors. We recommend three specific measures to reduce impact on wetland vegetation, including that Rockies Express finalize its consultations with appropriate agencies regarding wetland impact mitigation and monitoring procedures, including any plans for onsite or offsite mitigation.

Based on Rockies Express' proposal, including implementation of its Plan and Procedures, and our recommended measures, we believe impacts to water resources will be adequately minimized and would not be significant. We also believe impacts to herbaceous and scrub-shrub wetlands will generally be temporary or short-term and would not be significant. Impacts to forested wetlands would result in

long-term to permanent impacts, which are considered significant. However implementation of Rockies Express' Procedures, in addition to our recommended measures, would ensure that impacts on forested wetlands are adequately minimized and/or mitigated to acceptable levels.

5.1.5 Vegetation

Construction of the REX East Project pipeline would affect three main vegetative communities: agricultural, forested, and herbaceous vegetation. The pipeline route would cross 487.5 miles (11,124.5 acres) of agriculture and herbaceous open land and 144.7 miles (3,101.9 acres) of forested areas. The primary impacts on vegetation from construction of the Project would be the cutting, clearing, and/or removal of existing vegetation within the construction work area.

The majority of construction-related impacts would be temporary; and cleared vegetation would be able to return to natural conditions after construction, with the exception of the 10-foot-wide corridor centered on the pipeline, which would be maintained in an herbaceous state throughout the life of the Project. The clearing of upland forest would result in long-term and limited permanent impacts as upland forest and can take up to 30 years or more to return to pre-construction conditions. Impacts to forests and other vegetation would be minimized by collocating the pipeline adjacent to existing rights-of-ways and allowing the vegetation to return to existing cover types and uses where practical.

The Project would cross areas of contiguous forest in Missouri, Illinois, Indiana, and Ohio. The loss of vegetation in unfragmented forest lands may cause loss of wildlife due to habitat conversion. FWS is concerned for the loss of forested vegetation and loss of wildlife that depend on it. Therefore, we recommend that Rockies Express develop an upland forest mitigation plan in consultation with FWS, COE, and appropriate state agencies. To further minimize impacts on forested areas, we recommend that Rockies Express limit tree clearing between HDD entry and exit workspaces, to minor brush clearing, less than 3-foot-wide, using hand tools.

Aboveground facilities and contractor pipe yards would also have impacts on vegetation. To minimize impact to forested areas, we recommend that prior to the end of the draft EIS comment period, Rockies Express relocate the locations, where feasible, of its contractor and pipe storage yards to areas that avoid or minimize impacts to forested areas, and file new information reflecting any changes in locations.

The REX East pipeline route would cross vegetation communities of special concern in Indiana and CRP lands in Missouri. Construction of the Project would temporarily disturb approximately 44.8 acres of classified forests in Indiana. We recommend that Rockies Express develop its compensatory mitigation plan for classified forest areas in consultation with classified forest landowners and appropriate agencies. To date a total of 24 tracts of CRP lands have been identified along the pipeline route in Missouri. We recommend that Rockies Express consult with the FSA and other applicable agencies to identify mitigation measures to protect CRP lands. In addition, per COE recommendation that Japanese hop, a noxious weed, be included in Rockies Express Weed Management Plan. Also see section 5.1.9, Land Use and Visual Resources, for discussion of special-use lands.

We believe impacts to herbaceous vegetation generally will be temporary or short-term and would not be significant. Impacts to agricultural vegetation are more fully addressed in Soils (section 5.1.3) and Land Use and Visual Resources (section 5.1.9). Impacts to tracts of forest and potential fragmentation would result in long-term and limited permanent impacts, which are considered significant. However implementation of Rockies Express' Plan, in addition to our recommended measures, would ensure that impacts on forest tracts along the Project area are adequately minimized and/or mitigated, to acceptable levels.

5.1.6 Wildlife

The predominant wildlife habitats in the REX East Project area are open water, agricultural lands, forested lands, herbaceous upland, herbaceous wetland, and developed areas. The impact of the Project on wildlife species, including game species, and their habitats, would vary depending on the requirements of each species and the existing habitat present along the Project route. The clearing of right-of-way vegetation would reduce cover, nesting, and foraging habitat for some wildlife. The degree of impact would depend on the type of habitat affected and the rate at which vegetation regenerates after construction. As previously stated, we recommend that Rockies Express develop an upland forest mitigation plan to address fragmentation issues. To further minimize impacts on forest habitat, we recommend that Rockies Express consult with each state's applicable comprehensive conservation strategy coordinator to verify compliance with each state's Comprehensive Wildlife Conservation Strategy to the extent practicable.

Portions of the Mississippi Flyway and its principal routes pass through each State crossed by the pipeline; thus, migratory birds would occur in the Project area. The bald eagle was removed from the federal list of threatened and endangered species in June 2007 due to recovery and is no longer protected under the ESA. However, the species is currently protected under both the MBTA and the Bald and Golden Eagle Protection Act, and is known to nest in the Project area. We recommend that Rockies Express file documentation of consultations with FWS to determine the need for bald eagle surveys in the Project area, and implement the National Bald Eagle Management Guidelines. In addition, FWS identified three wooded locations along the construction right-of-way that may be breeding sites for known migratory birds. We recommend that Rockies Express file documentation of its consultations with FWS to determine if construction in these areas would impact breeding sites and activities for migratory birds, and to determine site-specific mitigation for each area of concern. Finally, we recommend that Rockies Express file its MBTA Conservation Agreement document developed in consultation with FWS. To further minimize impacts on wildlife areas, we also recommend that Rockies Express coordinate with jurisdictional agencies for construction schedule in sensitive wildlife areas.

Construction of the Project would cross 11 areas considered to be significant or sensitive wildlife habitats in Missouri and Ohio. We believe that, following existing corridors, where practicable; the use of HDD methods; and implementation of Rockies Express' Plan and Procedures, AIMP, Weed Management Plan, and Blasting Plan, with the implementation of our recommendations, the REX East Project would not significantly impact wildlife habitat in these managed and sensitive wildlife areas. In areas of forest, the proposed and recommended measures would ensure that impacts on these tracts are adequately minimized and/or mitigated, to acceptable levels.

5.1.7 Fisheries

All waterbodies affected by the Project have been classified as warmwater fisheries. Of the 1,462 waterbody crossings, 51 would involve fisheries of special concern. No essential fish habitat, as defined by the Magnuson-Stevens Fishery Conservation and Management Act, would be affected by the Project.

Construction of the Project including hydrostatic testing could result in several impacts on fisheries resources, including increased stress due to changes in water quality, decreased habitat and habitat value, loss of shading, and likelihood of streambank erosion. Overall, these impacts would be minor due to the relatively small area of the waterbody that would be affected.

Rockies Express proposes to use open-cut methods for a majority of the waterbody crossings. The dam-and-pump crossings method could also be used to cross Project waterbodies. Rockies Express

proposes to cross 30 waterbodies using the HDD method. A successful HDD would avoid direct impacts on the waterbody and aquatic resources.

Rockies Express may require blasting activities in or adjacent to 53 perennial waterbodies along the Project right-of-way. Instream blasting could injure or kill aquatic organisms close to blasting activities. Rockies Express would file for our review a site-specific Blasting Specification Plan before beginning any construction where blasting would be required within each waterbody greater than 10 feet wide.

The intake of hydrostatic test water also has the potential to affect fisheries from the entrainment and loss of prey organisms, as well as through the loss of fish and shellfish during early life stages. However impacts on fisheries from hydrostatic test water intake would be limited by adhering to Rockies Express' Plan and Procedures.

The Project would cross 51 fisheries of special concern, including one waterbody on the border of Missouri and Illinois, one in Illinois, six in Indiana, and 43 in Ohio. Because Rockies Express has not provided correspondence with state agencies approving an open-cut technique for any of the sensitive waterbodies, we recommend Rockies Express use a dry-ditch technique to cross significant waterbodies with a wetted width less than 30 feet. If a wet-crossing method would be used for waterbodies less than 30 feet, Rockies Express should file documentation of appropriate state agency approval prior to the end of the draft EIS comment period.

Based on Rockies Express' proposal, including implementation of its Plan and Procedures, and our recommended mitigation, we believe impacts to fisheries would be adequately minimized.

5.1.8 Special Status Species

Agency consultations resulted in the identification of 10 federally listed threatened or endangered species (Indiana bat, whooping crane, the clubshell, fanshell, fat pocketbook, and northern riffleshell mussels, decurrent false aster, eastern prairie fringed orchard, prairie bush clover and running buffalo clover) and 3 candidate species (eastern massasauga, rayed bean mussel, and spectaclecase mussel) for federal listing that potentially occur in the Project area. Based on a survey report filed by Rockies Express, the Indiana bat is likely to be adversely affected by the Project. Bats were captured in multiple locations along the Project area. Stress could arise for bats looking for roost trees that have been removed. However, this temporary stress is not expected to negatively impact reproduction. Any bats in trees that are disturbed by construction would be expected to leave the tree. In order to minimize impacts during construction, Rockies Express would limit activities such as clearing, trenching, welding, backfilling, and grading within a 300 foot radius of roost trees identified during surveys. This would occur one-half hour before dusk and one half-hour before dawn during the period of tree clearing restriction that was indicated by FWS (May 15- September 30). Areas where surveys were unable to be completed because of denied access would be surveyed before construction begins.

As currently proposed by Rockies Express, construction of the REX East Project would start during the spring of 2008. This construction period would conflict with FWS recommendation that potential roost trees be removed between October 1 and March 31 to avoid the summer roosting season for Indiana bats along the Project route. Removal of occupied roost trees between April 1 and September 30, when bats may occur along the proposed route, could cause injury or death. In addition, the noise associated with construction would disturb bats in the immediate vicinity of the construction corridor. We recommend that Rockies Express develop a Project-specific tree clearing plan for the Indiana bat. We restricted burning in Indiana bat habitat and recommended that Rockies Express not use any herbicides or pesticides. Since the Project is likely to adversely affect the Indiana bat, we would initiate

formal consultation with FWS. Hence, no construction activities would be allowed until we complete formal consultation with FWS. In all, we recommend eight specific measures that would minimize impacts on potential roost trees and potential Indiana bat habitat and individuals.

Because Indiana bats were captured in multiple locations along the REX East Project corridor; and alternate maternity colony roost trees could be used during construction activities where activities could result in adverse impacts of Indiana bats, we determine that the REX East Project is likely to adversely affect this species. Therefore, with the issuance of this draft EIS and our BA, we will request formal consultation with FWS and request that FWS prepare a biological opinion. However, we determine that the Project would have no effect on the hibernacula (the designated critical habitat) during construction or operation of the Project.

The whooping crane is not likely to occur, but is transient in the Project area. Even though the whooping crane is a transient species in the Project area, based on FWS' concern, we have recommended that if whooping cranes are found in the immediate vicinity of the Project construction activities should stop. Rockies Express conducted surveys for federally listed mussels in 2007. No federally-listed mussels were found. However, if listed mussels are identified in waterbodies not yet surveyed, Rockies Express would use a qualified malacologist to relocate mussels out of instream construction activities to areas upstream.

Hydrostatic testing the pipeline could adversely affect mussels or glochidia/host fish or juveniles. Intake screens would be used to limit the entrainment of fish; however these screens may not adequately protect mussel species. Therefore, to ensure that hydrostatic testing activities do not adversely affect federally listed mussels, we recommend Rockies Express avoid withdrawal of hydrostatic test water from waterbodies known to contain federally listed mussel species.

Surveys were not originally required for the decurrent false aster, the eastern prairie fringed orchid or the prairie bush clover; however, we recommend that Rockies Express conduct pre-construction surveys in potential habitat to ensure no individual or communities are found, and file a diagram of its fencing plan before construction. If either the aster or orchid plant is found, fencing off the plants and working around them would avoid impacts if populations are encountered during construction. If the clover is found, we recommend that Rockies Express consult with FWS to determine appropriate conservation measures.

In summary, we have determined that the Project would not affect one federally listed species and is not likely to adversely affect eight species based on the survey results and information filed by Rockies Express. Surveys are pending for the running buffalo clover in areas where access was denied. However, areas of suitable habitat were identified during the 2007 surveys. Therefore, our determination is pending for this species. We recommend that Rockies Express not begin any construction activities until we have completed the required consultation with FWS.

Survey report for the federal candidate eastern massasauga snake is pending. We recommend that Rockies Express file the surveys before the end of the draft EIS comment period. The two other federal candidate species were not found during surveys in 2007. We believe there would be no impact to these species.

The Natural Heritage Databases of Missouri, Illinois, Indiana, and Ohio identified 27 species of concern that may occur in the Project area. Sixteen were eliminated because they are either transient in the Project area; are unlikely to adversely respond to temporary and permanent impacts associated with the proposed facilities; or were determined after the initial review, in consultation with the agencies, to probably not occur in the Project area. Rockies Express continues to consult with the state agencies with

regards to minimizing impacts on state-listed and special-status species. In response to concerns identified by the ODNR and INDNR, we recommend four mitigation measures to further reduce impacts for the eastern hellbender; rabbitsfoot mussel; and Drummond's aster. With implementation of Rockies Express proposed mitigation, along with our recommended measures, we believe impacts on state-listed and special-status species would be minimized.

5.1.9 Land Use and Visual Resources

Construction of the Project would affect approximately 14,348.9 acres of land, including 9,683.0 acres for the pipeline construction right-of-way; 149.3 acres for the aboveground facilities; 32.4 acres for interconnects and laterals; and 4,484.2 acres for extra workspaces, pipe storage and contractor yards, and access roads. Agricultural land comprises about 72 percent of the Project area and 23 percent is forest land. Commercial/Industrial land, open water, open land, and residential land account for the remaining five percent of this acreage. Following construction, all affected areas outside the permanent pipeline right-of-way and aboveground facility sites would be restored and allowed to revert to pre-construction conditions and uses. During operation of the Project, the permanent pipeline right-of-way would consist of approximately 3,873.2 acres, and the aboveground facility sites and permanent access roads would permanently convert about 149.3 acres to commercial/industrial use.

The Project would impact approximately 10,677.9 acres of agricultural land. Based on consultation with federal and state agencies, as well as comments from landowners, we identified five areas of primary concern: drain tile repair, pipeline depth of cover, topsoil segregation, working in wet fields, and landowner having the ability to negotiate for other/additional mitigation. Rockies Express developed an AIMP to address these, and other potential impacts to agricultural lands. However, we believe the AIMP does not fully address the issues outlined above, thus we have made several recommendations to ensure that agricultural lands, and the respective properties' owners, are minimally impacted. The first recommendation requires Rockies Express to extend their proposed post-construction monitoring period to cover the five years following construction activities. Also, we recommend that Rockies Express bury the pipeline at a depth of five feet to minimize damage to drain tiles. In cases where drain tile damage is unavoidable, we recommend that Rockies Express hire local drain tile contractors to install/repair drain tiles that are damaged or need to be rerouted due to construction activities. We also recommend that Rockies Express compensate landowners where crop yields may be impacted by soil heating downstream of compressor stations. Finally, due to the presence of a specialty crop along the pipeline route, the Wilson Friendly Maple Farm, we recommend that Rockies Express develop a site-specific crossing plan to reduce the taking of trees, impacts on farm operation, and provides justification for impacts that cannot be avoided, and identifies additional mitigation.

Rockies Express identified 84 residences and 18 non-residential structures within 50 feet of the construction right-of-way. Four of the residences are currently within the proposed permanent right-of-way. Rockies Express is currently considering alternative routes through these areas that would preserve the structures. Additionally, we included a recommendation in section 4.8.2 to address the issue.

The Project would potentially affect 35 recreational and special interest areas, including COA lands administered by the MDC and containing the Ted Shanks Alluvial Complex; the Sny Levee, several scenic by-ways, various rivers listed as having significant habitat and/or recreational values; recreational trails (B&O Trail and Accommodation Line), state forests and parks, Raven Rocks, and Camp Woodsmoke. At the time of publication of this draft EIS, Rockies Express has not yet provided site-specific crossing plans for many of these sites. In other cases, we have found their draft plans to be incomplete. Therefore, we are making several recommendations for Rockies Express to provide or revise and include these plans, feasibility studies, safety mitigation and portage plans, as well as restoration plans these recreation and special-use areas.

Consultations continue with the NPS regarding the pipeline crossing of Big Darby Creek and the Little Miami River. The NPS contends that tributaries of these Wild and Scenic Rivers require special measures to ensure that sedimentation and proper erosion controls are employed to minimize down stream siltation. Therefore, we recommend that prior to construction, Rockies Express file site-specific plans to cross each tributary of the Big Darby Creek and Little Miami River. The plan would include: use of dry-crossing method; minimization of tree clearing at the crossing; erosion controls that would minimize down stream siltation, and a restoration and revegetation plan.

In addition, NPS requested that Rockies Express consult with the NPS to determine which of the tributaries of Big Darby Creek require surveys for mussel and fish spawning areas. Therefore, we recommend that prior to construction, Rockies Express consult with the NPS to determine which tributaries may require surveys, along with any correspondence with the NPS.

Visual resources along the Project route would be adversely affected, particularly during the construction phase. There are several existing pipelines in the vicinity of the Project, and the Rockies Express pipeline would parallel some of these existing right-of-ways, however only about 60 percent of the pipeline would be collocated. While some areas along the Project are either inaccessible or do not provide long-range unobstructed views, public viewpoints are present along many of the rivers and roadways. In addition, areas such as Raven Rocks offer unique viewing opportunities in the area.

Based on Rockies Express' proposal, along with our recommended measures to reduce impacts on special-interest lands, land use, and land requirements, we believe impacts to land use, special-interest lands, and visual resources would be minimized, and would not be significant.

5.1.10 Socioeconomics

Construction of the Project would have a minor, temporary impact on local transportation, and provide minor, temporary stimulatory increases to local populations, housing, employment, and taxes. Rockies Express has stated it would coordinate with the local emergency response services (police, medical, and fire) to minimize impacts of Project construction on local agencies. Operation of the Project, which would permanently employ 20 FTEs, would have a negligible effect on local spending and employment. Local taxes, in the form of ad valorem (property) taxes, would be paid annually to counties for the life of the Project.

5.1.11 Cultural Resources

Rockies Express consulted with the Wyoming, Nebraska, Missouri, Illinois, Indiana, and Ohio SHPOs and performed cultural resource investigations for areas that would be potentially affected by construction and operation of the Project. In Missouri, survey identified 88 archaeological sites and architectural resources. To date, 35 of these sites have been recommended as potentially eligible for listing on the NRHP. In Illinois, 397 archaeological sites and architectural resources were identified. Fifty-five of these have been recommended as potentially eligible for the NRHP. In Indiana, 494 archaeological and architectural resources have been identified. To date, 37 were recommended as potentially eligible for listing on the NRHP and seven had pending determinations but are being treated as potentially eligible at this time. Within Ohio, a total of 469 archaeological and architectural sites have been identified. Of those, 47 sites were found eligible or potentially eligible for listing on the NRHP. An initial assessment is pending for another 22 sites. All 69 of these sites are being treated as potentially eligible. In Nebraska, no cultural resources survey were identified at the compressor station site. In Wyoming, one archaeology site was identified at the compressor station site; however, the site is not eligible for the NRHP.

Rockies Express would develop plans to avoid and protect sites that may contain human remains such as prehistoric mound sites and historic cemeteries. Site protection may include fencing and/or providing an archaeological monitor for construction activities in the vicinity of these sites. Additionally, we recommend that Rockies Express avoid or develop treatment plans to mitigate impacts to all other NRHP-eligible resources. Rockies Express is currently reviewing routing alternatives for 11 sites that have been assessed as eligible for listing on the NRHP. Rockies Express also has agreed to bore under or use HDD to avoid impacts to other potentially NRHP-eligible sites including several historic roads and canals.

Since survey and evaluation is ongoing, the FERC has not yet determined the number of historic properties that would be adversely affected. Rockies would be required to produce site-specific treatment plans for the mitigation of adverse effects at historic properties that cannot be avoided, to be reviewed and approved by the appropriate parties. The FERC would ensure that treatment is carried out according to the terms of the MOA before construction is allowed in any give area where an historic property would be affected.

In order to assure that the ACHP would have the opportunity to comment on any historic properties that might be identified by the on-going studies, we recommend that Rockies Express not be allowed to construct any facilities, use any staging, storage, or temporary work areas, or use any access roads, until it files the survey reports, required treatment plans, and the SHPOs' comments with the Commission, and is given written authorization to proceed by the Director of the OEP.

Rockies express contacted 43 Native American Tribes with cultural links to the Project area. In total 22 tribes responded. Five tribes asked to participate in the consultation process, and an additional 17 tribes asked to be notified if human remains were found.

Rockies Express prepared Plans for the Unanticipated Discovery of Historic Properties and Human Remains during Construction for the Project, to be used in the event that any unanticipated historic properties (consisting of prehistoric or historic archaeological resources) or human remains are encountered during construction of the Project.

5.1.12 Air Quality and Noise

Air quality impacts associated with construction of the Project would include emissions from fossil-fueled construction equipment and fugitive dust. However, such air quality impacts would generally be temporary and localized and are not expected to cause or contribute to a violation of applicable air quality standards. Rockies Express would require its contractors to use their best available nonroad construction equipment in their fleets in the nonattainment areas. Additionally, we recommend monitoring of the equipment to ensure to protection of the nonattainment areas.

The proposed Arlington, Bertrand, Mexico, Blue Mound, Bainbridge, Hamilton, and Chandlersville Compressor Stations would emit air pollutants as a result of combustion of natural gas to drive the compressor units and associated equipment. However, screening analyses of these stations indicates air emissions associated with operation of these facilities would meet federal and state ambient air quality standards. Rockies Express has filed for air permit applications for all compressor stations except the Chandlersville Compressor Stations. Therefore, we recommend Rockies Express file a copy of this application to verify emission sources at the stations and emission calculations. An air permit was filed for the Arlington Compressor Station; however, it was incomplete. We recommend Rockies Express complete its air dispersion modeling portion of the permit application for the Arlington Compressor Station, and file this information prior to the end of the draft EIS comment period.

Impacts to noise levels associated with construction of the Project would generally be temporary, minor, and limited to daylight hours, except at HDD sites, where drilling and related construction equipment would likely operate on a continuous basis for up to several weeks. As a result of this continual operation, noise levels at 11 of the 40 evaluated HDD sites could be significantly increased at nearby NSAs. To minimize this potential increase in noise levels and the resulting impacts to NSAs at the 11 sites, Rockies Express has committed to using a temporary noise barrier at least 16 feet high along with other noise mitigation measures. With these mitigation measures, noise impacts due to HDD activities would not be significant. However, we are recommending that Rockies Express provide site specific plans for the use of the mitigation measures at the HDD sites and file the appropriate noise analyses for any new or moved HDD sites, including the White River and Big Walnut Creek.

The proposed new compressor stations would generate noise on a continuous basis during operation. However, the predicted noise levels attributable to operation of the Arlington, Bertrand, Mexico, Blue Mound, Bainbridge, Hamilton, and Chandlersville Compressor Stations should not result in significant impacts on the NSAs nearest to those facilities. To ensure that actual noise levels resulting from Project operation would not exceed significant levels, we are recommending that Rockies Express file post-construction noise survey reports for all compressor stations.

With implementation of Rockies Express' proposed mitigation and our recommendations, we believe impacts on air quality and noise would be minimized.

5.1.13 Reliability and Safety

The Project would be designed, constructed, operated, and maintained to meet or exceed all DOT safety standards for natural gas pipelines. Following construction, Rockies Express would also initiate a pipeline integrity management plan to ensure public safety during operation. The Project would result in only a slight increase in risk to the nearby public.

Rockies Express has proposed to cross the Sny Levee associated with the Mississippi River crossing using the HDD method. There are concerns with the safety and reliability of the levee should it be crossed by HDD. The majority of these concerns are addressed with a recommendation made in section 4.8.5 requiring geotechnical information, a feasibility study, and detailed plans including protection of the levee. In addition to the previous recommendation, we recommend that following construction Rockies Express monitor the levee for evidence of settling.

5.1.14 Cumulative Impacts

We identified 12 present and reasonably foreseeable future projects that would potentially result in a cumulative impact when considered in conjunction with the REX East Project. These projects include other natural gas transmission pipelines, electronic generating facilities, ethanol plants, transportation and other infrastructure projects, residential and urban development, COE Lock-and-dam projects, and water supply projects. Significant cumulative impacts associated with these projects are most likely to occur to wetlands, forested areas, wildlife that are particular sensitive to habitat fragmentation, federally and state-listed endangered and threatened species, soils, and land use. We included recommendations in this draft EIS to further reduce the environmental impacts associated with the Project. Similarly, each of the other actions considered in our cumulative analysis has been or would be designed to avoid or minimize impacts to sensitive environmental resources.

5.2 FERC STAFF'S RECOMMENDED MITIGATION

If the Commission approves the REX East Project, we recommend that the following measures be included as specific conditions of the Certificate. We believe that these measures would further mitigate the environmental impact associated with the construction and operation of the proposed project.

1. Rockies Express shall follow the construction procedures and mitigation measures described in their respective applications, supplemental filings (including responses to staff data requests), and as identified in the EIS, unless modified by the Commission's Order. Rockies Express must:
 - a. Request any modification to these procedures, measures, or conditions in a filing with the Secretary;
 - b. Justify each modification relative to site-specific conditions;
 - c. Explain how that modification provides an equal or greater level of environmental protection than the original measure; and
 - d. Receive approval in writing from the Director of OEP before using that modification.
2. The Director of OEP has delegated authority to take whatever steps are necessary to ensure the protection of all environmental resources during construction and operation of the REX East Project. This authority shall allow:
 - a. The modification of conditions of the Commission's Order; and
 - b. The design and implementation of any additional measures deemed necessary (including stop work authority) to assure continued compliance with the intent of the environmental conditions as well as the avoidance or mitigation of adverse environmental impact resulting from project construction and operation.
3. **Prior to any construction**, Rockies Express shall file with the Secretary an affirmative statement, certified by a senior company official, that all company personnel, EIs, and contractor personnel will be informed of the EI's authority and have been or will be trained on the implementation of the environmental mitigation measures appropriate to their jobs before becoming involved with construction and restoration activities.
4. The authorized facility locations shall be as shown in the EIS, as supplemented by filed alignment sheets. **As soon as they are available, and before the start of construction**, Rockies Express shall file with the Secretary any revised detailed survey alignment maps/sheets at a scale not smaller than 1:6,000 with station positions for all facilities approved by the Commission's Order. All requests for modifications of environmental conditions of the Commission's Order or site-specific clearances must be written and must reference locations designated on these alignment maps/sheets.

Rockies Express' exercise of eminent domain authority granted under NGA Section 7(h) in any condemnation proceedings related to the FERC Order must be consistent with these authorized facilities and locations. Rockies Express' right of eminent domain granted under NGA section 7(h) does not authorize it to increase the size of its natural gas pipeline

to accommodate future needs or to acquire a right-of-way for a pipeline to transport a commodity other than natural gas.

5. Rockies Express shall file with the Secretary detailed alignment maps/sheets and aerial photographs at a scale not smaller than 1:6,000 identifying all route realignments or facility relocations, and staging areas, pipe storage yards, new access roads, and other areas that would be used or disturbed and have not been previously identified in filings with the Secretary. Approval for each of these areas must be explicitly requested in writing. For each area, the request must include a description of the existing land use/cover type, documentation of landowner approval, whether any cultural resources or federally-listed threatened or endangered species would be affected, and whether any other environmentally sensitive areas are within or abutting the area. All areas shall be clearly identified on the maps/sheets/aerial photographs. Each area must be approved in writing by the Director of OEP **before construction in or near that area.**

This requirement does not apply to extra workspace allowed by Rockies Express' Upland Erosion Control, Revegetation, and Maintenance Plan, and/or minor field realignments per landowner needs and requirements which do not affect other landowners or sensitive environmental areas such as wetlands.

Examples of alterations requiring approval include all route realignments and facility location changes resulting from:

- a. Implementation of cultural resources mitigation measures;
 - b. Implementation of endangered, threatened, or special concern species mitigation measures;
 - c. Recommendations by state regulatory authorities; and
 - d. Agreements with individual landowners that affect other landowners or could affect sensitive environmental areas.
6. **Within 60 days of the acceptance of its Certificate and before the start of construction,** Rockies Express shall file an initial Implementation Plan for the review and written approval of the Director of OEP describing how Rockies Express will implement the mitigation measures required by the Commission's Order. Rockies Express must file revisions to the plan as schedules change. The plan shall identify:
 - a. How Rockies Express will incorporate these requirements into the contract bid documents, construction contracts (especially penalty clauses and specifications), and construction drawings so that the mitigation required at each site is clear to on-site construction and inspection personnel;
 - b. The number of EIs assigned per spread, and how the company will ensure that sufficient personnel are available to implement the environmental mitigation;
 - c. Company personnel, including EIs and contractors, who will receive copies of the appropriate material;

- d. The training and instructions Rockies Express will give to all personnel involved with construction and restoration (initial and refresher training as the project progresses and personnel change), with the opportunity for OEP staff to participate in the training session(s);
 - e. The company personnel (if known) and the specific portion of Rockies Express' organization having responsibility for compliance;
 - f. The procedures (including use of contract penalties) Rockies Express will follow if noncompliance occurs; and
 - g. For each discrete facility, a Gantt or PERT chart (or similar project scheduling diagram), and dates for:
 - i. The completion of all required surveys and reports;
 - ii. The mitigation training of on-site personnel;
 - iii. The start of construction; and
 - iv. The start and completion of restoration.
7. Rockies Express shall file updated status reports prepared by the lead EI on a **weekly** basis **until all construction-related activities, including restoration, are complete**. These status reports shall also be provided to other federal and state agencies with permitting responsibilities upon request. Status reports shall include:
- a. The current construction status of each spread, work planned for the following reporting period, and any schedule changes for stream crossings or work in other environmentally sensitive areas;
 - b. A listing of all problems encountered and each instance of noncompliance observed by the EIs or the third-party compliance monitors during the reporting period (both for the conditions imposed by the FERC and any environmental conditions/permit requirements imposed by other federal, state, or local agencies);
 - c. A description of corrective actions implemented in response to all instances of noncompliance, and their cost;
 - d. The effectiveness of all corrective actions implemented;
 - e. A description of any landowner/resident complaints that may relate to compliance with the requirements of the Commission's Order, and the measures taken to satisfy their concerns; and
 - f. Copies of any correspondence received by Rockies Express from other federal, state, or local permitting agencies concerning instances of noncompliance, and Rockies Express' response.
8. Rockies Express shall develop and implement an environmental complaint resolution procedure that remains active for at least 3 years following the completion of construction for the respective project. The procedure shall provide landowners with clear and simple directions for identifying and resolving their environmental mitigation problems/concerns during construction of the project and restoration of the right-of-way. **Prior to**

construction, Rockies Express shall file with the Secretary the environmental complaint resolution procures and mail the environmental complaint resolution procedures to each landowner whose property would be crossed by the respective project:

- a. In its letter to affected landowners, Rockies Express shall:
 - i. Provide a local contact that the landowners should call first with their concerns; the letter should indicate how soon to expect a response;
 - ii. Instruct the landowners that, if they are not satisfied with the response, they should call Rockies Express' Hotline, as applicable; the letter should indicate how soon to expect a response; and
 - iii. Instruct the landowners that, if they are still not satisfied with the response from Rockies Express' Hotline, they should contact the Commission's Enforcement Hotline at (888) 889-8030, or at hotline@ferc.gov.
 - b. In addition, Rockies Express shall file with the Secretary weekly status reports that include a table that contains the following information for each problem/concern:
 - i. The identity of the caller and the date of the call;
 - ii. The identification number from the certificated alignment sheet(s) of the affected property and appropriate location by milepost;
 - iii. A description of the problem/concern; and
 - iv. An explanation of how and when the problem was resolved, will be resolved, or why it has not been resolved.
9. Rockies Express must receive written authorization from the Director of OEP **before commencing service the project**. Such authorization will only be granted following a determination that rehabilitation and restoration of the right-of-way and other areas of project-related disturbance are proceeding satisfactorily.
10. **Within 30 days of placing the certificated facilities in service**, Rockies Express shall file an affirmative statement, certified by a senior company official:
 - a. That the facilities have been constructed in compliance with all applicable conditions, and that continuing activities will be consistent with all applicable conditions; or
 - b. Identifying which of the Certificate conditions Rockies Express has complied with or will comply with. This statement also shall identify any area affected by the project where compliance measures were not properly implemented, if not previously identified in filed status reports, and the reason for noncompliance.
11. Rockies Express shall file with the Secretary **prior to the end of the comment period for the draft EIS**, a description of the nonjurisdictional facilities needed for the operation of the Hamilton Compressor Station, maps showing the locations of those facilities, and a discussion of the environmental impacts associated with the construction of those facilities.

If no nonjurisdictional facilities are required for the operation of the Hamilton Compressor Station, discuss how the power requirements would be met. (page 1-8)

12. Rockies Express shall revise its construction plans in order to overlap, for spoil storage purposes, 15 feet of the existing Panhandle Eastern permanent right-of-way, and incorporate these revisions to its pre-construction planning, revising the REX East right-of-way configurations as necessary. Rockies Express shall file the revised right-of-way configurations with the Secretary **prior to the end of the draft EIS comment period.** (page 2-5)
13. Rockies Express shall revise its construction plans to center the pipeline within the permanent right-of-way in areas where it is presently shown within 10 feet of the edge of the permanent right-of-way, and incorporate these revisions to its pre-construction planning, revising the REX East right-of-way configurations as necessary. Rockies Express shall file the revised right-of-way configurations with the Secretary **prior to the end of the draft EIS comment period.** (page 2-6)
14. **Prior to the start of construction,** Rockies Express shall file with the Secretary for review and written approval by the Director of OEP the proposed use and site-specific justification for the size of each of its proposed extra temporary workspaces. (page 2-6)
15. Rockies Express shall store topsoil within the 125-foot-wide construction right-of-way. Rockies Express shall file with the Secretary **prior to the start of construction** a revised right-of-way configuration that does not include continuous 35-foot-wide temporary workspaces and shall file revised tables indicating acreage of area disturbed. (page 2-6)
16. **Prior to the end of the draft EIS comment period,** Rockies Express shall file with the Secretary a list of the new access roads that would be needed during the operation of the Project, indicating the purpose of each. In addition, Rockies Express shall describe how the temporary access roads would be removed and restored after construction. Rockies Express shall justify leaving in place any new access road not needed for the operation of the Project. (page 2-6)
17. Rockies Express shall revise its Plan and Procedures to be consistent with tables 2.3-1 and 2.3-2 of the draft EIS. Rockies Express shall file its revised Plan and Procedures with the Secretary **prior to the start of construction.** (page 2-9)
18. Rockies Express shall file with the Secretary for review and written approval by the Director of OEP a site-specific justification for each extra workspace which is within 50 feet of a wetland or waterbody, **prior to the start of construction.** (page 2-9)
19. **Prior to the start of construction,** Rockies Express shall file with the Secretary for review and written approval by the Director of OEP a Bulk Material Disposal Plan for excess rock, trees, brush, and other construction debris. (page 2-13)
20. Rockies Express shall develop a Hydrostatic Testing Plan that includes, but is not limited to, the following information:
 - a. The screen size proposed for use on intake hoses to prevent entrainment of fish; and

- b. Documentation that appropriate federal and state agencies have been consulted regarding the establishment of water withdrawal rates to ensure the withdrawals would have minimal impact on flows, fisheries, and downstream water users.

This Hydrostatic Testing Plan shall be filed with the Secretary for review and written approval by the Director of the OEP, **prior to the start of construction.** (page 2-15)

21. Rockies Express shall revise its Procedures to use a 75-foot-wide construction right-of-way for wetlands. Rockies Express shall incorporate these revisions in its pre-construction planning, revising the REX East construction alignment sheets, as necessary, to accommodate the revised work areas. For wetlands that Rockies Express believes would require a right-of-way width greater than 75 feet, Rockies Express shall file with the Secretary, site-specific justification in its implementation plan for the Project for review and written approval by the Director of OEP, **prior to the start of construction.** (page 2-18)
22. Rockies Express shall include in each of its site-specific HDD plans an estimate of the volume and a description of the method of disposal of cutting spoil and drilling fluid, **prior to the end of the draft EIS comment period.** (page 2-19)
23. Rockies Express shall file with the Secretary for review and written approval by the Director of OEP a draft third-party environmental monitoring program and obtain proposals from potential contractors to provide monitoring services, and file the program and proposals with the Secretary for review and written approval by the Director of OEP **at least 60 days prior to the anticipated start of pipeline construction.** The monitoring program shall include:
 - a. The employment by the contractor of one to two full-time on-site monitors per construction spread;
 - b. The employment by the contractor of a full-time compliance manager to direct and coordinate with the monitors, manage the reporting system, and provide technical support to the FERC staff;
 - c. A systematic strategy for the review and approval by the contract compliance manager and monitors of variances to certain construction activities as may be required by Rockies Express based on site-specific conditions;
 - d. The development of an internet website for posting daily or weekly inspection reports submitted by both the third-party monitors and Rockies Express' EIs; and
 - e. A discussion of how the monitoring program can incorporate and/or be coordinated with the monitoring or reporting that may be required by other Federal and state agencies. (page 2-24)
24. **Prior to the start of construction,** Rockies Express shall incorporate into the Project route the Deer Creek Lake State Park Route Alternative from MP 496.9 to MP 502.6, as depicted in figure 3.4.6-1. Rockies Express shall file with the Secretary updated alignment sheets (including incorporation of an HDD crossing of Deer Creek Lake) and updated land use and resource tables. (page 3-25)

25. **Prior to the start of construction**, Rockies Express shall incorporate into the Project route the route variation for the McCarroll property from MP 291.0 to MP 291.3, as depicted in appendix J, figure J-1. Rockies Express shall file with the Secretary updated alignment sheets and updated land use and resource tables. (page 3-33)
26. **Prior to the start of construction**, Rockies Express shall incorporate into the Project route the route variation for the Rogers property from MP 300.5 to MP 301.0, as depicted in appendix J, figure J-2. Rockies Express shall file with the Secretary updated alignment sheets and updated land use and resource tables. (page 3-33)
27. **Prior to the start of construction**, Rockies Express shall incorporate into the Project route the route variation for the Parker properties from MPs 318.1 to 318.8, as depicted in appendix J, figure J-3. Rockies Express shall file with the Secretary updated alignment sheets and updated land use and resource tables. (page 3-34)
28. **Prior to the start of construction**, Rockies Express shall incorporate into the Project route the route variation for the Alverson properties from MPs 370.0 to 370.6, as depicted in appendix J, figure J-4. Rockies Express shall file with the Secretary updated alignment sheets and updated land use and resource tables. (page 3-34)
29. **Prior to the start of construction**, Rockies Express shall incorporate into the Project route the route variation for the Yane property from MPs 380.4 to 380.6, as depicted in appendix J, figure J-5. Rockies Express shall file with the Secretary updated alignment sheets and updated land use and resource tables. (page 3-35)
30. **Prior to the start of construction**, Rockies Express shall incorporate into the Project route the route variation for the Morgan property from MPs 384.1 to 385.0, as depicted in appendix J, figure J-6. Rockies Express shall file with the Secretary updated alignment sheets and updated land use and resource tables. (page 3-36)
31. **Prior to the start of construction**, Rockies Express shall incorporate into the Project route the route variation for the White property from MPs 395.1 to 395.8, as depicted in appendix J, figure J-7. Rockies Express shall file with the Secretary updated alignment sheets and updated land use and resource tables. (page 3-36)
32. **Prior to the start of construction**, Rockies Express shall incorporate the route variation for the Schulte and Oetzel properties located between MPs 401.5 and 402.0, as depicted in appendix J, figure J-8. Rockies Express shall file with the Secretary updated alignment sheets and updated land use and resource tables. Rockies Express shall consult and coordinate with any newly affected landowners and file new landowner information. (page 3-37)
33. **Prior to the start of construction**, Rockies Express shall incorporate the route variation for the Schoenharl and Minges properties located between MP 405.1 and MP 405.9, as depicted in appendix J, figure J-9. Rockies Express shall file with the Secretary updated alignment sheets and updated land use and resource tables. Rockies Express shall consult and coordinate with any newly affected landowners and file new landowner information. (page 3-37)
34. **Prior to the end of the draft EIS comment period**, Rockies Express shall file with the Secretary documentation of consultations of the Project route and the route variation from

MPs 452.7 to 453.8, as depicted in appendix J, figure J-10, with the Village of Waynesville, Ohio Waste and Water Division of the Utilities Department, and other applicable agencies regarding construction in the WPA. (page 3-38)

35. **Prior to the start of construction**, Rockies Express shall incorporate into the Project route the route variation for the Mowrey and Jones properties located between MPs 458.1 and 458.9, as depicted in appendix J, figure J-11. Rockies Express shall file with the Secretary updated alignment sheets and updated land use and resource tables. (page 3-39)
36. **Prior to the start of construction**, Rockies Express shall incorporate into the Project route the route variation for the Kile property from MPs 477.1 to 477.5, as depicted in appendix J, figure J-12. Rockies Express shall file with the Secretary updated alignment sheets and updated land use and resource tables. (page 3-39)
37. **Prior to the start of construction**, Rockies Express shall incorporate into the Project route the Noll Route Variation A, as depicted in appendix J, figure J-13. Rockies Express shall file with the Secretary revised alignment sheets and updated land use and resource tables. Rockies Express shall consult and coordinate with any newly affected landowners and file new landowner information. (page 3-41)
38. **Prior to the start of construction**, Rockies Express shall incorporate into the Project route the route variation for the Shaffer property from MPs 623.3 to 624.4, as depicted in appendix J, figure J-14. Rockies Express shall file with the Secretary updated alignment sheets and updated land use and resource tables. Rockies Express shall consult and coordinate with any newly affected landowners and file new landowner information. (page 3-41)
39. **Prior to the start of construction**, Rockies Express shall incorporate into the Project route the route variations at MPs 384.3, 384.4, and 446.8, as depicted in appendix J, figures J-15 and J-16. Rockies Express shall file with the Secretary updated alignment sheets and updated land use and resource tables. (page 3-42)
40. **Prior to the end of the draft EIS comment period**, Rockies Express shall provide a revised list of landowners within 0.5 mile, and updated resource analyses for the two alternative compressor sites at MP 276 and 282.9 for the Bainbridge Compressor Station, as depicted in figure 3.6.2-1. The information provided should be consistent with the requirements for compressor stations, as outlined in FERC's Minimum Filing Requirements for Environmental Reports (18 CFR 380.12). (page 3-46)
41. **Prior to the start of construction**, Rockies Express shall file with the Secretary for review and written approval by the Director of OEP, a site-specific protection plan for oil or gas wells within the construction work area, both active and abandoned. These plans shall include details on how the wells would be protected and monitored during construction. Rockies Express shall also discuss how it would determine if any damage attributable to construction activities occurred to the aboveground equipment, casing, or plug (for abandoned wells). The plans shall also discuss how any damage would be mitigated. (page 4-4)
42. **Prior to the start of construction**, Rockies Express shall file with the Secretary for review and written approval by the Director of OEP, a plan for the identification of karst features and mitigation for crossing any such features identified during construction. This plan shall

also indicate how areas with these features would be monitored during the life of the Project and what steps would be taken if the area were to destabilize in the future. (page 4-9)

43. **Prior to the start of construction**, Rockies Express shall file with the Secretary for review and written approval by the Director of OEP, a contingency plan for HDDs in the karst areas identified on table 4.1.3-2. This plan shall include pre-construction identification of the potential for subsurface karst features and identify what Rockies Express would do if a solution void is intercepted to limit the amount of mud lost and successfully complete the drill. (page 4-10)
44. **Prior to the start of construction**, Rockies Express shall file with the Secretary for review and written approval by the Director of OEP, a plan for monitoring areas where the pipeline would cross underground mines that includes the steps that would be taken if the area were to destabilize in the future. The monitoring shall continue for the life of the Project. (page 4-11)
45. **Prior to the start of construction**, Rockies Express shall file with the Secretary for review and written approval by the Director of OEP, a High Water Contingency Plan for the construction of the Mississippi River crossing. This plan shall be developed in consultation with the COE. (page 4-12)
46. **Prior to the start of construction**, Rockies Express shall file with the Secretary for review and written approval by the Director of OEP, a plan for the identification of paleontological material found during construction. Rockies Express shall also provide criteria for the determination of significance. (page 4-12)
47. Rockies Express shall prepare an Agricultural Wet Weather Contingency Plan to address construction practices in agricultural areas during wet weather (i.e., active precipitation and/or saturated ground or as otherwise determined by the EI). This plan shall include, at a minimum:
 - a. A determination of the allowable depth of rutting, and allowable working conditions, prior to suspension of construction activities based on the type of soil, topsoil and subsoil thickness and/or using the Atterberg Field Test Procedure;
 - b. Designation of authority for the onsite agricultural inspector to have “stop-work” authority in the event that wet weather conditions place topsoil and subsoil at risk; and
 - c. Identification of alternate construction procedures to enable activities to continue without risking the loss and/or mixing of topsoil and subsoil and severe compaction in the event of an unseasonably wet construction season.

This plan shall be filed with the Secretary for review and written approval by the Director of OEP **prior to the start of construction**. (page 4-18)

48. **Prior to the start of construction**, Rockies Express shall file with the Secretary the locations by milepost of all springs, seeps, and wells identified within 150 feet of construction work areas. (page 4-24)

49. **Prior to the end of the draft EIS comment period**, Rockies Express shall file with the Secretary the distance of each WPA area from the proposed construction work area and documentation of consultations with applicable municipalities and/or other federal and state agencies regarding construction in areas with WPA or other groundwater management areas crossed by the pipeline. (page 4-26)
50. **Within 30 days of placing the pipeline facilities in service**, Rockies Express shall file a report with the Secretary identifying all water supply wells/systems damaged by construction and how they were repaired. The report shall include a discussion of any complaints concerning the well yield or quality and how each problem was resolved. (page 4-27)
51. **Prior to the start of construction** across Flatrock River (MP 362.7) and Righthand Fork Salt Creek (MP 375.6) in Indiana and Somerset Creek (MP 553.2) in Ohio, Rockies Express shall file with the Secretary documentation of consultation with the organizations or individuals who withdraw potable water within 3 miles of these proposed open-cut crossings. (page 4-30)
52. **Prior to the start of construction**, Rockies Express shall file with the Secretary a revised HDD contingency plan that indicates the agencies that would be contacted should a frac-out occur. (page 4-31)
53. Rockies Express shall file with the Secretary for review the results of its HDD geotechnical feasibility investigations, site-specific construction diagrams, and contingency plans for each HDD location. If a planned HDD crossing is not feasible, then Rockies Express shall develop a site-specific alternative crossing plan for each waterbody in consultation with all relevant agencies. Rockies Express' plans and documentation of consultations regarding the site-specific HDD plans shall be filed with the Secretary **prior to the end of the draft EIS comment period**. (page 4-31)
54. Rockies Express shall include the U.S. Coast Guard and COE to the list of agencies contacted in the event of a spill or leak as described in the SPCC Plan. Rockies Express shall file the revised SPCC plan with the Secretary **prior to the start of construction**. (page 4-33)
55. **Prior to the end of the draft EIS comment period**, Rockies Express shall file with the Secretary revised site-specific crossing plans that identify specific restoration and mitigation measures applicable to each sensitive waterbody crossing (listed in tables 4.3.3-1 and 4.6.2-1) and any applicable agency consultations. (page 4-33)
56. **Prior to the end of the draft EIS comment period**, Rockies Express shall file with the Secretary revised site-specific crossing plans for Nationwide Rivers Inventory waterbodies and documentation of consultation with the NPS and other applicable agencies regarding these finalized plans. (page 4-36)
57. **Prior to the end of the draft EIS comment period**, Rockies Express shall develop a contingency plan for the crossings of the Little Miami River and Big Darby Creek that identifies the alternative routes and crossing locations evaluated in section 3.4.3 and 3.4.7, respectively, of this draft EIS as the preferred alternative should the HDD of either waterbody fail. Rockies Express shall file with the Secretary the contingency plans, as well

as site-specific construction plans for the alternatives and a list of landowners affected by the alternatives. (page 4-36)

58. Rockies Express shall successfully complete the HDD crossing of the Little Miami River **prior to the start of construction** between MP 432.9 and MP 467.2. (page 4-37)
59. Rockies Express shall successfully complete the HDD crossing of the Big Darby Creek **prior to the start of construction** between MPs 494.1 and MP 533.9. (page 4-37)
60. **Prior to the end of the draft EIS comment period**, Rockies Express shall file with the Secretary an updated Dredge Material Disposal Plan for the Mississippi River, which includes the disposal location of this material. (page 4-38)
61. **Prior to the end of the draft EIS comment period**, Rockies Express shall file with the Secretary site-specific HDD crossing plans for the White River (MP 315.8) and Big Walnut Creek (MP 281.5). If geotechnical feasibility assessments indicate that HDD crossings of the White River and the Big Walnut Creek would not be possible, then Rockies Express shall consult with IDEM and FWS regarding alternative crossing methods and file the results of these consultations with the Secretary along with the geotechnical report. (page 4-38)
62. **Prior to the start of construction**, Rockies Express shall develop a site-specific wetland restoration plan for Blackburn Island in consultation with the COE, FWS, and MDNR. Rockies Express shall file this plan with the Secretary for review and written approval by the Director of OEP. (page 4-46)
63. **Prior to the start of construction**, Rockies Express shall consult with the COE, FWS, and other relevant agencies regarding replanting, monitoring, and managing reforestation for all temporary and permanent right-of-way, additional temporary workspaces and contractor yards/pipe yards located within forested wetlands. Rockies Express shall include this information in its Wetland Mitigation Plan. (page 4-48)
64. **Prior to the start of construction**, Rockies Express shall finalize consultations with the COE, FWS, and appropriate state and federal agencies to develop its Wetland Mitigation Plan; and file with the Secretary a draft Wetland Mitigation Plan and the results of its consultations with these agencies. (page 4-48)
65. **Prior to the end of the draft EIS comment period**, Rockies Express shall develop an upland forest mitigation plan in consultation with FWS, COE, and appropriate state agencies for each state. Rockies Express shall file this plan with the Secretary along with documentation of consultation with the agencies involved. (page 4-56)
66. For all HDDs, Rockies Express shall not clear any trees between the workspace for the drill site and the workspace for the exit site. Minor brush clearing, less than 3-foot-wide, using hand tools is allowed to facilitate the use of the HDD tracking system. (page 4-56)
67. **Prior to the end of the draft EIS comment period**, Rockies Express shall avoid cutting trees at or relocate the Bowling Green, Springfield, Green Castle, Middletown, Hamilton, Jefferson, Pickaway, Lancaster, and Guernsey contractor and pipe storage yards, where feasible, to minimize impacts to forested areas. Environmental information and

documentation of the revised locations of the pipe storage yards shall be filed with the Secretary. (page 4-58)

68. **Prior to the start of construction**, Rockies Express shall develop its compensatory mitigation plan for the classified forest areas in Indiana, in consultation with the classified forest landowners; INDNR, Division of Forestry; and the local District Forester. This plan shall be filed with the Secretary along with documentation of related consultation for review and written approval by the Director of OEP. (page 4-58)
69. **Prior to the start of construction**, Rockies Express shall file with the Secretary a copy of its Flood Control Permit from INDNR. (page 4-60)
70. **Prior to the end of the draft EIS comment period**, Rockies Express shall consult with FSA and other applicable federal and state agencies to identify affected CRP lands and to develop mitigation measures to protect CRP lands. Rockies Express shall file this information with the Secretary along with copies of all related correspondence. (page 4-60)
71. **Prior to the start of construction**, Rockies Express shall include the Japanese hop in its Weed Management Plan and file the revised Weed Management Plan with the Secretary. (page 4-61)
72. **Prior to the end of the draft EIS comment period**, Rockies Express shall consult with each applicable Comprehensive Wildlife Conservation Strategy Coordinator to verify that it is in compliance with the state's Comprehensive Wildlife Conservation Strategy to the maximum extent practicable and file with the Secretary documentation of this correspondence. (page 4-66)
73. **Prior to the end of the draft EIS comment period**, Rockies Express shall file with the Secretary, documentation of consultations with FWS to determine the need for bald eagle surveys. If surveys are required, Rockies Express shall file with the Secretary survey reports along with FWS comments on those surveys and documentation of its consultation with FWS. (page 4-69)
74. Rockies Express shall implement the National Bald Eagle Management Guidelines, including limitation of construction activities in the vicinity of active bald eagle nests, as recommended by FWS between **February 1 through July 31**. (page 4-69)
75. **Prior to the end of the draft EIS comment period**, Rockies Express shall file with the Secretary, documentation of its finalized consultation with FWS to determine specific areas of forest fragmentation that would impact breeding sites and activities for migratory birds, and to determine site-specific mitigation for each area of concern. (page 4-70)
76. **Prior to the end of the draft EIS comment period**, Rockies Express shall file with the Secretary its MBTA Conservation Agreement, which shall be developed in consultation with FWS. Rockies Express shall file documentation of related consultation with other agencies. (page 4-71)
77. **Prior to the end of the draft EIS comment period**, Rockies Express shall consult with appropriate jurisdictional agencies regarding construction schedules and any necessary mitigation measures for the sensitive wildlife areas identified in table 4.5.4-1 that would minimize construction-related impacts to wildlife. Rockies Express shall file its

construction schedule along with documentation of its consultation with the Secretary. (page 4-75)

78. Rockies Express shall use a dry-ditch technique, such as flume, dam-and-pump, bore, or HDD, to cross any waterbodies that are considered fisheries of special concern with a wetted width less than 30 feet, as described in table 4.6.2-1. If a wet-crossing method would be used for waterbodies less than 30 feet, Rockies Express shall file with the Secretary the proposed crossing method along with documentation of approval by the appropriate state agency **prior to the end of the draft EIS comment period.** (page 4-81)
79. **Prior to the end of the draft EIS comment period,** Rockies Express, in consultation with FWS and COE, shall develop a project- and site-specific tree clearing plan for the Indiana bat that includes the location of any potential maternity roost trees in or adjacent to the construction corridor. For forested wetlands, Rockies Express shall develop the project- and site-specific tree clearing plan for the Indiana bat that includes the location of any potential maternity roost trees in or adjacent to the construction corridor in consultation with FWS and COE. (page 4-90)
80. **During construction,** trees, limbs, brush, and debris shall not be burned in the right-of way within 500 feet of potential Indiana bat habitat to avoid smoke impacts on Indiana bats. (page 4-90)
81. Rockies Express shall not use herbicides or pesticides for maintenance of the permanent right-of-way or adjacent forested areas, regardless of whether Indiana bats are present, **for the life of the Project.** (page 4-90)
82. Rockies Express shall not begin construction or cut or remove trees until:
 - a. Staff have reviewed the results of the Indiana bat surveys, habitat analysis, and any comments from FWS regarding the proposed action;
 - b. Staff complete any necessary consultation with FWS for the Indiana bat; and
 - c. Rockies Express has received written notification from the Director of OEP that construction or use of mitigation may begin. (page 4-91)
83. **During construction,** if any whooping cranes are encountered in the immediate vicinity during construction of the pipeline or other aboveground facilities in Indiana and Ohio, construction shall immediately stop in that area, FWS and the FERC shall be contacted, and appropriate protection measures would be developed and implemented. Protection measures shall be developed in coordination with FWS. (page 4-92)
84. **Prior to the end of the draft EIS comment period,** Rockies Express shall file with the Secretary, the completed habitat assessment for the eastern massasauga snake along with FWS comments on the habitat survey. (page 4-93)
85. **Prior to the end of the draft EIS comment period,** Rockies Express shall file with the Secretary site-specific HDD crossing contingency plans for waterbodies that are surrounded by floodplains that provide important Indiana bat habitat, and that would be crossed using the HDD method, such as the Mississippi River, Wabash River, Big Raccoon Creek, Big Walnut Creek, and West Fork White River. Should HDD fail at one of these

crossings, the new crossing procedure and mitigation measures shall be completed in consultation with FWS, and the results shall be filed with the Secretary for review and written approval by the Director of OEP **prior to construction**. (page 4-96)

86. **Prior to the end of the draft EIS comment period**, Rockies Express shall file with the Secretary the feasibility of using a dry crossing method for the Sugar Creek at MP 484.3. (page 4-97)
87. **Prior to the end of the draft EIS comment period**, Rockies Express shall file with the Secretary site-specific HDD crossing contingency plans for the Scioto River and Deer Creek. If HDD fails at these crossings, the new crossing procedures and mitigation measures shall be developed in consultation with FWS. Results of such consultations shall be filed with the Secretary for review and written approval by the Director of OEP **prior to construction**. (page 4-97)
88. **During construction**, Rockies Express shall not withdraw hydrostatic test water from waterbodies where endangered mussels or glochidia/host fish or juveniles could be directly impacted. (page 4-97)
89. **Prior to the end of the draft EIS comment period**, Rockies Express shall file with the Secretary completed mussel survey reports for the federally listed mussel species, documentation of its consultation with FWS and ONR, and conservation measures necessary to minimize impact to mussel beds. (page 4-97)
90. **Prior to the end of the draft EIS comment period**, Rockies Express shall file with the Secretary the completed survey report for the running buffalo clover along with the FWS comments on the survey. (page 4-99)
91. **Prior to the start of construction**, Rockies Express shall file with the Secretary a diagram of the fencing plan indicating perimeter and distance to running buffalo clover plants from the fence for review and written approval by the Director of OEP. (page 4-99)
92. **Prior to the start of construction**, Rockies Express shall conduct pre-construction surveys for the decurrent false aster, and file with the Secretary the survey report and if necessary, a diagram of the fencing plan indicating perimeter and distance to plant from the fence for review and written approval by the Director of OEP. If avoidance is not possible, Rockies Express shall consult with FWS to develop mitigation measures for this species. (page 4-100)
93. **Prior to the start of construction**, Rockies Express shall file with the Secretary a diagram of the fencing plan indicating perimeter and distance to prairie fringed orchid plants from the fence, for review and written approval by the Director of OEP. (page 4-101)
94. **Prior to the start of construction**, Rockies Express shall file with the Secretary a diagram of the fencing plan indicating perimeter and distance to prairie bush clover plants from the fence for review and written approval by the Director of OEP. (page 4-102)
95. **Prior to the end of the draft EIS comment period**, Rockies Express shall file with the Secretary the feasibility of using a dry crossing method for waterbody crossings in Muskingum County that contain eastern hellbenders. (page 4-105)

96. **Prior to the end of the draft EIS comment period**, Rockies Express shall file with the Secretary the feasibility of using a dry crossing method for Youngs Creek (MP 336.1) to minimize impact to rabbitsfoot mussel. (page 4-106)
97. **Prior to the start of construction**, Rockies Express shall file with the Secretary for review and approval by the Director of OEP, pre-construction survey reports, ODNR comments on the survey, and a diagram of the fencing plan for the Drummond's Aster, including the fence perimeter and distance to plants from the fence. (page 4-107)
98. Rockies Express shall develop and implement a five-year post-construction monitoring program to evaluate crop productivity in areas impacted by the construction of the Project. Rockies Express shall file with the Secretary **quarterly reports for a period of five years following construction** documenting any crop-related problems, including soil heating near compressor stations, identified by the company or landowner and describing any corrective action taken to remedy those problems. If any landowner agrees that revegetation and crop productivity are successful prior to the five year requirement, Rockies Express shall provide documentation in its quarterly reports, indicating which landowners have agreed that monitoring is no longer necessary. This documentation shall include the landowners' name, tract number, and the date of agreement. (page 4-114)
99. Rockies Express shall file with the Secretary, and provide to the MODNR, a state-specific AIMP for Missouri **prior to the end of the draft EIS comment period**. (page 4-115)
100. Rockies Express shall hire local drain tile contractors to install/repair drain tiles that are damaged or need to be rerouted due to construction activities. (page 4-117)
101. **During construction**, Rockies Express shall identify and mark all encountered, severed, and/or damaged tile lines on each affected landowner's property using GPS coordinates accurate to one meter. Rockies Express shall provide this information to the landowner, the local county Soil and Water Conservation District, and be kept in the company's landowner records for future reference. (page 4-117)
102. Rockies Express shall bury the pipeline at a minimum depth of five feet where the pipeline would cross agricultural fields with prime soils unless otherwise negotiated with landowners. (page 4-118)
103. Rockies Express shall file a plan with the Secretary of the crossing of Wilson Friendly Maple Farm **prior to the end of the draft EIS comment period**. This plan shall include avoiding the removal of trees and impacts on the maple syrup operation. For any unavoidable impacts Rockies Express shall quantify the impact, justify why the impact is required, and provide mitigation for the impact. (page 4-120)
104. Rockies Express shall file with Secretary **prior to the end of the draft EIS comment period** a site-specific explanation of how access would be maintained for each residence whose driveway or access would be affected by construction activities. (page 4-123)
105. Rockies Express shall provide each landowner and tenant whose residence is within 50 feet of the proposed construction work area with a copy of the site-specific plan for construction near their residence **at the same time Rockies Express files its Implementation Plan with the Commission**. (page 4-123)

106. Rockies Express shall file site-specific plans with the Secretary for review and written approval by the Director of OEP **prior to the start of construction** that:
 - a. Describe the measures that would be taken to minimize construction impacts on each residence within 25 feet of a construction work area, including but not limited to reduced pipeline separation, centerline adjustment, use of stove-pipe or drag-section techniques, working over existing pipelines, pipeline crossover, bore, or a minor route variation;
 - b. Include discussion of how Rockies Express would ensure that the trench is not excavated until the pipe is ready for installation and that the trench is backfilled immediately after pipe installation; and
 - c. Include evidence of landowner concurrence if the construction work area and fencing will be located within 10 feet of a residence. (page 4-123)
107. **Prior to the start of construction**, Rockies Express shall file with the Secretary a site-specific construction plan for Tract IL-MC-028.051 for review and written approval by the Director of OEP. (page 4-125)
108. **Prior to the end of the draft EIS comment period**, Rockies Express shall file a construction plan for the property in Warren County, Ohio on Tract OH-WA-066.000 to OH-WA-066.002 that preserves the ability to construct a home, or propose an alternative route. (page 4-125)
109. Rockies Express shall identify all septic systems **prior to the start of construction**, present each property owner with a copy of the Septic System Contingency Plan, and restore, relocate, or replace all septic systems damaged during construction, whether or not such mitigation was part of the easement negotiation. (page 4-125)
110. Rockies Express shall file with the Secretary **prior to the end of the draft EIS comment period**:
 - a. Complete geotechnical information for both crossing methods for the Sny Levee;
 - b. A feasibility study of both crossing methods;
 - c. A detailed plan for both crossing methods, including detailed information on how the levee would be protected during construction; and
 - d. Documentation of consultation on these plans with the Sny Levee District and the COE. (page 4-134)
111. **Prior to the start of construction**, Rockies Express shall file with the Secretary for review and written approval by the Director of OEP a plan for setting up a safe portage for canoeists who wish to traverse the crossing area of the West Fork White River during construction. This plan shall include assistance transporting canoes around the work area for those who request help. (page 4-136)
112. Rockies Express shall file with the Secretary for review and written approval by the Director of OEP **prior to the start of construction**, a plan for the crossing of the B&O

Trail. This plan shall include measures for maintaining public access to the trail and avoidance of tree cutting at the crossing location. (page 4-136)

113. Rockies Express shall file with the Secretary for review and written approval by the Director of OEP **prior to the start of construction** a site-specific mitigation plan for the HDD crossing of Big Walnut Creek that includes a reduction of tree clearing at the crossing site, a revegetation plan including the planting of native vegetation, and a portage plan for user of Big Walnut Creek, including assistance in moving the canoes/floats around the crossing location if needed. (page 4-138)
114. Rockies Express shall work with Camp Woodsmoke to determine a schedule for crossing the camp. Rockies Express shall discuss with the camp the need for any additional safety mitigation (fencing, signs) during construction in the camp. The results of this consultation shall be filed with the Secretary for review and written approval by the Director of OEP **prior to the start of construction.** (Page 4-139)
115. Rockies Express shall file with the Secretary **prior to the end of the draft EIS comment period** a site-specific plan for the crossing and restoration of the Little Miami River. This plan shall include all proposed mitigation; contingency plans for HDD failures, frac-outs, and hydrostatic test water source and release; and revegetation. This plan shall be developed in consultation with the ODNR and the NPS. (page 4-140)
116. **Prior to the start of construction,** Rockies Express shall file with the Secretary for review and written approval by the Director of OEP a site-specific plan for the crossing of each tributary of the Little Miami River, developed in consultation with the NPS. These plans shall include:
 - a. dry-crossing method;
 - b. minimization of tree clearing;
 - c. erosion controls that would minimize down stream siltation; and
 - d. a restoration and revegetation plan. (page 4-140)
117. Rockies Express shall file with the Secretary for review and written approval by the Director of OEP **prior to the end of the draft EIS comment period** a site-specific plan for the crossing and restoration of the Big Darby Creek. This plan shall include all proposed mitigation; contingency plans for HDD failures, frac-outs, and hydrostatic test water source and release; and revegetation. This plan shall be developed in consultation with the ODNR and the NPS. (page 4-141)
118. **Prior to the start of construction,** Rockies Express shall file with the Secretary for review and written approval by the Director of OEP a site-specific plan for the crossing of each tributary of the Big Darby Creek, developed in consultation with the NPS. These plans shall include:
 - a. dry-crossing method;
 - b. minimization of tree clearing;

- c. erosion controls that would minimize down stream siltation; and
 - d. a restoration and revegetation plan. (page 4-142)
119. Rockies Express shall consult with the NPS to determine which of the tributaries of Big Darby Creek that would be crossed, should be surveyed for mussels and fish spawning areas. Rockies Express shall file the results of any required surveys with the Secretary for review and written approval by the Director of OEP **prior to the start of construction**, along with any correspondence with the NPS. (page 4-142)
 120. Rockies Express shall develop a plan for warning boaters of construction on Painted Creek. In addition, the plan shall contain provision for a safe portage through the construction work area. Rockies Express shall provide assistance in moving the boats around the construction work area if requested. Rockies Express shall file this plan with the Secretary for review and written approval by the Director of OEP **prior to the start of construction**. (page 4-143)
 121. Rockies Express shall file with the Secretary for review and written approval by the Director of OEP **prior to the start of construction** a plan for the construction and restoration of the Little Miami Scenic State Park. Rockies Express shall also include a plan for maintaining safe public access through the construction area and revegetating the disturbed areas by planting native vegetation. This plan shall be developed in consultation with the ODNR. (page 4-144)
 122. **Prior to the start of construction**, Rockies Express should file with the Secretary for review and written approval by the Director of OEP a site-specific crossing, mitigation, and restoration plan for pipeline construction activities in Caesar Creek State Park and Wildlife Area developed in consultation with the ODNR. (page 4-145)
 123. **Prior to the start of construction**, Rockies Express shall file with the Secretary for review and written approval by the Director of OEP a site-specific crossing, mitigation, and restoration plan for pipeline construction activities in Perry State Forest and Blue Rock State Forest. (page 4-146)
 124. **Prior to the start of construction**, Rockies Express shall file with the Secretary for review and written approval by the Director of OEP a site-specific crossing plan for pipeline construction activities in the White Oak Exotic Hunting Preserve, and that Rockies Express work with the land owner to find a time for construction that is minimally disruptive to their business. (page 4-146)
 125. **Prior to the end of the draft EIS comment period**, Rockies Express shall consult with each state's Department of Transportation and local traffic authorities regarding road closures and appropriate detours. Rockies Express shall file documentation of this consultation with the Secretary. (page 4-159)
 126. Rockies Express shall avoid or conduct Phase II evaluation testing for any potentially eligible sites in Missouri that have not yet been addressed, including 23PI1341, 23PI1352, 23PI1379, and 23RA1878. Rockies Express shall file with the Secretary for review and written approval by the Director of OEP the Phase II report and the SHPO's comments on the report, **prior to the start of construction**. (page 4-165)

127. Rockies Express shall fence the right-of-way and provide an archaeological monitor **during construction** in the vicinity of the Montezuma Mound Group (11PK1245). (page 4-165)
128. **Prior to the end of the draft EIS comment period**, Rockies Express shall develop and file with the Secretary a plan for avoiding and protecting prehistoric mound sites 11PK1709 and 11PK1733, and documentation of SHPO comments on the plan. (page 4-166)
129. Rockies Express shall avoid or conduct Phase II evaluation testing for any potentially eligible sites in Illinois that have not yet been addressed, including sites 11E141, 11PK1334, 11PK1597, 11PK1674 and 12 pending site numbers. Rockies Express shall file with the Secretary for review and written approval by the Director of OEP the Phase II report and the SHPO's comments on the report, **prior to the start of construction**. (page 4-166)
130. **Prior to the end of the draft EIS comment period**, Rockies Express shall develop and file with the Secretary a plan for avoiding and protecting prehistoric mound site 12FR125b. (page 4-167)
131. Rockies Express shall avoid or conduct Phase II evaluation testing for any potentially eligible sites in Indiana that have not yet been addressed, including 12FR337, 12PM345, 12DE776, and the five sites with pending site numbers. Rockies Express shall file with the Secretary for review and written approval by the Director of the OEP the Phase II report and the SHPO's comments on the report, **prior to the start of construction**. (page 4-167)
132. Rockies Express shall provide an archaeological monitor **during construction** for work in the vicinity of the former mound site 12SH12. (page 4-167)
133. **Prior to the end of the draft EIS comment period**, Rockies Express shall address any concerns or requests for additional information expressed by the Indiana SHPO in comments submitted in letters dated May 10 and September 17, 2007. (page 4-167)
134. Rockies Express shall avoid the Brockman Cemetery and Site 12FR332 and **prior to the end of the draft EIS comment period**, develop and file with the Secretary plans for site protection from construction activities. (page 4-168)
135. **Prior to construction**, Rockies Express shall complete architectural surveys for Indiana, file with the Secretary for review and written approval by the Director of OEP a report with the survey results, and file with the Secretary the SHPO's comments on the report. (page 4-168)
136. **Prior to the start of construction**, Rockies Express shall avoid or file with the Secretary for review and written approval by the Director of OEP a Phase II evaluation for the Wabash & Erie Canal and the SHPO's comments on the report. (page 4-168)
137. **Prior to the start of construction**, Rockies Express shall file with the Secretary for review and written approval by the Director of OEP a site-specific HDD construction plan that describes how the archaeological features associated with the Whitewater Canal would be avoided. (page 4-168)
138. Rockies Express shall avoid or conduct Phase II evaluation testing for any potentially eligible sites that have not yet been addressed in Ohio. Rockies Express shall file with the

Secretary for review and written approval by the Director of OEP the Phase II report and the SHPO's comments on the report, **prior to the start of construction.** (page 4-169)

139. **Prior to the end of the draft EIS comment period,** Rockies Express shall address the comments of the Ohio SHPO contained in letters dated September 6, 2007 and provide any information requested by the SHPO. (page 4-169)
140. **Prior to the start of construction,** Rockies Express shall avoid or file with the Secretary for review and written approval by the Director of OEP an assessment of eligibility and effects for architectural resources in Ohio, a report summarizing the assessment, and the SHPO's comments on the report. (page 4-170)
141. **Prior to the start of construction,** Rockies Express shall avoid or conduct and file with the Secretary for review and written approval by the Director of OEP a report with additional architectural evaluations of the Wilson Friendly Farm in Warren County, Ohio (MP 458) and the SHPOs comments on the report. (page 4-170)
142. Rockies Express **shall** defer construction and use of facilities, **staging, storage, temporary work areas, and new or to-be-improved access roads until:**
 - a. Rockies Express files with the Secretary all additional required cultural resource inventory and evaluation reports, avoidance or treatment plans, and any additional information that SHPOs have requested;
 - b. Rockies Express files with the Secretary copies of the appropriate SHPO comments on all reports and plans;
 - c. The ACHP has been provided an opportunity to comment on whether any historic properties would be adversely affected; and
 - d. The Director of OEP reviews and approves all reports and plans and notifies Rockies Express in writing that it may proceed with treatment or construction. (page 4-175)

All material filed with the Commission that contains **location, character, and ownership** information about cultural resources must have the cover and any relevant pages therein clearly labeled in bold lettering: "**CONTAINS PRIVILEGED INFORMATION—DO NOT RELEASE.**" (page 4-175)

143. **Prior to the end of the draft EIS comment period,** Rockies Express shall file with the Secretary the completed air dispersion modeling portion of the permit application for the Arlington Compressor Station. (page 4-176)
144. **Prior to the end of the draft EIS comment period,** Rockies Express shall file with the Secretary the completed air permit application for the Chandlersville Compressor Station. (page 4-177)
145. **Prior to the start of construction,** Rockies Express shall file with the Secretary for review and written approval by the Director of OEP the age distribution and emission control technology associated with all of its contractor's fleet equipment for the project. During construction, in its filed weekly status reports, Rockies Express shall identify the equipment used in the non-attainment areas. (page 4-190)

146. **Prior to the start of construction**, Rockies Express shall file with the Secretary for review and written approval by the Director of OEP updated site specific plans for any HDD entry or exit site it proposes to implement noise mitigation. The updated plans shall identify any noise walls or barriers, equipment locations, equipment barriers, or any other mitigation measures. (page 4-196)
147. **Prior to the end of the draft EIS comment period**, Rockies Express shall file a noise analysis, for review and written approval by the Director of OEP, for any new HDD sites (including the White River and Big Walnut Creek crossings) or any HDD sites that are relocated since the publication of the draft EIS. This analysis shall identify any NSAs within one half mile of the HDD entry or exit location, and the proposed length of time HDD activities would occur. The analysis shall also include background noise levels and estimated drilling noise contributions at the nearest NSAs at each HDD entry and exit location with Noise Sensitive Areas within one half mile, along with any measures Rockies Express will implement to control noise from the HDDs. (page 4-196)
148. Rockies Express make all reasonable efforts to assure its predicted noise levels from the Arlington, Bertrand, Mexico, Blue Mound, Bainbridge, Hamilton, and Chandlersville Compressor Stations are not exceeded at nearby NSAs and file noise surveys showing this with the Secretary **no later than 60 days after placing each of the Arlington, Bertrand, Mexico, Blue Mound, Bainbridge, Hamilton, and Chandlersville Compressor Stations in service**. However, if the noise attributable to the operation of the Arlington, Bertrand, Mexico, Blue Mound, Bainbridge, Hamilton, or Chandlersville Compressor Stations at full load exceeds a DNL of 55 dBA at any nearby NSAs, Rockies Express shall file a report on what changes are needed and shall install additional noise controls to meet the level **within 1 year of the in-service date**. Rockies Express shall confirm compliance with this requirement by filing a second noise survey with the Secretary **no later than 60 days after it installs the additional noise controls**. (page 4-198)
149. Rockies Express shall file with the Secretary and the Sny Levee District the survey results for levee settlement monitoring **every six months for a period of five years after installation under the levee**. (page 4-205)