



U.S. Department of Energy Categorical Exclusion Determination Form

Submit by E-mail

Proposed Action Title: NERC mitigation actions along three transmission lines

Program or Field Office: Western Area Power Administration, Desert Southwest Regional Office

Location(s) (City/County/State): La Paz, Mohave, Maricopa, and Yavapai Counties, AZ

Proposed Action Description:

Western proposes to correct design discrepancies associated with the existing Topock-Black Mesa, Peacock-Prescott, and Gavilan Peak-Prescott 230-kV transmission lines in Mohave, Yavapai, and Maricopa counties, Arizona. A discrepancy exists when field conditions of the transmission line are not compliant with minimum National Electric Safety Code requirements. For the proposed facilities ratings project, Western will correct the conductor height in areas where sagging has occurred, resulting in ground clearance issues. Identified problem spans will be corrected by installing floating dead ends on existing structures, reconductoring segments of the transmission line, reinforcing existing steel lattice towers, installing one (1) steel pole structure, and removing one (1) structure. The project is anticipated to start in January 2015 and be complete by December 2015. See continuation sheet.

Special Conditions-Contractor must notify COR 60 days prior to land and vegetation disturbance activities in order for environmental (G0400) to complete required clearances (e.g., biological or cultural pre-construction surveys)

Categorical Exclusion(s) Applied:

B4.6 - Additions and modifications to transmission facilities

For the complete DOE National Environmental Policy Act regulations regarding categorical exclusions, including the full text of each categorical exclusion, see Subpart D of [10 CFR Part 1021](#).

Regulatory Requirements in 10 CFR 1021.410(b): (See full text in regulation)

The proposal fits within a class of actions that is listed in Appendix A or B to 10 CFR Part 1021, Subpart D.

To fit within the classes of actions listed in 10 CFR Part 1021, Subpart D, Appendix B, a proposal must be one that would not: (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities; (3) disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources, including, but not limited to, those listed in paragraph B(4) of 10 CFR Part 1021, Subpart D, Appendix B; (5) involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those listed in paragraph B(5) of 10 CFR Part 1021, Subpart D, Appendix B.

There are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal.

The proposal has not been segmented to meet the definition of a categorical exclusion. This proposal is not connected to other actions with potentially significant impacts (40 CFR 1508.25(a)(1)), is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.27(b)(7)), and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211 concerning limitations on actions during preparation of an environmental impact statement.

Based on my review of the proposed action, as NEPA Compliance Officer (as authorized under DOE Order 451.1B), I have determined that the proposed action fits within the specified class(es) of action, the other regulatory requirements set forth above are met, and the proposed action is hereby categorically excluded from further NEPA review.

NEPA Compliance Officer:

Date Determined:

6.5.14

NERC Mitigation Categorical Exclusion Continuation Sheet

1. Topock-Black Mesa 230-kV Transmission Line:

- a. **Replace Transmission Line Conductor**-Removal and replacement of 2.7 miles of existing 230-kV transmission line (includes suspension clamps and compression dead ends, from existing insulator assemblies. Aluminum Conductor Steel Reinforced (ACSR) will be replaced with Aluminum Conductor Steel Supported (ACSS) conductor to allow increased tension on transmission line. At tangent structures (where there is no change in the angle of the transmission line), pulleys or travelers will be installed where the existing conductor attaches to the insulator. The old conductor will be pulled out through the travelers and new wire will be pulled in. A bucket truck will be used to allow crews to access the insulator points to attach and remove the travelers. A pulling truck will be setup at one dead end location oriented on the opposite side of the structure from the segment where the conductor will be pulled. A wire boat and tensioner truck will be setup at the opposite dead end of the reconducted segment, also oriented on the opposite side of the conductors being pulled. At angle structures and dead ends, equipment and crews will use a maximum 300-foot radius half-circle as a pulling/tensioning site.

- 38/1 to 39/2 (38/1, 38/2, 38/3, 38/4, 39/1, 39/2)
- 56/4 to 58/1 (56/4, 56/5, 57/1, 57/2, 57/3, 57/4, 58/1)

- b. **Transmission Line Steel Lattice Towers**-Installation of new galvanized steel reinforcing bracing to five (5) suspension type steel lattice structures to help strengthen the structures. Pickup, bucket, and line trucks will be used to install the bracing.

- 27/3, 28/4, 36/1, 39/3, 53/3

- c. **Transmission Line Electrical**-Removal of existing single-string suspension insulator assemblies and conductor vibration dampers from 16 steel lattice towers. The single-string suspension insulators will be replaced with double-string floating dead end insulator assemblies. At these locations bucket trucks will be used to access and replace the insulator arrangements on the existing structures. Equipment and crews may use a maximum 150-foot radius around the existing structures to access the insulator assemblies.

21/3	28/2	33/1	52/1
22/1	28/4	35/3	53/3
22/2	30/1	36/1	53/4
27/3	32/4	39/2	54/3

- d. **Transmission Line Steel Pole Structures**-Installation of one (1) single-circuit suspension steel pole H-frame structure. The structure embedment depth will be 25 feet, unless rock is encountered. If rock is encountered, structure embedment depths may be reduced to the overburden depth plus 10 feet. An auger truck will be used to drill the holes for the footings. Concrete will be poured into the holes for the footings.

- 47/3A

2. Peacock-Prescott 230-kV Transmission Line:

- a. **Replace Transmission Line Conductor**-Removal and replacement of 11.8 miles of existing 230-kV transmission line (includes suspension clamps and compression dead ends, from existing insulator assemblies. ACSR conductor will be replaced with ACSS conductor to allow increased tension on transmission line. At tangent structures (where there is no change in the angle of the transmission line), pulleys or travelers will be installed where the existing conductor attaches to the insulator. The old conductor will be pulled out through the travelers and new wire will be pulled in. A bucket truck will be used to allow crews to access the insulator points to attach and remove the travelers. A pulling truck will be setup at one dead end location oriented on the opposite side of the structure from the segment where the conductor will be pulled. A wire boat and tensioner truck will be setup at the opposite dead end of the reconducted segment, also oriented on the opposite side of the conductors being pulled. At angle structures and dead ends, equipment and crews will use a maximum 300-foot radius half-circle as a pulling/tensioning site.
- **55/2 to 61/5** (55/2, 55/3, 55/4, 56/1, 56/2, 56/3, 56/4, 57/1, 57/2, 57/3, 57/4, 58/1, 58/2, 58/3, 58/4, 59/1, 59/2, 59/3, 59/4, 60/1, 60/2, 60/3, 60/4, 61/1, 61/2, 61/3, 61/4, 61/5)
 - **99/4 to 105/1** (99/4, 100/1, 100/2, 100/3, 100/4, 101/1, 101/2, 101/3, 101/4, 102/1, 102/2, 102/3, 102/4, 103/1, 103/2, 103/3, 103/4, 104/1, 104/2, 104/3, 104/4, 105/1)
- b. **Transmission line steel lattice towers**-Installation of new galvanized steel reinforcing bracing to two (2) suspension type steel lattice structures. Pickup, bucket, and line trucks will be used to install the bracing.
- 50/4, 54/1
- c. **Transmission line electrical**-Removal of existing single-string suspension insulator assemblies and conductor vibration dampers from 54 steel lattice towers. The single-string suspension insulators will be replaced with double-string floating dead end insulator assemblies. At these locations bucket trucks will be used to access and replace the insulator arrangements on the existing structures. Equipment and crews may use a maximum 150-foot radius around the existing structures to access the insulator assemblies.

50/3	82/3	106/4	129/2
50/4	82/4	110/3	131/3
54/1	83/2	110/4	131/4
54/2	83/3	111/1	135/1
54/3	87/3	111/2	135/2
55/1	87/4	115/3	136/2
62/3	88/4	122/3	136/3
62/4	90/2	123/4	138/1
63/1	91/1	125/3	138/2
63/2	92/1	127/1	138/3
67/5	92/2	127/2	141/3
72/1	96/2	128/2	142/1
74/1	96/3	128/3	
82/2	105/4	129/1	

3. Gavilan Peak-Prescott 230-kV Transmission Line:

a. **Replace Transmission Line Conductor**-Removal and replacement of 17.8 miles of existing 230-kV transmission line conductor (includes suspension clamps and compression dead ends, from existing insulator assemblies. ACSR conductor will be replaced with ACSS conductor to allow increased tension on transmission line. At tangent structures (where there is no change in the angle of the transmission line), pulleys or travelers will be installed where the existing conductor attaches to the insulator. The old conductor will be pulled out through the travelers and new wire will be pulled in. A bucket truck will be used to allow crews to access the insulator points to attach and remove the travelers. A pulling truck will be setup at one dead end location oriented on the opposite side of the structure from the segment where the conductor will be pulled. A wire boat and tensioner truck will be setup at the opposite dead end of the reconducted segment, also oriented on the opposite side of the conductors being pulled. At angle structures and dead ends, equipment and crews will use a maximum 300-foot radius half-circle as a pulling/tensioning site.

- **142/3 to 150/4** (142/3, 142/4, 143/1, 143/2, 143/3, 144/1, 144/2, 144/3, 145/1, 145/2, 145/3, 145/4, 146/1, 146/2, 146/3, 146/4, 147/1, 147/2, 147/3, 147/4, 148/1, 148/2, 148/3, 148/4, 149/1, 149/2, 149/3, 150/1, 150/2, 150/3, 150/4)
- **195/3 to 205/2A** (195/3, 195/4, 196/1, 196/2, 196/3, 196/4, 197/1, 197/2, 197/3, 197/4, 198/1, 198/2, 198/3, 198/4, 198/5, 199/1, 199/2, 199/3, 199/4, 200/1, 200/2, 200/3, 200/4, 201/1, 201/2, 201/3, 201/4, 201/5, 202/1, 202/2, 202/3, 202/4, 203/1, 203/2, 203/3, 203/4, 204/1, 204/2, 204/3, 204/4, 205/1, 205/2, 205/2A)

b. **Transmission line steel lattice towers**-Installation of new cross members to five (5) suspension type steel lattice structures to help strengthen the structures. Pickup, bucket, and line trucks will be used to install the bracing.

- 177/1, 190/4, 195/1, 197/4

c. **Transmission line electrical**-Removal of existing single-string suspension insulator assemblies and conductor vibration dampers from 21 steel lattice towers. The single-string suspension insulators will be replaced with double-string floating dead end insulator assemblies. At these locations bucket trucks will be used to access and replace the insulator arrangements on the existing structures. Equipment and crews may use a maximum 150-foot radius around the existing structures to access the insulator assemblies.

157/4	163/2	171/3	194/2
158/3	163/3	175/1	194/3
158/4	163/4	177/1	195/1
159/2	163/5	188/2	
159/3	165/2	190/4	
160/2	165/3	192/2	

d. **Transmission line steel pole structures**-Removal of one Type 254S-80 light duty steel pole H-frame structure (143/3A). The structure is no longer needed and will inhibit increasing the transmission conductor to ground clearance. This structure is direct embedded (poles buried 13-15 feet below ground level without rebar reinforcement) and will either be removed or cut off below ground level and backfilled with surrounding soil. Soil will be spread evenly at the structure locations to match existing contours.

Checklist for Categorical Exclusion Determination, revised Nov. 2011

Application of Categorical Exclusions (1021.410)	Disagree	Agree	Unknown
(b)(1) The proposal fits within a class of actions that is listed in appendix A or B to subpart D.		X	
(b)(2) There are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal, including, but not limited to, scientific controversy about the environmental effects of the proposal; uncertain effects or effects involving unique or unknown risks; and unresolved conflicts concerning alternate uses of available resources		X	
(b)(3) The proposal has not been segmented to meet the definition of a categorical exclusion. Segmentation can occur when a proposal is broken down into small parts in order to avoid the appearance of significance of the total action. The scope of a proposal must include the consideration of connected and cumulative actions, that is, the proposal is not connected to other actions with potentially significant impacts (40 CFR 1508.25(a)(1), is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.27(b)(7)), and is not precluded by 40 CFR 1506.1 or § 1021.211 of this part concerning limitations on actions during EIS preparation.		X	
B. Conditions that are Integral Elements of the Classes of Actions in Appendix B. :	NO	YES	UNKNOWN
(1) Threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety and health, or similar requirements of DOE or Executive Orders.	X		
(2) Require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities;	X		
(3) Disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases;	X		
(4) Have the potential to cause significant impacts on environmentally sensitive resources. An environmentally sensitive resource is typically a resource that has been identified as needing protection through Executive Order, statute, or regulation by Federal, state, or local government, or a federally recognized Indian tribe. An action may be categorically excluded if, although sensitive resources are present, the action would not have the potential to cause significant impacts on those resources (such as construction of a building with its foundation well above a sole-source aquifer or upland surface soil removal on a site that has wetlands). Environmentally sensitive	X		

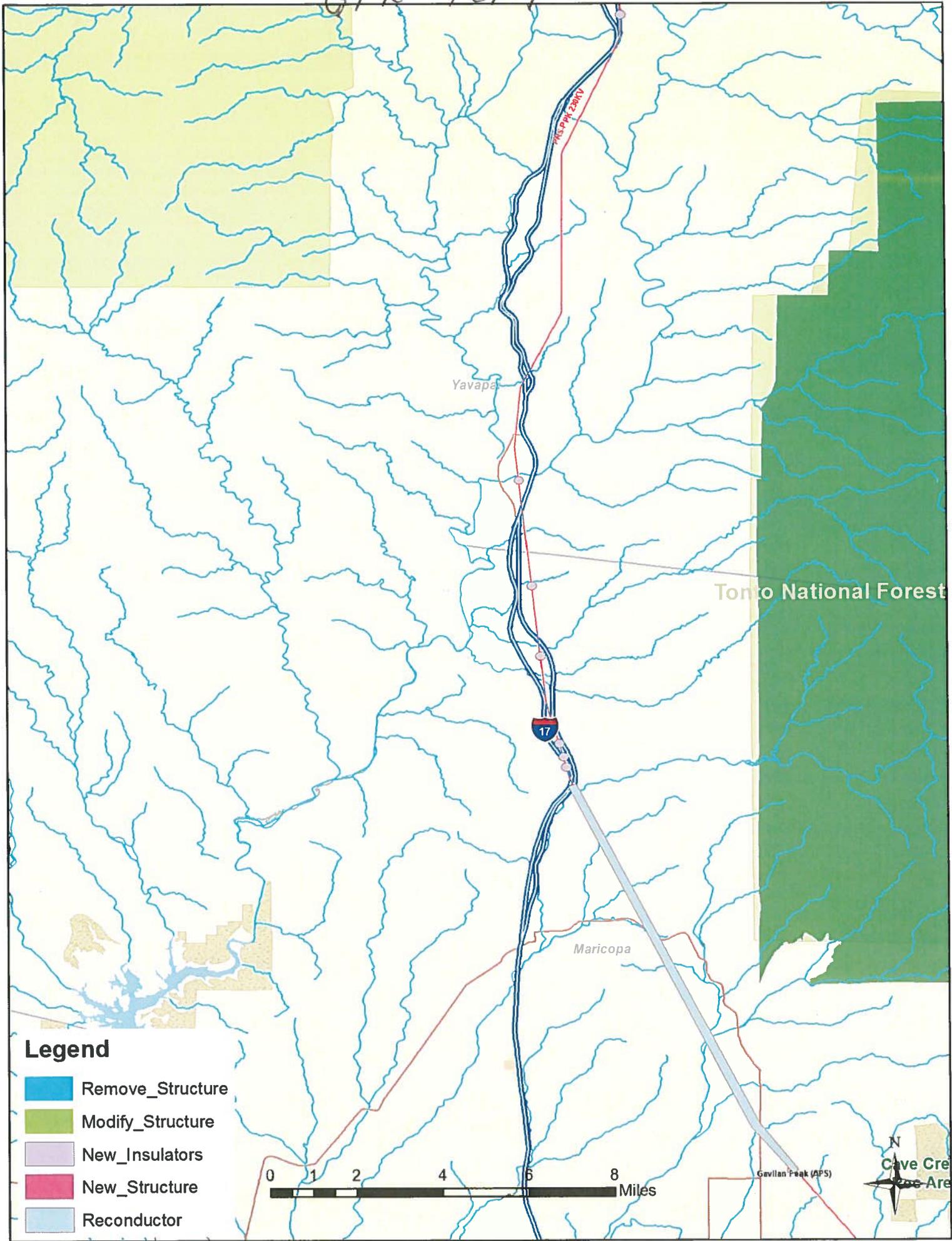
	resources include, but are not limited to:			
(i)	Property (such as sites, buildings, structures, and objects) of historic, archaeological, or architectural significance designated by a Federal, state, or local government, or property determined to be eligible for listing on the National Register of Historic Places;	X		
(ii)	Federally-listed threatened or endangered species or their habitat (including critical habitat) or Federally- proposed or candidate species or their habitat (Endangered Species Act); state-listed or state-proposed endangered or threatened species or their habitat; Federally-protected marine mammals and Essential Fish Habitat (Marine Mammal Protection Act; Magnuson-Stevens Fishery Conservation and Management Act); and otherwise Federally-protected species (such as under the Bald and Golden Eagle Protection Act or the Migratory Bird Treaty Act);	X		
(iii)	Floodplains and wetlands (as defined in 10 CFR 1022.4, —Compliance with Floodplain and Wetland Environmental Review Requirements: “Definitions,” or its successor);	X		
(iv)	Areas having a special designation such as Federally- and state-designated wilderness areas, national parks, national monuments, national natural landmarks, wild and scenic rivers, state and Federal wildlife refuges, scenic areas (such as National Scenic and Historic Trails or National Scenic Areas), and marine sanctuaries;	X		
(v)	Prime or unique farmland, or other farmland of statewide or local importance, as defined at 7 CFR 658.2(a), —Farmland Protection Policy Act: Definitions, or its successor;	X		
(vi)	Special sources of water (such as sole-source aquifers, wellhead protection areas, and other water sources that are vital in a region); and	X		
(vii)	Tundra, coral reefs, or rain forests.; or	X		
(5)	Involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those of the Department of Agriculture, the Environmental Protection Agency, and the National Institutes of Health.	X		

Checklist for Categorical Exclusion Determination, revised Nov. 2011

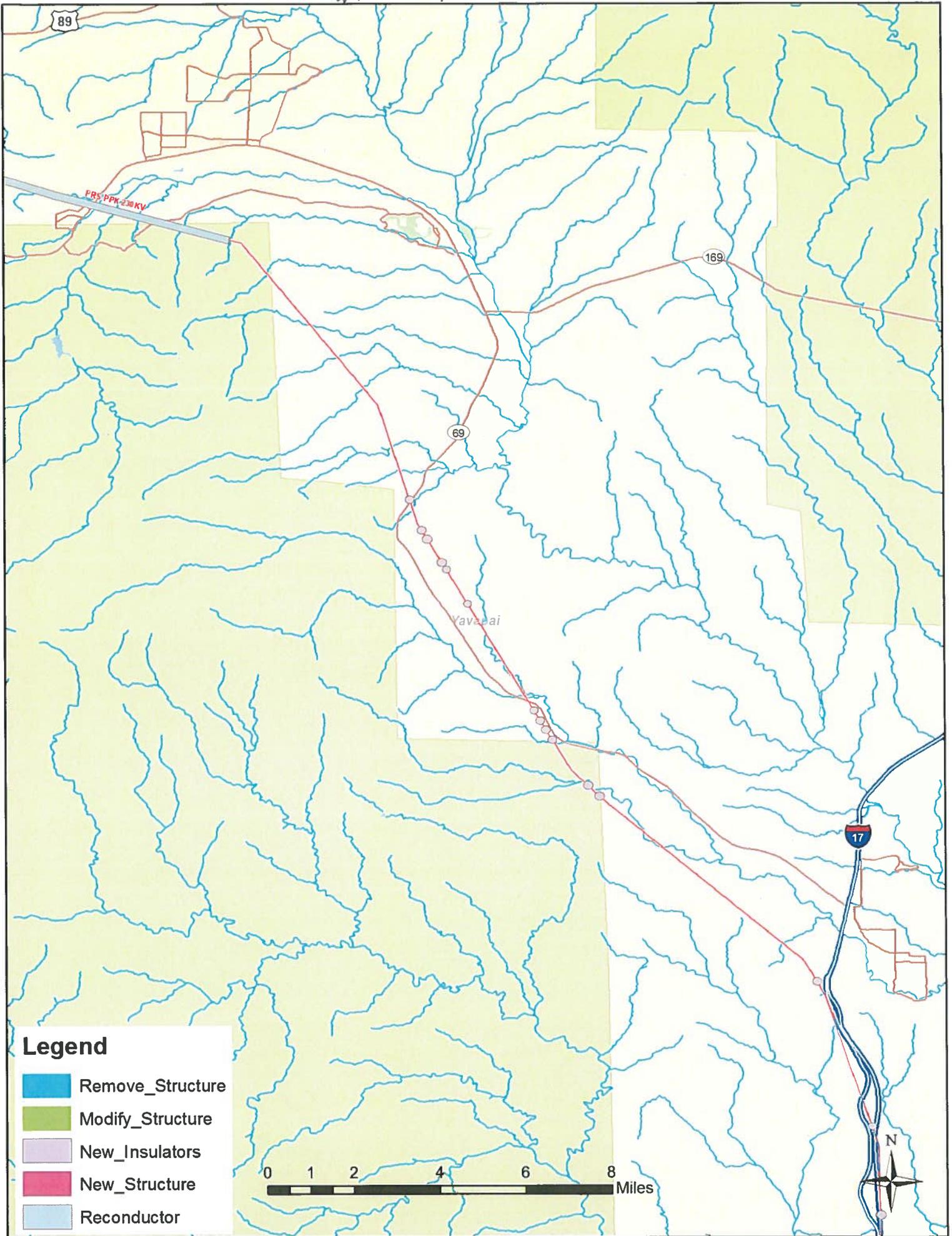
Application of Categorical Exclusions (1021.410)	Disagree	Agree	Unknown
(b)(1) The proposal fits within a class of actions that is listed in appendix A or B to subpart D.		X	
(b)(2) There are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal, including, but not limited to, scientific controversy about the environmental effects of the proposal; uncertain effects or effects involving unique or unknown risks; and unresolved conflicts concerning alternate uses of available resources		X	
(b)(3) The proposal has not been segmented to meet the definition of a categorical exclusion. Segmentation can occur when a proposal is broken down into small parts in order to avoid the appearance of significance of the total action. The scope of a proposal must include the consideration of connected and cumulative actions, that is, the proposal is not connected to other actions with potentially significant impacts (40 CFR 1508.25(a)(1), is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.27(b)(7)), and is not precluded by 40 CFR 1506.1 or § 1021.211 of this part concerning limitations on actions during EIS preparation.		X	
B. Conditions that are Integral Elements of the Classes of Actions in Appendix B. :	NO	YES	UNKNOWN
(1) Threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety and health, or similar requirements of DOE or Executive Orders.	X		
(2) Require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities;	X		
(3) Disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases;	X		
(4) Have the potential to cause significant impacts on environmentally sensitive resources. An environmentally sensitive resource is typically a resource that has been identified as needing protection through Executive Order, statute, or regulation by Federal, state, or local government, or a federally recognized Indian tribe. An action may be categorically excluded if, although sensitive resources are present, the action would not have the potential to cause significant impacts on those resources (such as construction of a building with its foundation well above a sole-source aquifer or upland surface soil removal on a site that has wetlands). Environmentally sensitive	X		

	resources include, but are not limited to:			
(i)	Property (such as sites, buildings, structures, and objects) of historic, archaeological, or architectural significance designated by a Federal, state, or local government, or property determined to be eligible for listing on the National Register of Historic Places;	X		
(ii)	Federally-listed threatened or endangered species or their habitat (including critical habitat) or Federally- proposed or candidate species or their habitat (Endangered Species Act); state-listed or state-proposed endangered or threatened species or their habitat; Federally-protected marine mammals and Essential Fish Habitat (Marine Mammal Protection Act; Magnuson-Stevens Fishery Conservation and Management Act); and otherwise Federally-protected species (such as under the Bald and Golden Eagle Protection Act or the Migratory Bird Treaty Act);	X		
(iii)	Floodplains and wetlands (as defined in 10 CFR 1022.4, —Compliance with Floodplain and Wetland Environmental Review Requirements: “Definitions,” or its successor);	X		
(iv)	Areas having a special designation such as Federally- and state-designated wilderness areas, national parks, national monuments, national natural landmarks, wild and scenic rivers, state and Federal wildlife refuges, scenic areas (such as National Scenic and Historic Trails or National Scenic Areas), and marine sanctuaries;	X		
(v)	Prime or unique farmland, or other farmland of statewide or local importance, as defined at 7 CFR 658.2(a), —Farmland Protection Policy Act: Definitions, or its successor;	X		
(vi)	Special sources of water (such as sole-source aquifers, wellhead protection areas, and other water sources that are vital in a region); and	X		
(vii)	Tundra, coral reefs, or rain forests.; or	X		
(5)	Involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those of the Department of Agriculture, the Environmental Protection Agency, and the National Institutes of Health.	X		

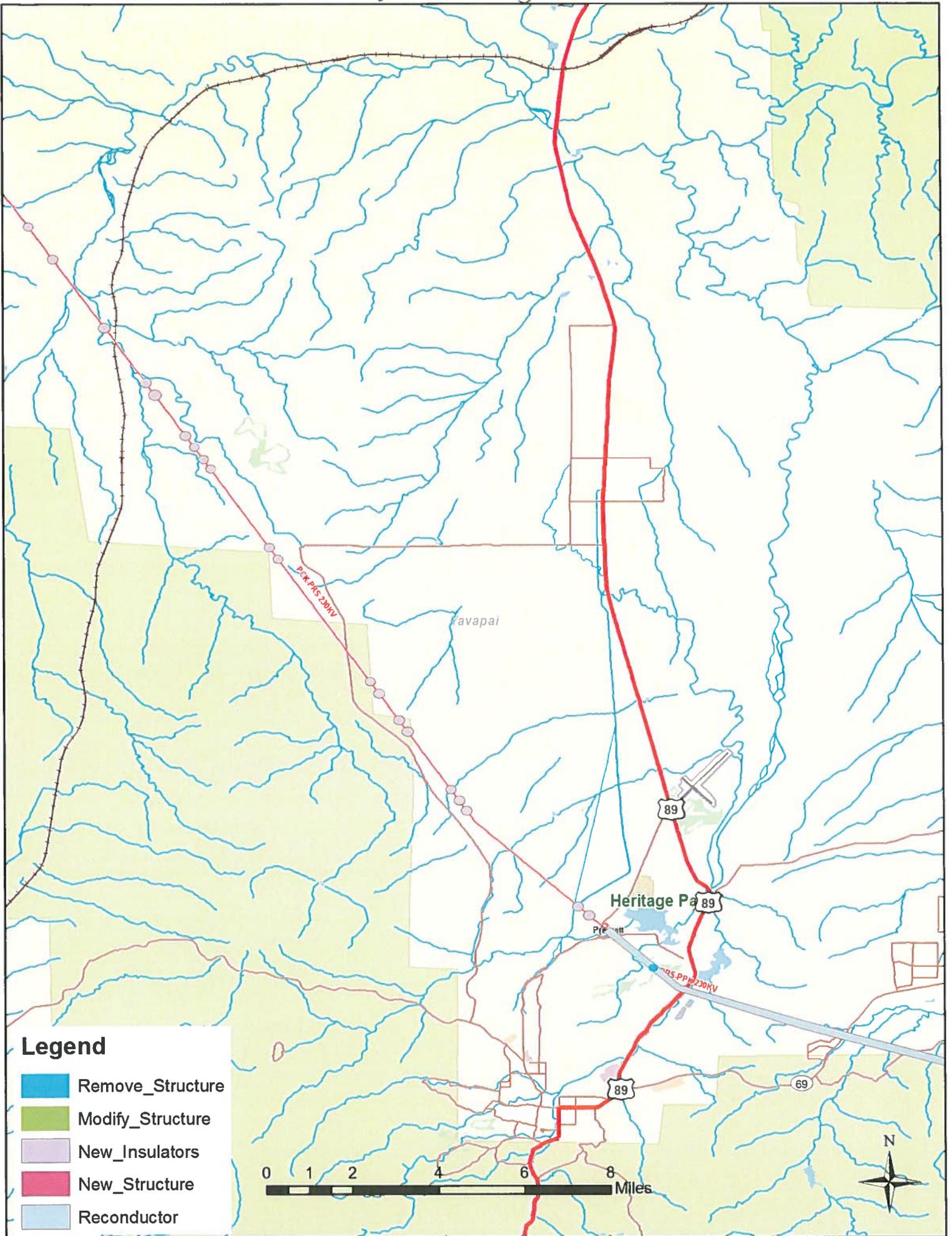
G'PK - PCK 1



G'PK - PCK 2



6'PK - PCK 3

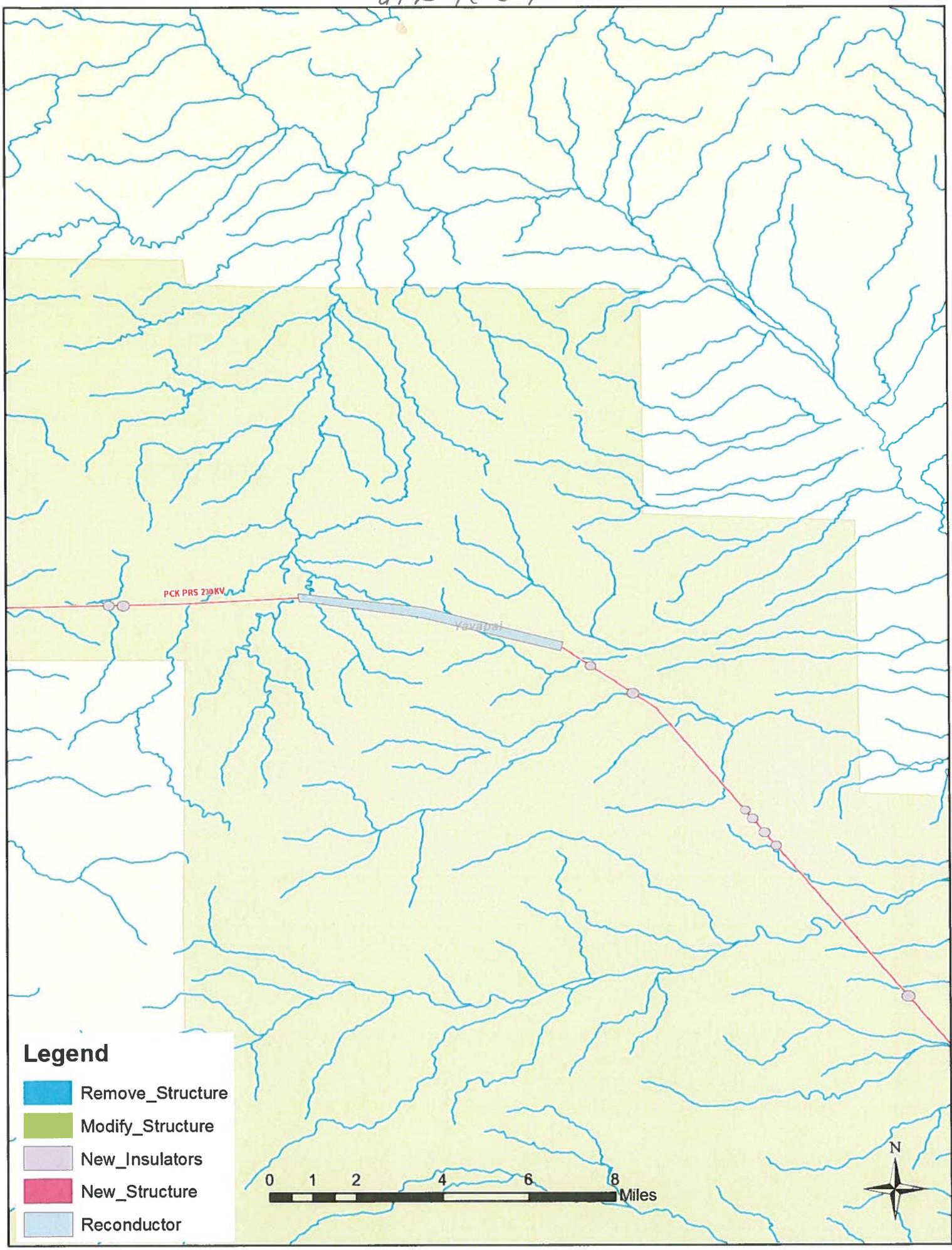


Legend

- █ Remove_Structure
- █ Modify_Structure
- █ New_Insulators
- █ New_Structure
- █ Reconductor

0 1 2 4 6 8 Miles



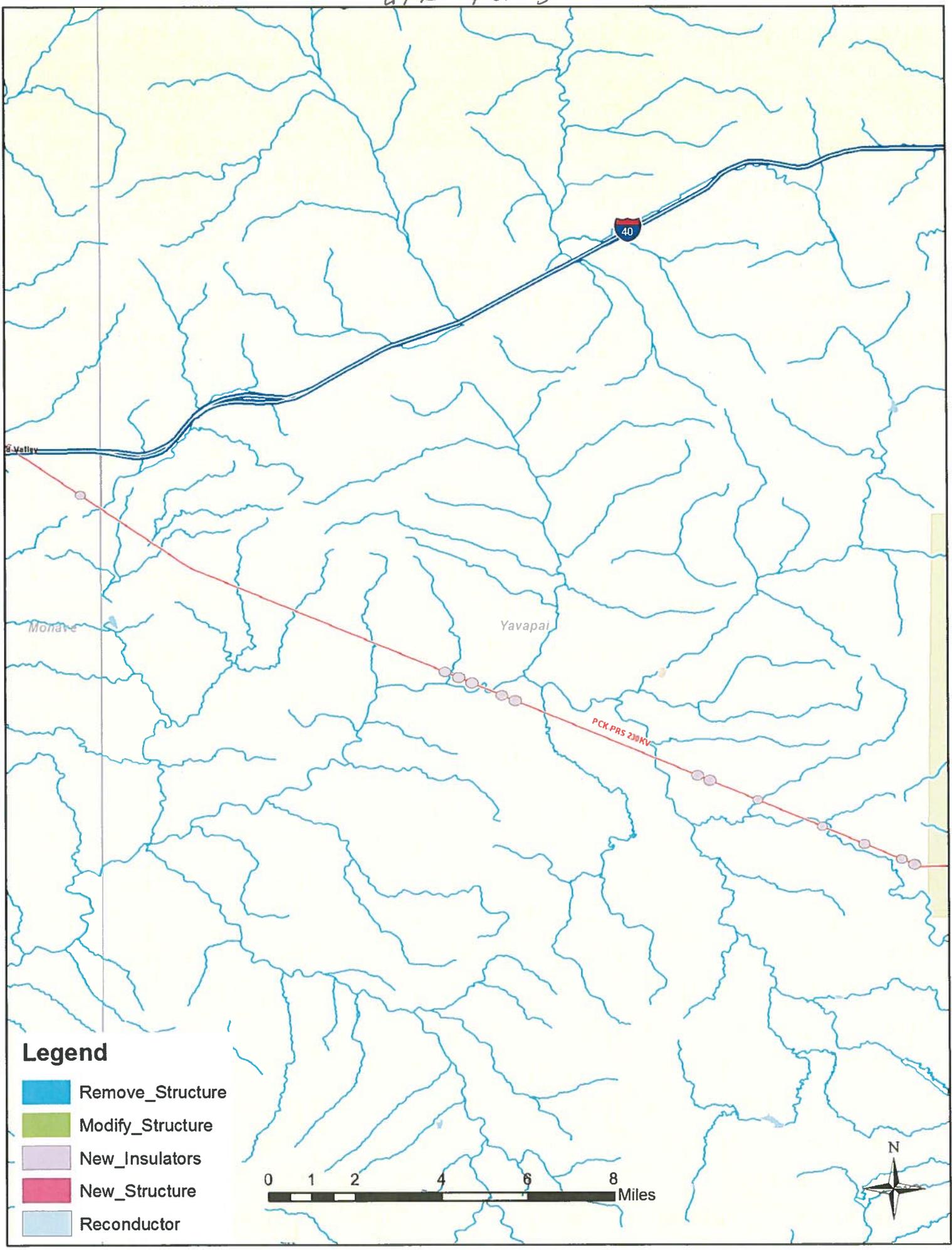


- Legend**
- Remove_Structure
 - Modify_Structure
 - New_Insulators
 - New_Structure
 - Reconductor

0 1 2 4 6 8 Miles



6'PK - PCK 5



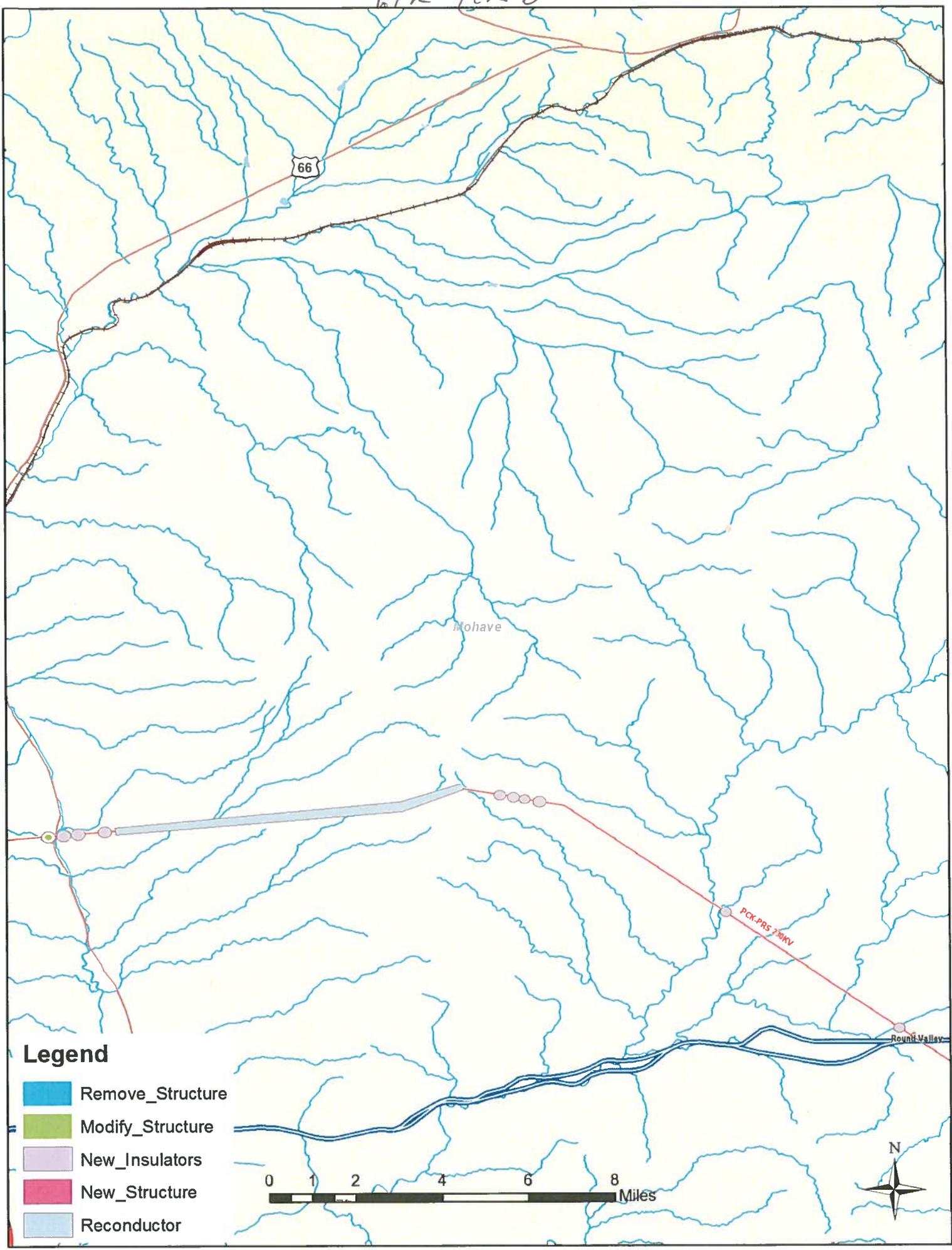
Legend

- █ Remove_Structure
- █ Modify_Structure
- █ New_Insulators
- █ New_Structure
- █ Reconductor

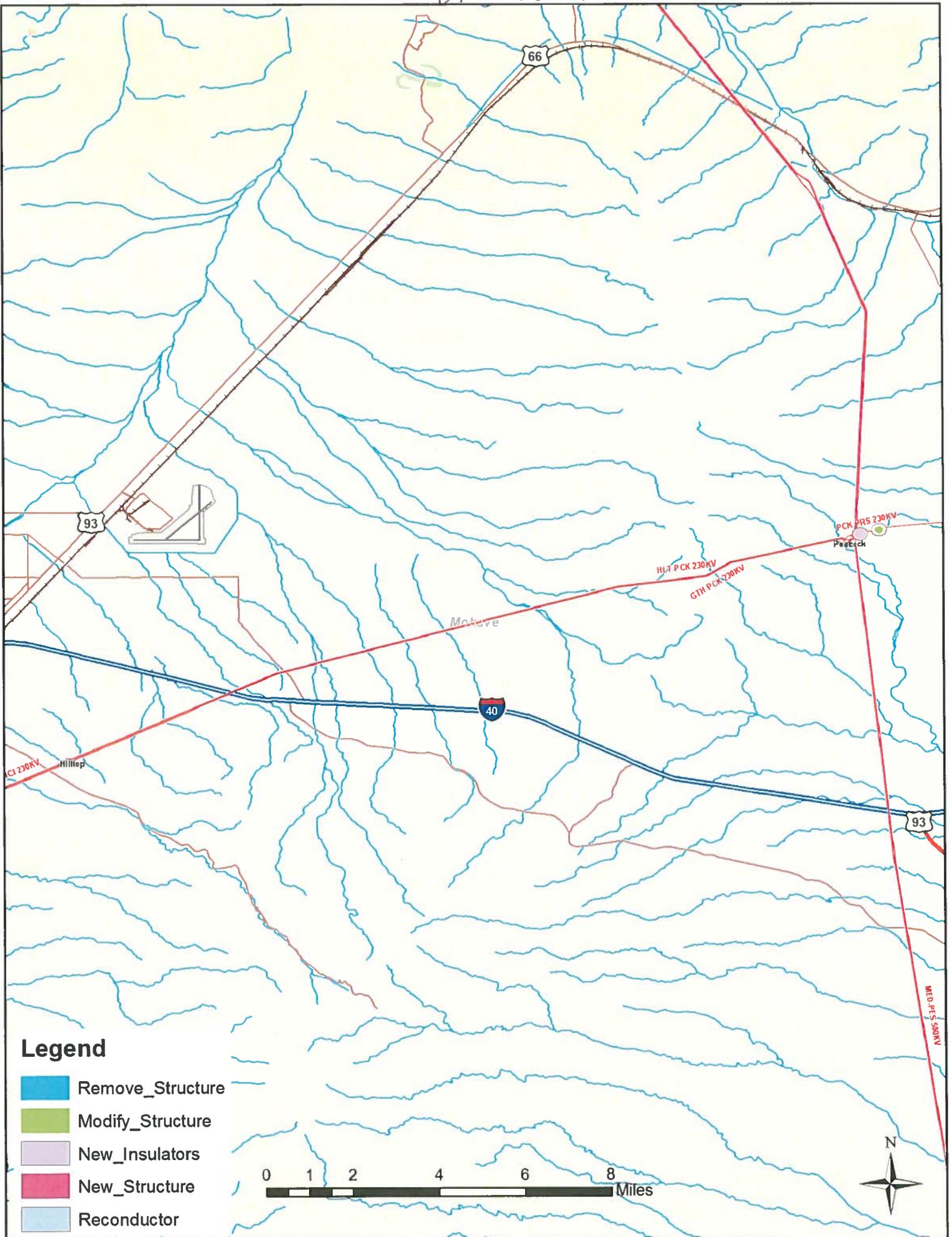
0 1 2 4 6 8 Miles



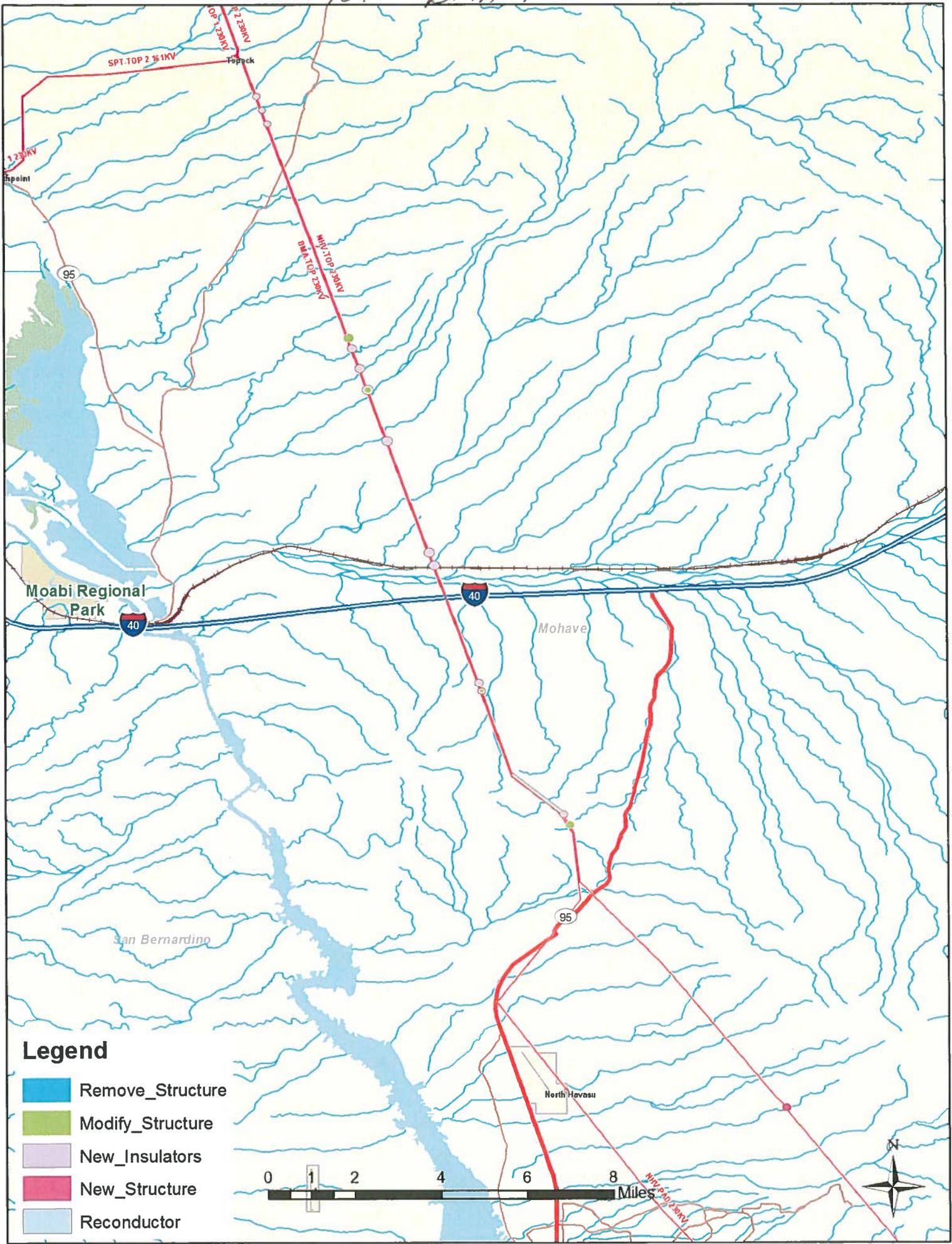
CPK - PCK 6



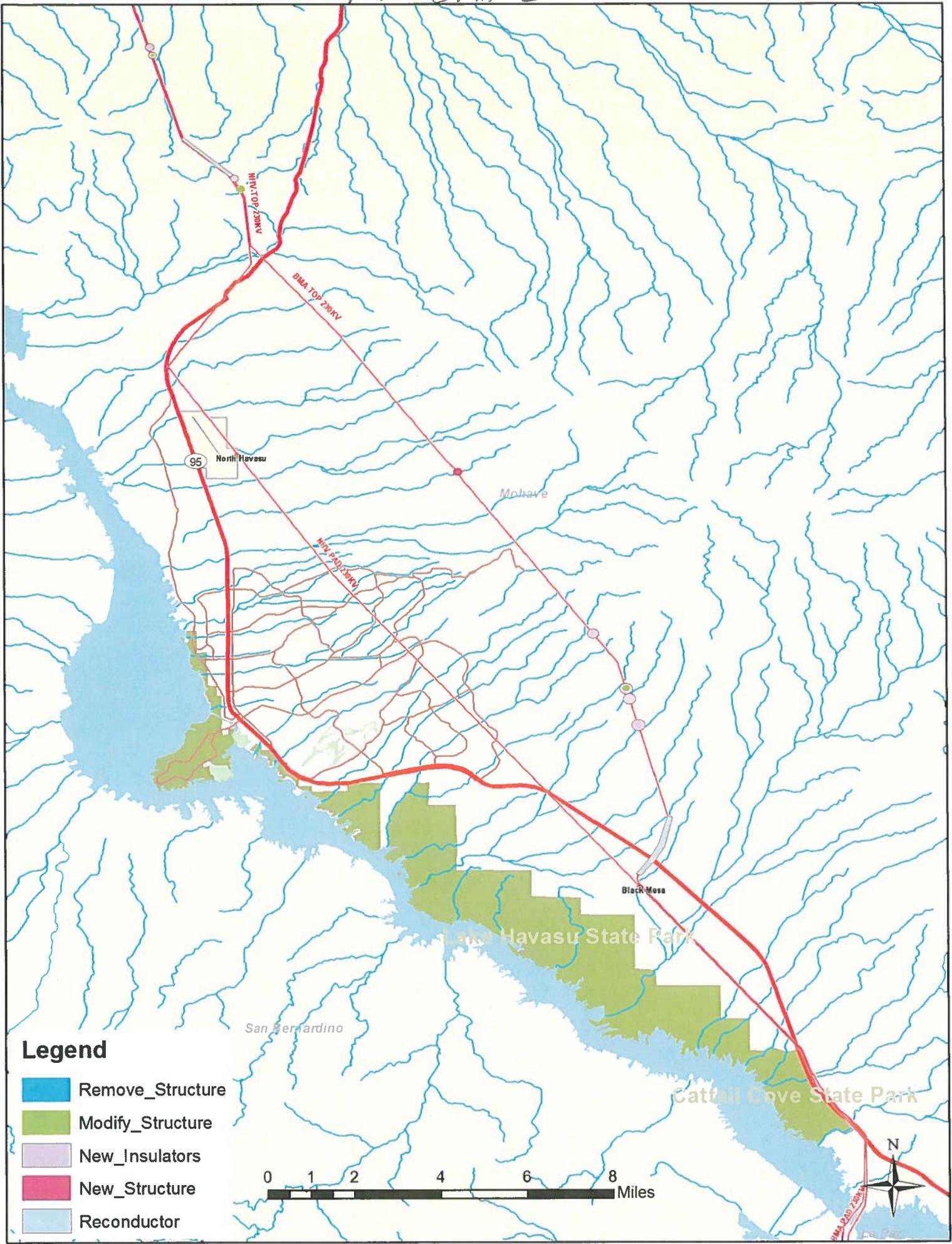
GPK-PCK +



701 - ISMA 1



TOP-BMA 2



Legend

- Remove_Structure
- Modify_Structure
- New_Insulators
- New_Structure
- Reconductor

