ATTACHMENT W: MONITORING AND MITIGATION PLAN

MONITORING AND MITIGATION PLAN

Table 1 address potential impacts from construction and operations of Pathway in El Paso County and also proposed mitigation measures where appropriate. Mitigation measures planned for Pathway are listed by resource in Table 1. Additional information about the environmental factors considered during the routing and siting study process is provided in Attachment C. Impacts will be minimized during construction of the Project and will be addressed by Xcel Energy. If mitigation attributable to Project impacts is required, it will be addressed during Project construction by Xcel Energy pursuant to permit requirements.

Table 1: Proposed Mitigation Measures

Resource	Description of Avoidance of Impacts or Proposed Mitigation
Agriculture	During construction, minimal permanent impacts to agricultural lands will occur. Disturbed areas will be revegetated following construction. Disturbed areas will be returned to pre-construction conditions or reseeded according to landowner requests and El Paso County requirements. Agricultural use can continue for these lands except the footprint of each transmission pole. Permanent Pathway facilities will be limited to the footprint of the individual transmission poles and transmission access roads.
Air Quality	Water trucks will be utilized during construction activities around roadway access points to suppress dust from vehicles and equipment as necessary within the right-of-way (ROW) and access roads as per coordination with El Paso County. If necessary, Xcel Energy will apply for an Air Pollutant Emission Notice (APEN) for land development prior to construction and follow state standards to control the release of fugitive dust related to construction. An APEN will be required for a disturbance greater than 25 contiguous acres and land development activities longer than 6 months.
Biological Resources	Pathway will avoid or minimize impacts to habitat as practicable. Impacts to most vegetation will be temporary and limited to the 150-foot-wide ROW and Temporary Construction Areas (TCAs). The ROW will be cleared of tall vegetation for ongoing maintenance. Measures will be implemented to minimize the spread of noxious weeds in the ROW (Attachment D). To avoid or minimize impacts to aquatic habitat within the ROW, surface waters, riparian areas, and wetlands in areas at a crossing will be spanned as practicable. Pathway will adhere to best management practices (BMPs) and erosion control measures outlined in the stormwater management plan (SWMP). To avoid or minimize impacts to wildlife, Pathway will implement measures such as requiring proper trash and food debris disposal and compliance with posted speed limits. Colorado Parks and

Resource	Description of Avoidance of Impacts or Proposed Mitigation
	Wildlife (CPW) recommendations (CPW 2021) will be incorporated where practicable. To avoid or minimize potential project impacts to eagles and other migratory birds and raptors, tree/vegetation clearing will be conducted during the nonbreeding season for birds (September 1–April 15) if feasible. If vegetation clearing cannot occur during the nonbreeding season, vegetation clearance surveys, nest surveys, and burrowing owl surveys may be conducted per U.S. Fish and Wildlife Service (USFWS) and CPW guidance to identify avian nesting activity and determine appropriate avoidance buffers (CPW 2020, CPW 2021) or monitor actives nest sites until determined to be inactive. In addition, electrical components of the transmission lines will be separated to minimize the risk of avian contact and will follow Avian Power Line Interaction Committee guidelines (APLIC 2006). Bird flight or swan diverters or other marking devices may be used as determined necessary for specific locations. Xcel Energy will continue to coordinate with USFWS and CPW to address concerns regarding wildlife impacts throughout planning, design, and construction of Pathway, and will comply with all regulatory requirements.
Electric and Magnetic Fields	A Noise and EMF Study was conducted for Pathway and submitted as part of Pathway's Certificate of Public Convenience and Necessity application, Proceeding No. 21A-0096E (Attachment E). The study concluded that magnetic field levels at the edge of the Pathway transmission line ROW are projected to be 54.7 milligauss (mG). These levels are below 150 mG and were deemed reasonable by the Colorado Public Utilities Commission (CPUC). No related impacts to human health and safety are anticipated.
Land Use	The Land Use and Zoning Map is provided as Attachment F. Pathway will not cause a significant change in land use in the immediate area. Permanent Pathway facilities will be limited to the footprint of the individual transmission poles and transmission access roads. Current land use can continue for these lands except the footprint of each transmission pole.
Noise	Construction vehicles and equipment will be maintained in proper operating condition and equipped with manufacturer's standard noise control devices (e.g., mufflers or engine enclosures). Based on the Noise and EMF Study conducted for Pathway (Attachment E), the maximum projected noise level measured at 25 feet from the edge of the ROW is 49.8 dBA. Per Rule 3206(f) of 4 CCR 723-3, noise levels below 50 dBA are not subject to further review. The projected noise levels from Pathway were

Resource	Description of Avoidance of Impacts or Proposed Mitigation
	deemed reasonable by the CPUC and not subject to further review.
Natural Hazards	A map of soils, geologic conditions, and natural hazards is included in Attachment G. No areas of natural hazards are located near Pathway. Xcel Energy electric facilities, including transmission poles, are specifically designed for the locations where they are placed. Geotechnical studies are conducted for transmission poles to identify subsurface conditions and determine foundation specifications. Transmission lines are built and maintained to meet or exceed safety standards, such as those specified by the National Electrical Safety Code (NESC) and the North American Electric Reliability Corporation. Every effort is made to ensure safety in construction, operation, and maintenance of transmission lines. Transmission lines are designed to withstand extreme weather conditions, and protective devices at line terminals stop the electricity flow under abnormal operating circumstances. The transmission poles will be equipped with shield wires above the energized line; this equipment provides protection against lightning strikes. Transmission lines are structurally designed according to the NESC, which incorporates standards from the American Society of Civil Engineers on structural loading. The NESC requires poles over 60 feet tall to be able to resist the loading from various ice and wind scenarios. The base design wind speed for eastern Colorado is 95 miles per hour. This wind speed is part of an equation that also considers terrain, span length between transmission poles, and transmission pole height to produce an overall wind pressure applied to the wires and the transmission pole. In addition, the design scenario considers how the structural capacity of a transmission pole is affected by the icing conditions on the wire. The weight of the ice increases the tension in the wires and therefore the loading on the transmission pole. The result of this design scenario is that transmission lines typically have additional structural capacity for much higher wind speeds than the NESC requires after accounting conservatively for icing conditions. Xcel Energy's transmission lines are monitored 24 hours a day, 7 days a week, 365 days a year for line contact, the term describing when an object comes in contact with the transmission line conductors. If there is an unanticipated event in the line, the line is isolated from the system to protect the public and the line from operating under unsafe conditions. Xcel Energy's transmission lines are inspected annually to check for line connections and damage. For the safety of the general public, unauthorized

Resource	Description of Avoidance of Impacts or Proposed Mitigation
	personnel are not permitted to come in contact with the transmission line conductor wire. Xcel Energy's facilities are designed, constructed, operated, and maintained to meet or exceed all applicable requirements of the Institute of Electrical and Electronics Engineers (IEEE) standards and accepted industry standards and practices including IEEE 979, Guide for Substation Fire Protection. Applicable fire laws and regulations, as outlined in CRS 31-15-601, will be observed during construction and normal operation of the transmission line. Fires along transmission lines are very rare. Xcel Energy's powerlines are monitored and controlled remotely from an operations center where event response is coordinated. In the rare event of an emergency, Xcel Energy will likely be aware of an issue before the general public or emergency responders. Nevertheless, the public is encouraged to contact Xcel Energy's emergency number: 800-895-1999 to report an emergency. Unauthorized personnel, including emergency responders, should not approach the facilities and should not touch the electric lines or anyone or anything in contact with them. Xcel Energy also coordinates closely with local fire departments and first responders and consults with them to discuss any concerns within their response area. Xcel Energy offers free online safety training to fire departments and first responders that is based on national standards through the Responding to Utility Emergencies Program. Xcel Energy's Emergency Response Procedures are provided as Attachment H.
Cultural Resources	No previously recorded National Register of Historic Places-eligible cultural resources have been recorded along Pathway in El Paso County. Therefore, the transmission line will not have adverse effects on cultural resources.
Socioeconomic	Existing businesses and social services are adequate to support Pathway given the size of the construction crew and temporary nature of the construction activities. No impacts to emergency health care facilities or law enforcement services are therefore anticipated. Pathway will deliver economic benefits to rural communities across eastern and southern Colorado, including El Paso County, over the short and long-term.
Soils and Geology	A map of soils, geologic conditions, and natural hazards is included in Attachment G. No areas of geologic hazards are located near Pathway. Geotechnical studies are conducted for transmission poles to identify subsurface conditions and determine foundation specifications. To avoid potential indirect impacts from construction-related erosion and sediment movement during

Resource	Description of Avoidance of Impacts or Proposed Mitigation
	construction, Pathway will adhere to BMPs outlined in the SWMP, which will include erosion control and revegetation measures.
Toxic and Hazardous Substances	Construction, operation, and maintenance activities will comply with applicable federal, state, and local laws and regulations regarding the use of hazardous substances. Construction activities will be performed by methods that prevent entrance or accidental spillage of solid matter, contaminants, debris, and other pollutants and wastes into flowing streams or dry watercourses, lakes, and underground water sources. Activities will follow BMPs for the management of waste to avoid and minimize effects from potential spills or other releases to the environment.
Transportation	The Transportation Memorandum is provided as Attachment I. Traffic Control Plans will be developed in areas where travel on roadways could be impacted during construction. Construction updates and schedules will be discussed with local government officials as needed, as details are determined. Necessary road use and ROW permits will be obtained from El Paso County and from Colorado Department of Transportation for state highway/interstate crossings as needed prior to construction.
Vegetation	Pathway will avoid or minimize impacts to vegetation as practicable. Impacts to most vegetation will be temporary and limited to the 150-foot-wide ROW and TCAs. The ROW will be cleared of tall vegetation for ongoing maintenance. Measures will be implemented to minimize the spread of noxious weeds in the ROW (Attachment D). To avoid or minimize impacts to aquatic habitat within the ROW, surface waters, riparian areas, and wetlands in areas at a crossing will be spanned as practicable. Pathway will adhere to BMPs and erosion control measures outlined in the SWMP. Once construction has been completed for each Pathway segment, temporary work areas and the transmission line ROW will be restored in a manner generally similar to the condition prior to construction or as may be provided for in private agreements. This work may include fence repair, rut removal, decompaction, tilling, seeding and stabilization measures. Areas not needed for ongoing operations and maintenance and not being used for crop production will be reseeded as soon as practicable and in coordination with the landowner following construction in a given area. Xcel Energy's ROW agents will meet with landowners to learn about site-specific circumstances which may need to be addressed, including any loss or damage that occurs to crops or other non-restorable property during construction. Noxious Weed Control Measures are provided in Attachment D.

Resource	Description of Avoidance of Impacts or Proposed Mitigation
Visual Resources	Pole Details, Representative Photographs, and Simulations are provided in Attachment J. The type of steel used will be weathering steel, which oxidizes to resemble a natural brown look and is not shiny. Existing undisturbed trees, shrubs, and native vegetation will be preserved to the extent possible to maintain visual contrast in the landscape. Following construction, the ROW will be restored to pre-construction conditions.
Water Resources	The Water Resources Map is provided in Attachment K. There will be minor localized impact in drainage direction in areas of permanent grading but no impact to drainage basins or sub-basins runoff along the transmission line. Pathway will not result in additional runoff or negatively affect stormwater erosion across the full scope of the proposed development. The application package includes a Preliminary Drainage Analysis (Attachment L) that describes how Pathway will limit potential impacts to drainage and stormwater erosion during construction and operation of the transmission line. Xcel Energy will submit any related permitting as necessary to align with the County's requirements and will continue to coordinate with the County on these plans as required. Temporary impacts to wetlands and waters of the U.S. during construction of Pathway will be avoided to the extent practicable. If wetlands cannot be avoided, matting and other protective temporary measures will be used. Depending on the condition of the wetland soil and hydrology, matting may be used to protect wetlands from rutting. Prior to construction, a SWMP will be prepared according to the Colorado Department of Public Health and Environment requirements. To avoid potential indirect impacts from construction-related erosion and sediment movement during construction, Pathway will adhere to BMPs outlined in the SWMP, which will include erosion control and revegetation measures. Construction activities will be performed in a manner that prevents entrance or accidental spillage of solid matter, contaminants, debris, and other pollutants and wastes into flowing streams or dry watercourses, lakes, and underground water sources. All activities will follow BMPs for the management of wastes to avoid and minimize effects from potential spills or other releases to the environment. Impacts to water quality will be minimized during construction through BMPs and the site-specific SWMP. Xcel Energy will comply with permit application requirements, El Paso County standards, and construction protocol to ensure that Pathway does not violate water quality standards.

REFERENCES

APLIC (Avian Power Line Interaction Committee). 2006. Suggested practices for raptor protection on power lines; the State of the Art in 2006. Edison Electric Institute, APLIC and the California Energy Commission Lincoln, D.C and Sacramento, CA.

CPW (Colorado Parks and Wildlife). 2021. Colorado Parks and Wildlife Recommendations to Avoid and Minimize Impacts to Wildlife from Land Use Development in Colorado. Available online at: https://cpw.state.co.us/Documents/Conservation-Resources/Energy-Mining/CPW_HPH-Map-Layers.pdf. Accessed January 2023.

CPW. 2020. Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors (2020). Available online at: https://cpw.state.co.us/Documents/WildlifeSpecies/LivingWithWildlife/Raptor-Buffer-Guidelines.pdf. Accessed January 2023.