NATIONAL WILDLIFE FEDERATION

Wires & Wildlife: Transmission Development and Western Migratory Species

Transmission is an exciting opportunity to create a resilient power grid without exacerbating habitat loss and degradation.

Across the western U.S., many wildlife species rely on seasonal habitats, and the ability to migrate between these habitats, to reproduce, survive, and thrive. These areas are increasingly under threat from human development and climate change. Wildlife habitat is being fragmented and degraded, and climate impacts can interfere with migration cues and routes.

To counter the effects of climate change, and account for an increasing human population, we must expand energy generation and transmission. Understanding the potential impacts of this expansion on wildlife is crucial to ensure our future energy grid does not undermine conservation goals.

NWF's report, **Wires and Wildlife: Transmission Development and Western Migratory Species,** provides an overview of impacts to ungulates and greater sage-grouse from human development and climate change, to understand the potential implications of transmission buildout in the Intermountain West.

The report identifies several ways these species, and their habitat and migration routes, may be impacted by transmission development. It also provides a range of recommendations and an adaptive management approach to guide industry and agencies within the Intermountain West on the path to responsible transmission development.

Thoughtful, data-driven decisions about infrastructure planning and siting can conserve wildlife habitat and build a connected Western transmission grid.

PHOTOS: TOP: THAINCHAI SITTHIKONGSA, DAVID MCGOWN; LEFT: DENNIS STOGSIDILL

Migratory Species in a Changing Intermountain West

Migratory wildlife species play an important role in the Intermountain West. Conserving their habitats can indirectly benefit other species and preserve Western culture. These species are dealing with unprecedented rates of ecosystem change, due to land-use shifts, development, and urbanization – and these are all interacting with the effects of climate change. Disturbances and stressors related to land-use change and climate change can't be evaluated in isolation. These stressors can add up, and the effects can be challenging to predict.

This context is important to inform the siting and design of transmission development, now and into the future. Though more research is needed to improve our understanding of the impacts of transmission development on wildlife – especially in the context of global change – this report identifies some key issues. For ungulates, the impacts of transmission construction and development may largely resemble the impacts of roads and other types of human activity, exacerbating habitat degradation and loss. For greater sage-grouse, the impacts may be more significant, as evidence suggests the presence of transmission lines boosts predator populations and influences behavior. The report also highlights significant research and monitoring gaps that, if addressed, could inform transmission development by decision makers and developers.

Recommendations to Support Wildlife-Responsible Transmission

To prevent unintended impacts to wildlife and communities, the National Wildlife Federation recommends minimizing "greenfield" transmission development in undisturbed and natural areas. Analysis shows that upgrading existing transmission infrastructure to increase capacity through grid-enhancing technologies, and the use of advanced reconductoring in existing rights-of-way, can help us meet needs – and do so cost effectively. Additional infrastructure can also be sited on lands that have already been disturbed or degraded.

Where new greenfield development occurs, developers and decision makers can reduce wildlife impacts with evidence-based decisions about planning and siting. To make sense of large amounts of data and examine alternatives, we recommend the use of a **dynamic decision-support tool**. This tool could help **to identify and prioritize important wildlife seasonal ranges and connectivity requirements** for conservation and prudent management, thereby offering more certainty to industry and agencies alike. This decision support tool would help **to evaluate and optimize identification of low-impact placements for current and future energy development**, predicted wildlife distributions and movement requirements, and climate-related changes to habitats throughout the American West. Additional data from research and monitoring efforts can update and further refine the tool to help decision makers use a "science first" approach to decision-making.

PHOTO: KAREN DESJARDIN

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READ *WIRES & WILDLIFE: TRANSMISSION DEVELOPMENT AND WESTERN MIGRATORY SPECIES* AT

www.nwf.org/transmission