Wetland Restoration on Alaska's North Slope: Challenges, Progress, and the Future

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Ground ice, logistical considerations, a short growing season, regulatory uncertainty, and limited technical experience create unique challenges for restoration projects on Alaska's North Slope. This presentation summarizes drivers behind rehabilitation of the North Slope, the history of rehabilitation on Alaska's North Slope, recent developments in rehabilitation, and directions likely to be taken in the coming years. While compensatory mitigation is not a standard practice on the North Slope, many projects to restore physically disturbed tundra, areas with gravel fill, and areas with oil and brine spills have been initiated, often voluntarily. Specific requirements for large-scale restoration remain uncertain, but because field abandonment will not occur for at least twenty years there is time for further assessment of methods and establishment of demonstration projects that can contribute to development of appropriate specific requirements. In the past, most projects focused on experimental trials using small-scale plots to determine appropriate seeding and fertilization practices. More recently, industry has shifted from a focus on small-scale plot-level projects to full-scale site rehabilitation. Also, industry has standardized the planning process, monitoring methods, and report formatting to simplify tracking and to develop a data base that will contribute to improved understanding of restoration. Results from several long-term (10-year) experiments are available, as are preliminary results of a study intended to test a plant cover monitoring method. Research, adequate monitoring, and clear communication are critically important to eventual large-scale rehabilitation of Alaska's North Slope oil fields.

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