

MONITORING VEGETATION RECLAMATION AND TIME **WETLAND AND SPACE**

Jonah Keim, Matrix Solutions Inc.

16-ERPC-07

Wetlands ecosystems are important to water quality, nutrient cycling, and biodiversity, and have been identified as a management priority across Canada. In Alberta and BC, oil and gas operators are responsible for delineating and monitoring wetlands potentially impacted by their activities. Wetland vegetation is influenced by a number of natural processes related to water, nutrients, topography, season, and climate (Vitt and Chee 1990, Vitt et al. 1995, Dimitrov et al. 2014). A key challenge for operators is identifying whether changes to wetland ecosystems are being caused by development or natural processes. Methods are therefore needed to separate development effects from natural sources of variation that occur across space (e.g., nutrient gradients) and time (e.g., seasons and annual climate). Our research program tests a method of monitoring wetland vegetation, wildlife habitat use, and reclamation. The expected benefit of this study is to reduce the cost of terrestrial monitoring

while increasing the defensibility of monitoring efforts.

Policy Issue

Wetlands

Knowledge Gap

Wetland ecological valuation, effectiveness of wetland reclamation (function, habitat, hydrology) following a range of disturbance types (both semi-permanent and more temporary disturbances) and on a range of wetland types (permanent lakes and ponds, bogs, fens, peatlands)

[Report](#)