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# BERA Project Update



## **Monitoring Disturbance Recovery Using Satellites**

**Project Update Year**  
2021

**Lead**  
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Calgary

**Supervisor(s)**  
Dr. McDermid

**Project Theme Area**  
Remote Sensing

**Project Code**  
RS2

**Project Location**  
TBD

**Working Group**  
Please reach out to  
Tanya to join this working  
group

### **Why is this study important?**

Current approaches to tracking disturbance recovery require field work and boots-on-the-ground observations. However, the sheer volume of disturbances in the lower Athabasca makes this approach cumbersome and difficult to scale. Satellite time-series analysis provides an attractive alternative, but there are important questions to be addressed. For example, can satellite time series effectively capture small disturbance features like seismic lines and OSE well sites? How do the remote-sensing metrics relate to traditional ground observations? This research will address these broad questions.

### **How was it completed?**

The lead researcher, Tanya Yeomans is in the first year of her MSc program. Background research is currently ongoing with the analysis expected to begin in the spring 2022. The lower Athabasca region will be analyzed using free and open satellite data using the Google Earth Engine platform.

### **What are the core management implications to date?**

This research will provide a large-area look at disturbance recovery, allowing governments and industry stakeholders to monitor their entire area of operations. The analysis may highlight regional differences in recovery trends, providing context to other projects. The project will also help stakeholders effectively direct their resources to areas where they are most needed by providing a first-look at recovery before staff are sent to the field.

