Project Title and Brief Abstract

• NASA RECOVER DSS
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  • Partners: BLM, Idaho Dept. of Lands, USFS
  • Project Summary: Post-wildfire decision support system to assist agency partners in developing a well-informed recovery plan.
    – The RECOVER DSS has been used for \textbf{33} wildfires and assisted with the Ft. McMurray, Alberta, Canada wildfire
    – These 33 wildfires burned 1.7 million acres
  • Earth Observations applied: Landsat, MODIS, Merra

\textsuperscript{1} ISU GIS TReC
\textsuperscript{2} NASA Goddard Space Flight Center
**Purpose & Objective**

- RECOVER brings together in a single application all the *information* needed for ES&R and BAER wildfire rehabilitation planning and long-term ecosystem monitoring.

- RECOVER’s system components include the RECOVER Server and RECOVER Clients (desktop and mobile decision support applications) that integrate *information* about fire severity with other geospatial data to better inform rehabilitation strategies.

**Approach**

- RECOVER team matured both Server and Client and increased capabilities to become a full production environment.
- Includes full geospatial coverage across 11 western states.
- New end-users at the USFS, NPS, and NWS engaged along with Idaho Transportation Dept.
- Anticipate increased use of NASA GSFC’s High-Performance Science Cloud to facilitate operation of long-term post-fire monitoring with NASA earth observing systems (Wrangler).

**Key Milestones**

<table>
<thead>
<tr>
<th>Milestone Statement</th>
<th>Date</th>
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<tbody>
<tr>
<td>Offer a webinar for partners</td>
<td>04/17</td>
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<tr>
<td>Formalize relationships/agreements with partners to continue RECOVER</td>
<td>06/17</td>
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<tr>
<td>Complete “Wrangler”, long-term monitoring automation</td>
<td>07/17</td>
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**ARL**

- Start = 1
- Most Recent = 6
- Goal = 8
Biggest Achievement to Date: The Capability

5min
CHALLENGE: Transition period (more later)

CHANGE: Welcome addition of “Evaluating the Socioeconomic Impacts of Rapid Assembly and Geospatial Data in Wildfire Emergency Response Planning” (more tomorrow)
Summary of Challenges; Problems; Objective Analysis

Getting commitment for continuation by end-user partners

Some prefer doing things as they have always done them

Letting more potential end-users know about RECOVER

Summary of Progress

1. On-going discussions and interest from NIFC as well as Idaho state office of BLM, and Idaho Dept. of Lands.

2. We have users!
• An important goal for the RECOVER DSS is to have it accepted into the workflow of our end-user partners
• To a large extent, this acceptance has been achieved
• But, we also need to ensure RECOVER continues following the end of NASA funding
There is interest!
Current focus is on ISU’s GIS TReC continuing to support/host RECOVER on its servers
- ISU GIS TReC would maintain current geospatial base layers (n = 25)
- And host both the Generator, web-maps, and underlying web services
• We will most likely request a 1-year no-cost extension for RECOVER and the new Socioecon part of this project
We have the interest (NIFC, BLM, IDL)

Our users are growing (Idaho Dept. of homeland security, Idaho Transportation Department)

The hurdle will be getting our end-user partners to pay for something they have been getting for free

This may include a cost-benefit analysis (completion of the socioecon. part of the project)

*Scientists are not sales people*

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Budget progress and future plans to spend down the funding by year:

We are planning to request a one-year no-cost extension

ARL_{Start} = 01  \hspace{1cm} ARL_{Most Recent} = 06  \hspace{1cm} ARL_{Goal} = 08
PI Overall Assessment: Impact

Honest Opinion

RECOVER:

It WORKS

33 fires
1.7 M acres

It is USED

But, will it continue?

Project’s Impact/Potential as an Analogy

From our childhood, many of us remember…

We have worked very hard to climb that hill, all the time saying “I think I can”…

That hill is the successful transition with our end-user partners.
Relevant Publications, Awards, Accomplishments

- Paper in review (IGAARS)
- Successful presentations at Intermountain GIS Users’ Conference (Montana) and the Esri International Users’ Conference (UC)
- And, I would like to share results of a user survey (next slide)
<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>View it graphically</th>
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<tbody>
<tr>
<td>Vegetation/landscape recovery can be adequately monitored using moderate</td>
<td>0</td>
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<td>resolution imagery (250 meters per pixel) because recovery trend is very</td>
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<td></td>
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<td>important.</td>
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<td>Vegetation recovery requires detailed/high resolution imagery because</td>
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<td>specific acreages within a fire must be assessed.</td>
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<td>Frequent imagery (approximately every two weeks) is more important than</td>
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<td>seasonal imagery (one image per growing season/year)</td>
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<tr>
<td>Cost of imagery acquisition and processing is an important consideration</td>
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<tr>
<td>Free imagery acquisition is a very important consideration</td>
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<tr>
<td>I would rather have free, frequent, moderate resolution imagery than</td>
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<tr>
<td>costly, seasonal, high-resolution imagery</td>
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<tr>
<td>I would rather receive actionable information (imagery showing good</td>
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<td>recovery versus poor recovery) instead of raw data</td>
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<td>Interpreting and understanding the imagery (regardless of its resolution)</td>
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<td>is always difficult</td>
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<td>I prefer completed reports describing long-term monitoring trends for a</td>
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<td>fire instead of imagery/maps</td>
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