



- RECOVER: Rehabilitation Capability Convergence for Ecosystem Recovery
- Keith T Weber (PI), John Schnase (Co-I), Mark Carroll (Co-I), Roger Gill, and Maggie Wooten (GSFC), Jeff May, Kindra Serr, Ryan Howerton (ISU GIS TReC)
- Partners: USDI BLM, Idaho Department of Lands, Idaho Transportation Department, and NPS (and growing)

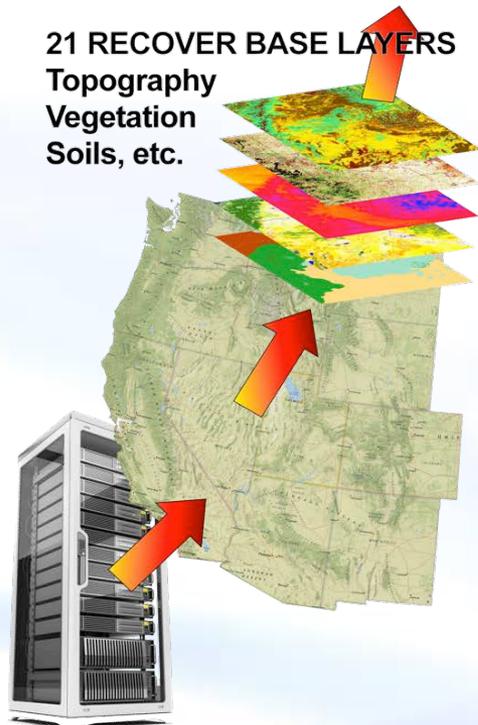
- Project Summary:
 - Customer-driven, Customer-centric*
 - Decision Support System (DSS)
 - Rapid assembly of site-specific data
 - Delivered in a customized GIS analysis environment
 - Wildfire focus
 - Reduces/eliminates data acquisition demands
 - Provides for a better informed decision process
- Earth Observations applied:
 - MODIS NDVI
 - Landsat
 - Derived products (Landfire)

RECOVER

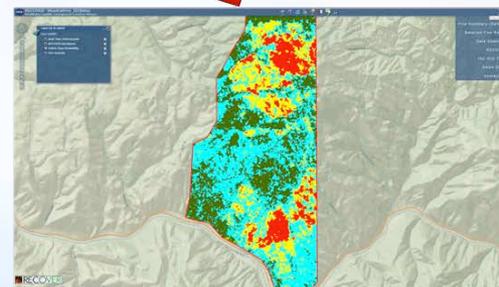
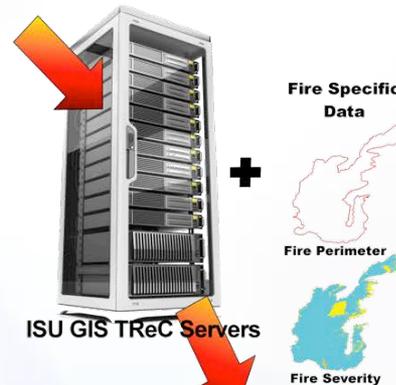


Geospatial data are clipped to the extent of the *Fire AOI* using *CreateRECOVER.tbx*

21 RECOVER BASE LAYERS
Topography
Vegetation
Soils, etc.



AnyServer... AnyWhere*



RECOVER DSS Client

RECOVER: Rehabilitation Capability Convergence for Ecosystem Recovery

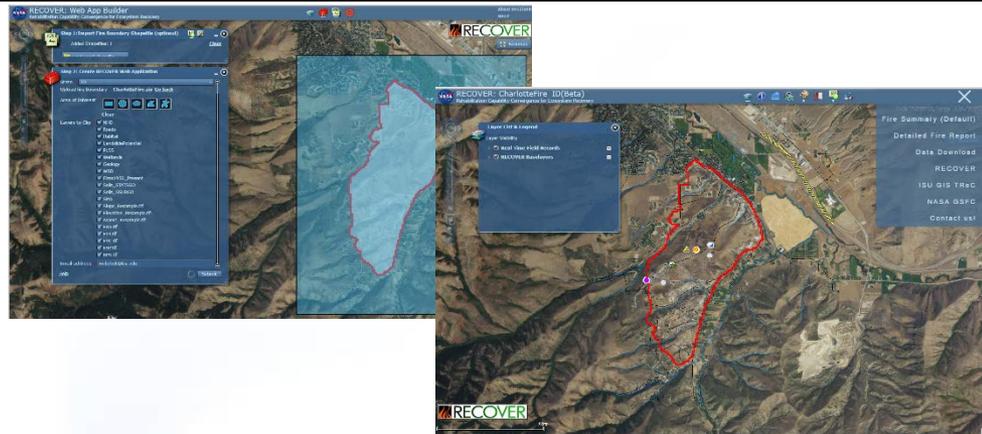
PI: Keith T Weber, ISU GIS TR&C (webekeit@isu.edu, 208.282.2757)

and Co-I/NASA PI: John L Schnase, NASA GSFC (john.l.schnase@nasa.gov, 301.286.4351)



Purpose & Objective

- RECOVER brings together in a single application all the information needed for Emergency Stabilization and Rehabilitation (ESR) and Burned Area Emergency Response (BAER) post-wildfire rehabilitation planning and long-term ecosystem recovery monitoring.
- RECOVER's major system components include the RECOVER Server (a data management system that automatically aggregates site-specific data from a collection of geospatial data) and RECOVER Clients (desktop and mobile decision support applications) that integrate information about fire severity with other geospatial data to help plan rehabilitation strategies.



Targeted End-Users: Federal agency US DOI BLM and
Federal agency USDA USFS, US State agency IDL

Approach

- The RECOVER team will continue maturing the RECOVER Server and Client and increase capabilities as appropriate.
- The project currently includes full geospatial coverage across 11 western states.
- New collaborators and targeted end-users at the USFS, NPS, and NOAA have been engaged, along with Idaho Transportation Dept. and California Department of Transportation
- We anticipate increased use of NASA GSFC's High-Performance Science Cloud resources and staff to facilitate ARL advancement and operational deployment of RECOVER capabilities especially as it relates to long-term post-fire monitoring with NASA earth observing systems.

Key Milestones

Milestone Statement	Date
Improve process automation for 2016 fire season	03/16
Complete mock-fire training workshop with BLM	05/16
Complete automated monitoring and anomaly characterization	06/16
Develop new relationships with USFS, NOAA, NPS, and USGS collaborators	08/16

ARL_{Start} = 1

ARL_{Most Recent} = 6

ARL_{Goal} = 8

ARLs = N/A

RECOVER

Biggest Achievement to Date

As of:
22-Feb-16



- Active use of RECOVER during the 2015 Soda fire (Idaho)
 - Began use at 78,000 acres (Aug. 12, 2015)
 - First refresh, 120,000 acres (Aug. 12, 2015)
 - Final refresh (no. 5) at 280,000 acres (Aug. 25, 2015)



RECOVER

Biggest Challenge or Change

As of:
22-Feb-16



- Challenge:
 - Broaden partner usage
 - Increase existing partner usage to better leverage RECOVER's decision support capabilities



- Active users of RECOVER
 - Idaho BLM
 - Idaho Transportation Dept. (ITD)
 - California Dept. of Transportation (CalDOT)
 - NEW- Washington, Oregon BLM, The Nature Conservancy (Oregon), NOAA-NWS (Idaho, Washington, Oregon)





Summary of Challenges; Problems; Objective Analysis

- Broader end-user/agency use and adoption
 - Why?
 - Unaware of RECOVER in general
 - Unaware of RECOVER's full capabilities

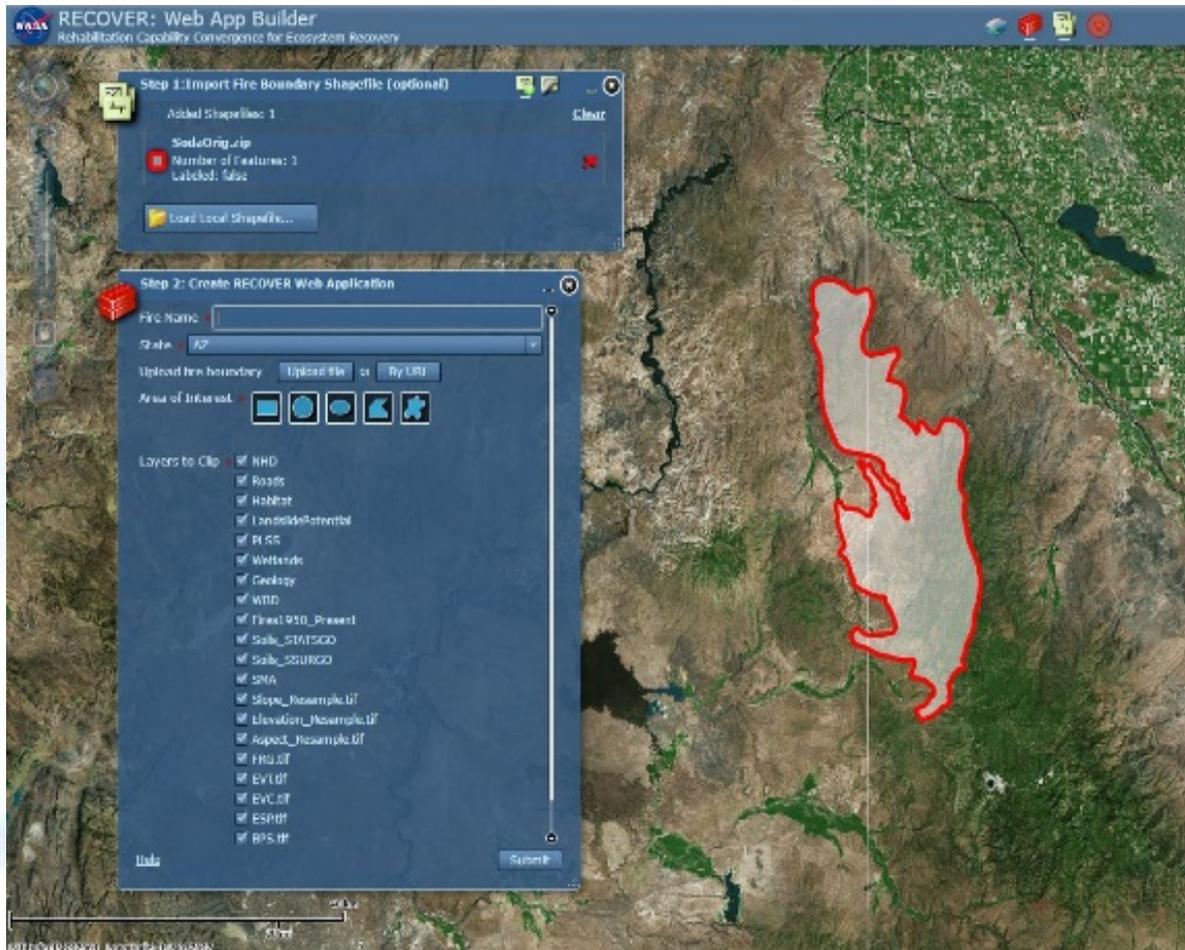
Summary of Positive Progress

- ARSET Wildfires workshop
- NBAER team telcons
- Real-time app
- Speed/performance improvements with Python
- End-user "Generator"
- SurveyMonkey results
- ISU Bengal Solutions
- ISU RDC investment
- Upcoming mock-fire

Overall Assessment

RECOVER is a great project, a success story of team work and dedication

- RECOVER Generator...

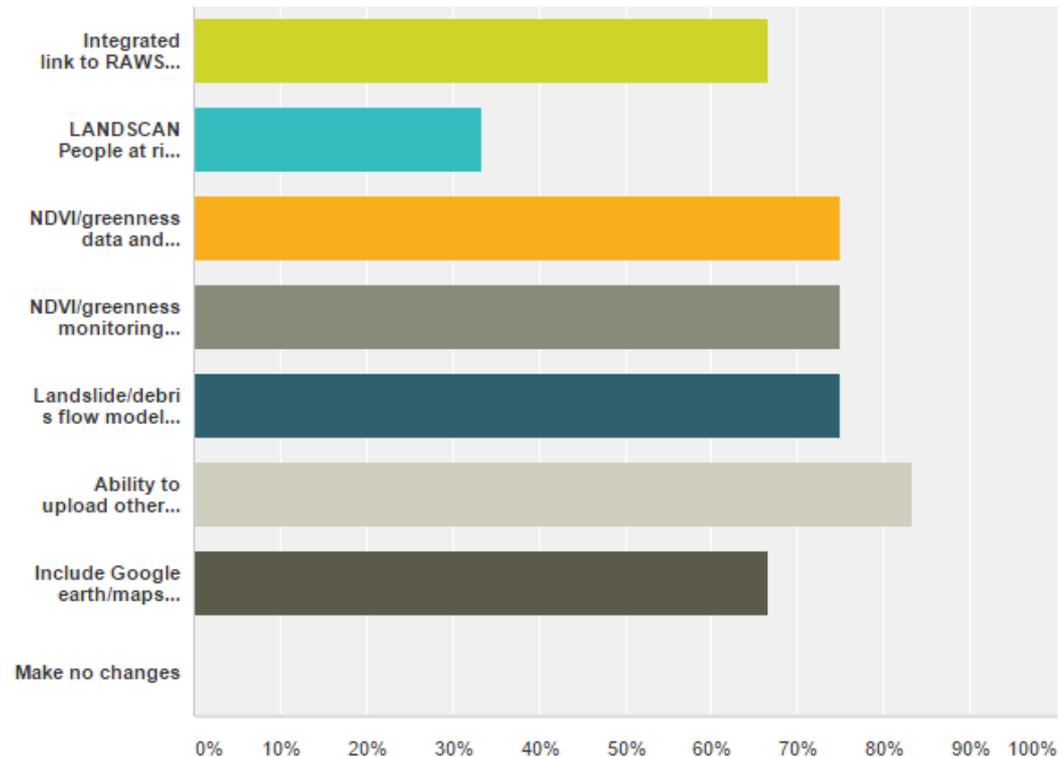




- Survey Says...

We have received comments and suggestions to include a number of additional capabilities to the RECOVER DSS. Please select the new capabilities you would like to see in upcoming versions of the NASA RECOVER Decision Support System. The following data/information may be available from the RECOVER browser web map.

Answered: 12 Skipped: 0



Relevant Accomplishments...

As of:
22-Feb-16



- ARSET Wildfires workshop
 - Great exposure for RECOVER to a broader user group
- First out-of-state (non-Idaho) fires
- NASA Spin-Off



“It’s a **good tool** for land managers to use to help **make** the best **informed decisions** on the **ground.**”

— Gregory Mann,
Bureau of Land Management

RECOVER PI Assessment of Future...

As of:
20-Mar-16



- We will...
 - Fully operationalize the RECOVER DSS
 - Include new partner agencies
- Incorporate new data products:
 - MODIS C6 NDVI time series
 - Research results from NASA DEVELOP



- Thank you for your support
- Questions?
- Visit the RECOVER project website:

http://giscenter.isu.edu/research/Techpg/nasa_RECOVER/

