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What is RECOVER?

- Customer-driven, Customer-centric*
- Secure, Decision Support System (DSS)
 - Rapid assembly of site-specific data
 - Delivered in customized GIS analysis environment
 - Wildfire focus



* Our “customer” is anyone with wildfire management responsibilities (BLM, NPS, USFS, State Lands, DOT’s, NGO’s, etc.)

Data Architecture

- RECOVER covers the Western US
- Esri ArcGIS
 - File Geodatabase
 - Vector and raster data
 - Automated Map Services

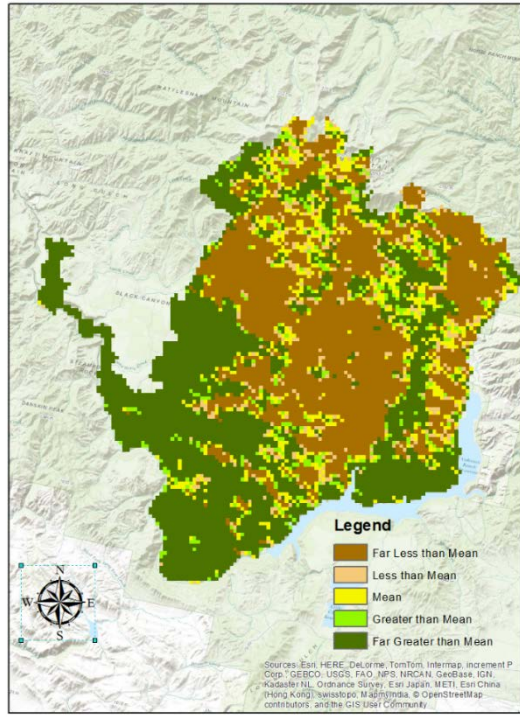


Additional data requests

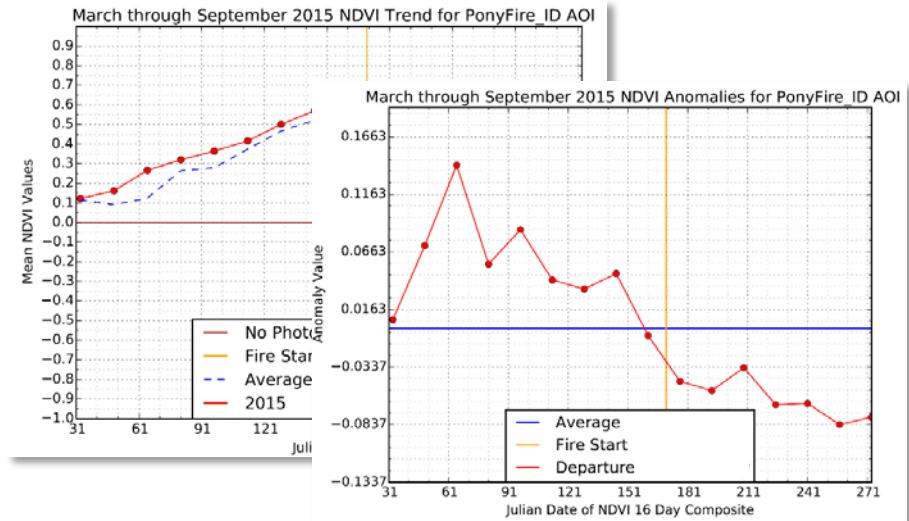
- Fire-affected Vegetation (dNBR)
- Debris-flow probability
- NDVI vegetation anomaly
 - 16-day MODIS NDVI-composite imagery
 - Long-term average NDVI (2001-present)
 - Current fire season compared against long-term trend

NDVI Anomaly Data

Map layer



Charts



More than Maps

Soda Fire - Summary Report	
Administration Agency	Acres
BLM	227,635
BOR	196
PVT	42,824
ST	12,741
<i>Total Acres</i>	<i>283,396</i>

Soda Fire - Detailed Report			
Admin. Unit Name	Area Symbol	Map Unit Symbol	Acres
Bureau of Land Management	ID665		
		BrB	
		GaB	
		NaB	
		NaC	
		QcB	
		QcD	
		QcE	
		VaD	
		VaE	
	ID675	1	
		100	
		11	
		112	
		121	

Ecological Site/Plant Association and Vegetation (ID)					
Owyhee County Area, Idaho					
[Composition of forest understory vegetation is based on canopy cover. Composition of rangeland vegetation is based on dry weight]					
Map symbol and soil name	Ecological site or plant association	Common trees	Forest understory or rangeland characteristic vegetation	Composition	
				Forest	Range
<i>Pct</i>					
1:					
Acrelane	LOAMY 11-13 ARTRT/PSSPS (R025XY043ID)	---	bluebunch wheatgrass basin big sagebrush antelope bitterbrush other shrubs other perennial forbs other perennial grasses	--- --- --- --- --- ---	50 20 5 5 5 5
Rock outcrop	---	---	---	---	---

To Date...

- The RECOVER DSS has been used for **33** wildfires and assisted with the Ft. McMurray, Alberta, Canada wildfire
- These 33 wildfires burned 1.7 million acres

The Future of Fire

- Cumulative Severity Rating forecast

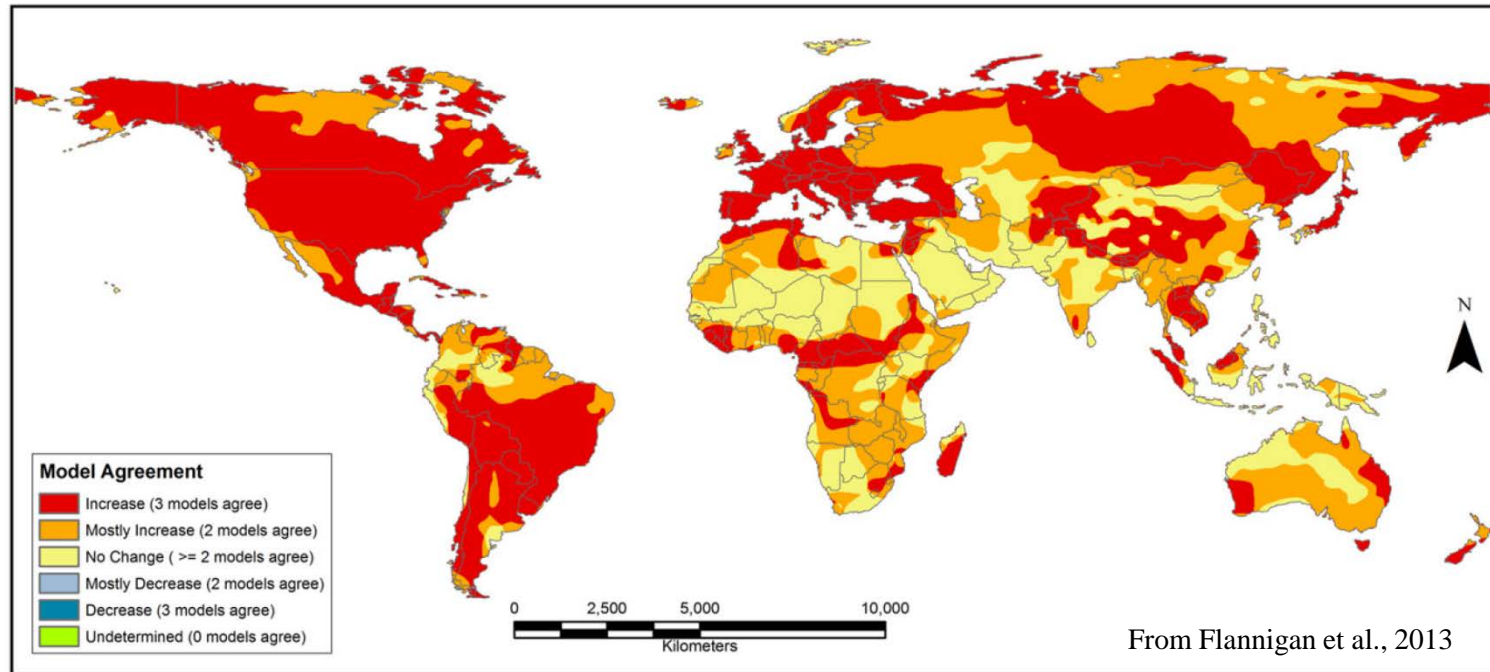
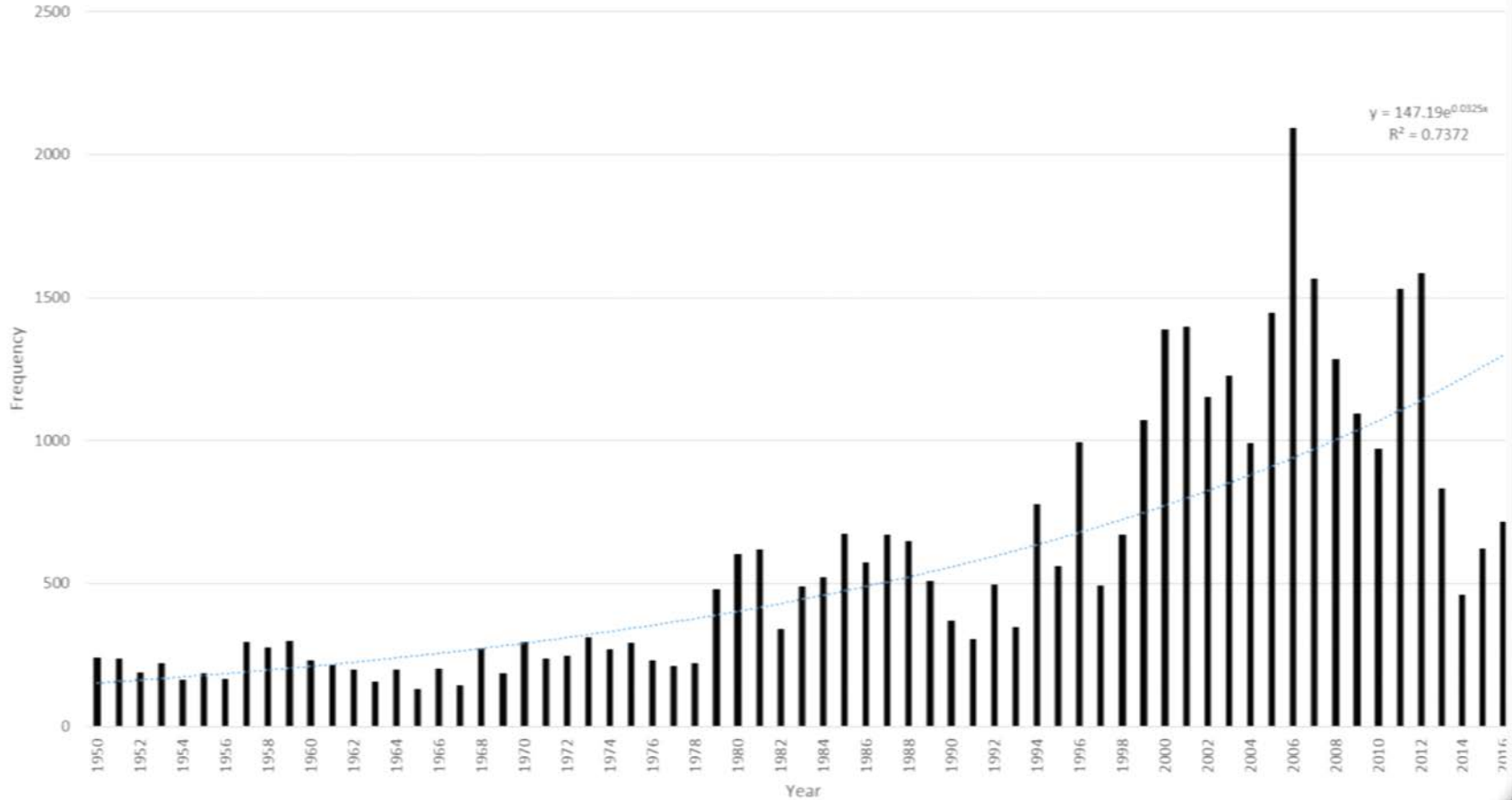


Fig. 3. Composite CSR anomaly map for the A2 scenario 2041–2050 relative to the 1971–2000 base period.

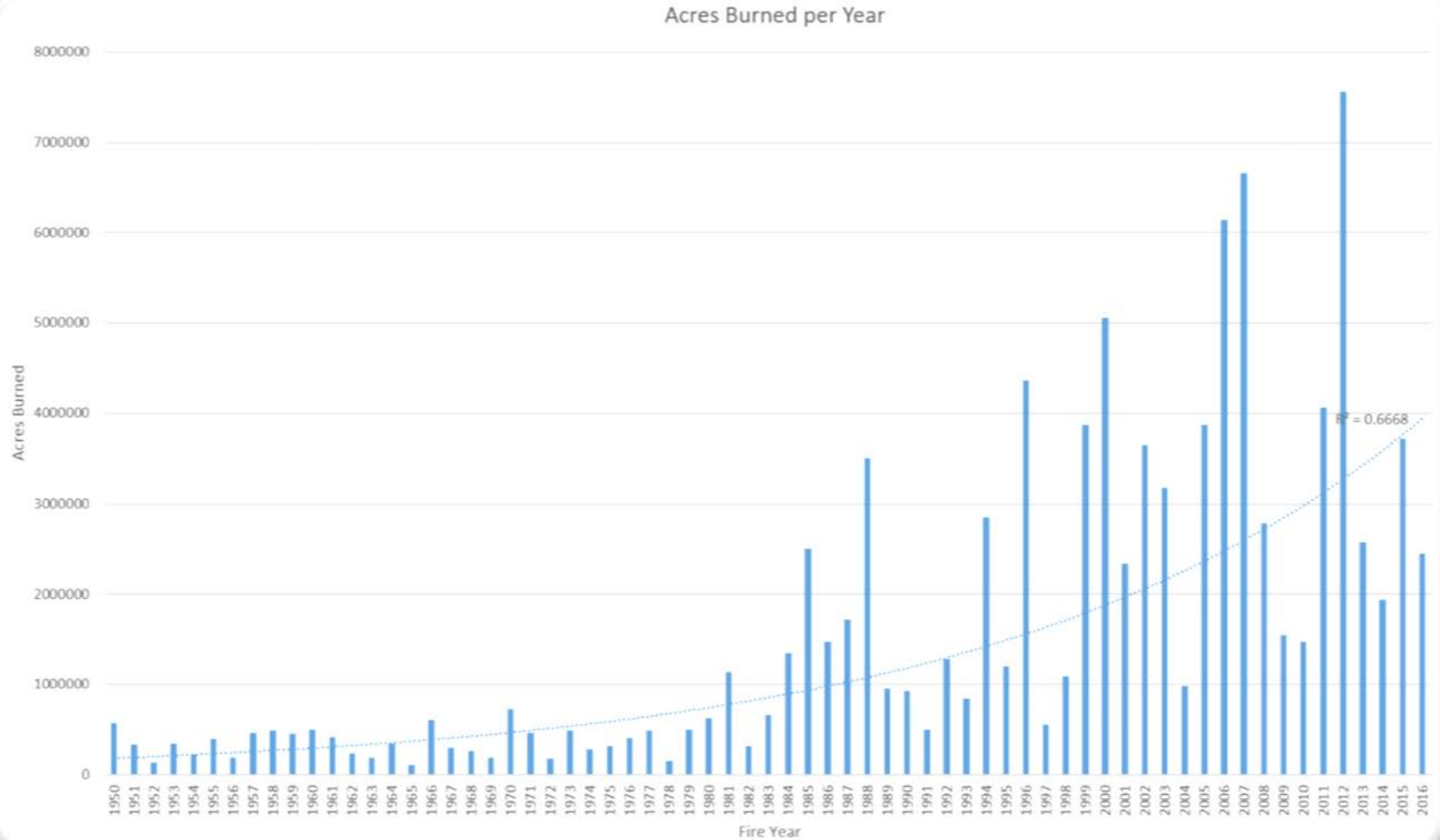
Current Picture

Chart Area

Fire Frequency Per Year



A Need for RECOVER?



The Capability



Our Future

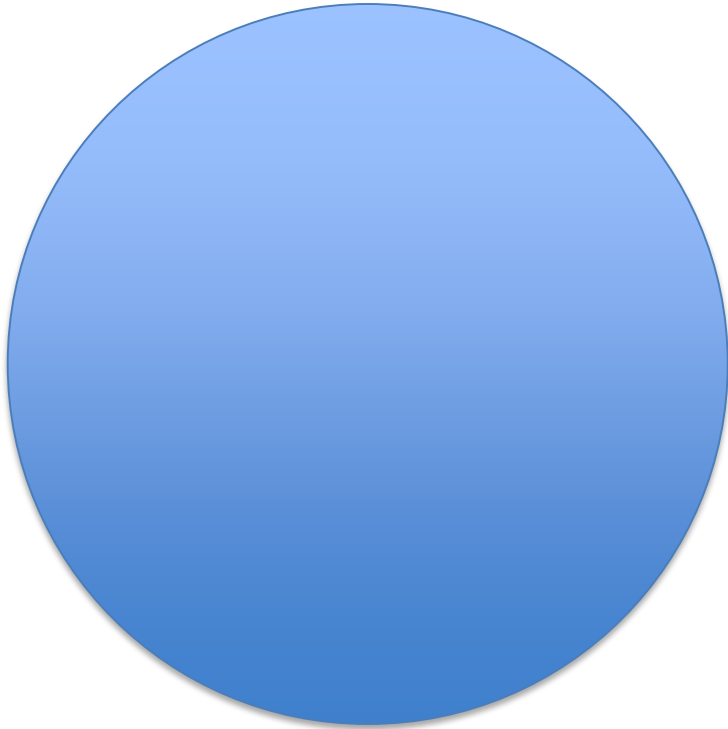
- Improvements to IT Infrastructure
 - ISU's new dedicated Research Data Center
 - 10 Gbps network connectivity instead of 1 Gbps

Our Future (cont'd)

- In approx. 5 months, NASA funding for RECOVER will end

2017				AUGUST		
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

To Continue...



- Very minimal and basic budget of \$50,000 annually
 - Can be split by BLM, NIFC, and IDL
 - How to slice the pie?

Questions?



RECOVER is a NASA Applied Sciences sponsored project. K. T. Weber (PI), J. Schnase (Co-PI) and M. Carroll (Co-PI), Goddard Space Flight Center

