The Western States Water Data Access and Analysis Tool (WestDAAT) Update

Western States Water Council

2023 Fall Meetings, Anchorage Alaska

Sept 13, 2023

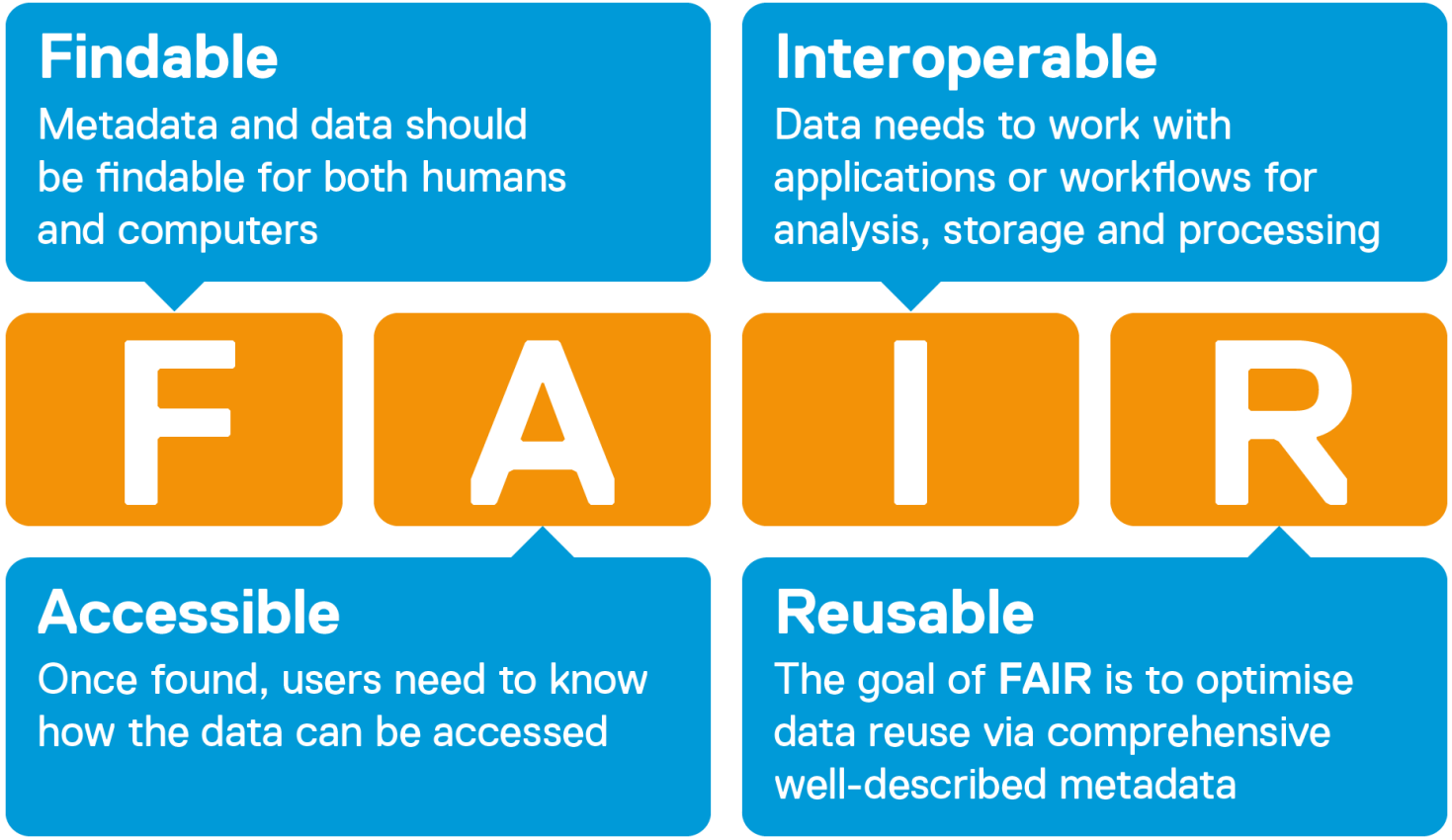
Adel Abdallah, Water Data Exchange (WaDE) Program Manager
Tony Willardson, WSWC Executive Director
Ryan James, WaDE Data Analyst

The WaDE Program is committed to assisting WSWC member states in publicly sharing water rights, allocation, supply, and use data through a common streamlined and standardized service that enables regional analyses to inform water resources planning and policies

WaDE Database and Water Data Shared through WestDAAT

	#	Data Type	Data	# States sharing	WaDE database	WestDAAT
Stage 1	1	Water Rights	Owner, point of diversion, purpose of use, permitted flow or volume, place of use, water source name and type, priority date	18	Yes	Yes
Stage 2	2	State Regulatory and Admin Overlays	Basins closed to new surface water diversions, groundwater management areas, natural resources districts, interstate stream and river compacts, etc.	15	Yes	No
	3	State Site-Specific time series	State reservoir and state streamgages or groundwater observation wells	10	Yes	No
			State public-supply water use	4	Yes	
			Historic withdrawals related to water rights (e.g. CA, ND).	2	No	
	4	Area Aggregated time series	Available water supply, withdrawal, demand and delivered water as well as consumption or consumptive use	9	Yes	No

WaDE Data is FAIR



https://www.scibite.com/solutions/enterprise-fair-data-mdm/

WSWC New Contractors

Andrew Campbell

Bachelor of Science in Software Engineering from Utah Valley University

Joseph Wirthlin

Pursuing Master of Science in Economics at the University of Utah

Internet of Water COALITION

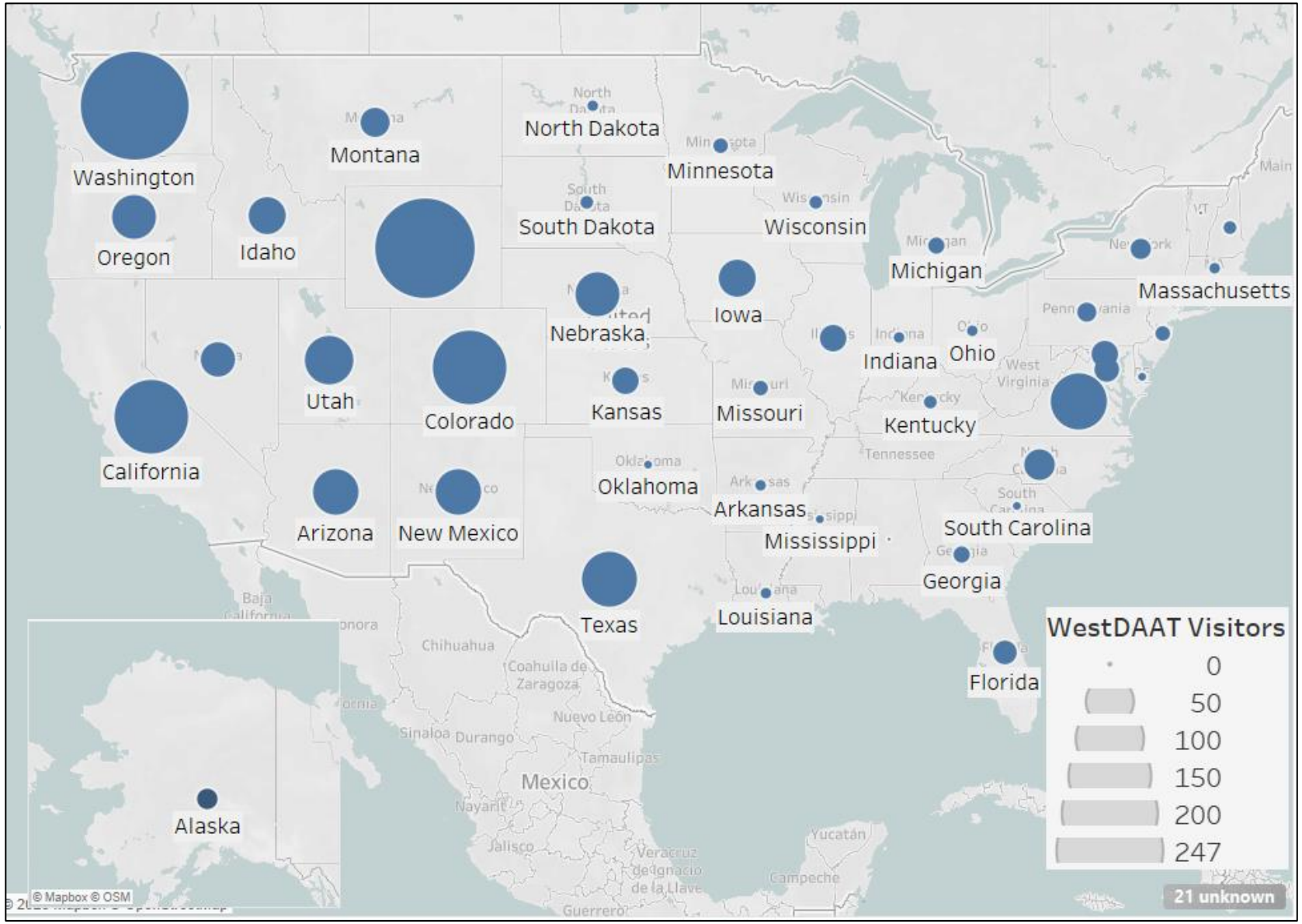
Our Story Resources Peer Network Events Newsroom

Unveiling WestDAAT

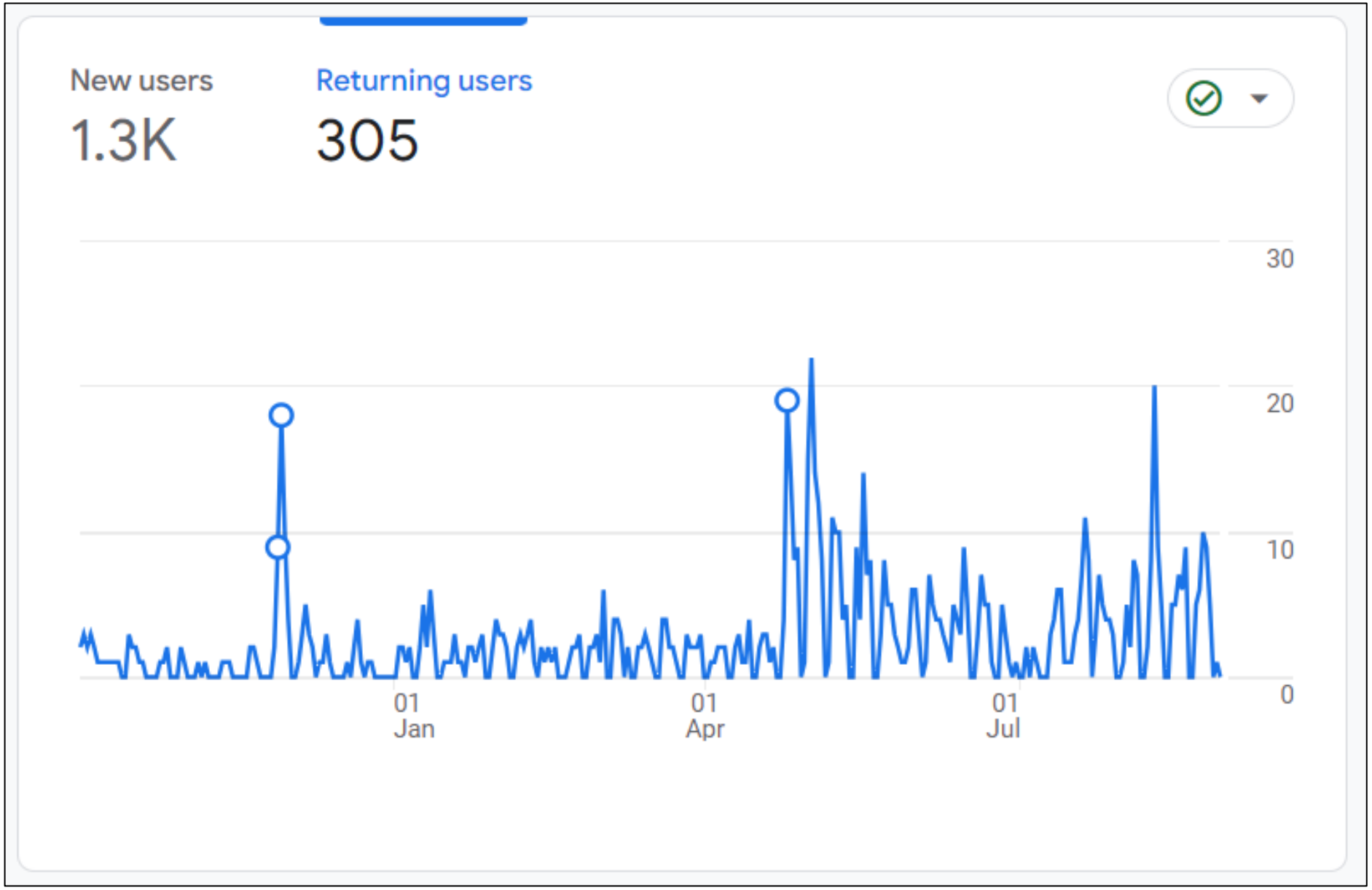
A Breakthrough for Water Rights Data Management in the Western United States

https://internetofwater.org/blog/unveiling-westdaat-a-breakthrough-for-water-rights-data-management-in-the-western-united-states

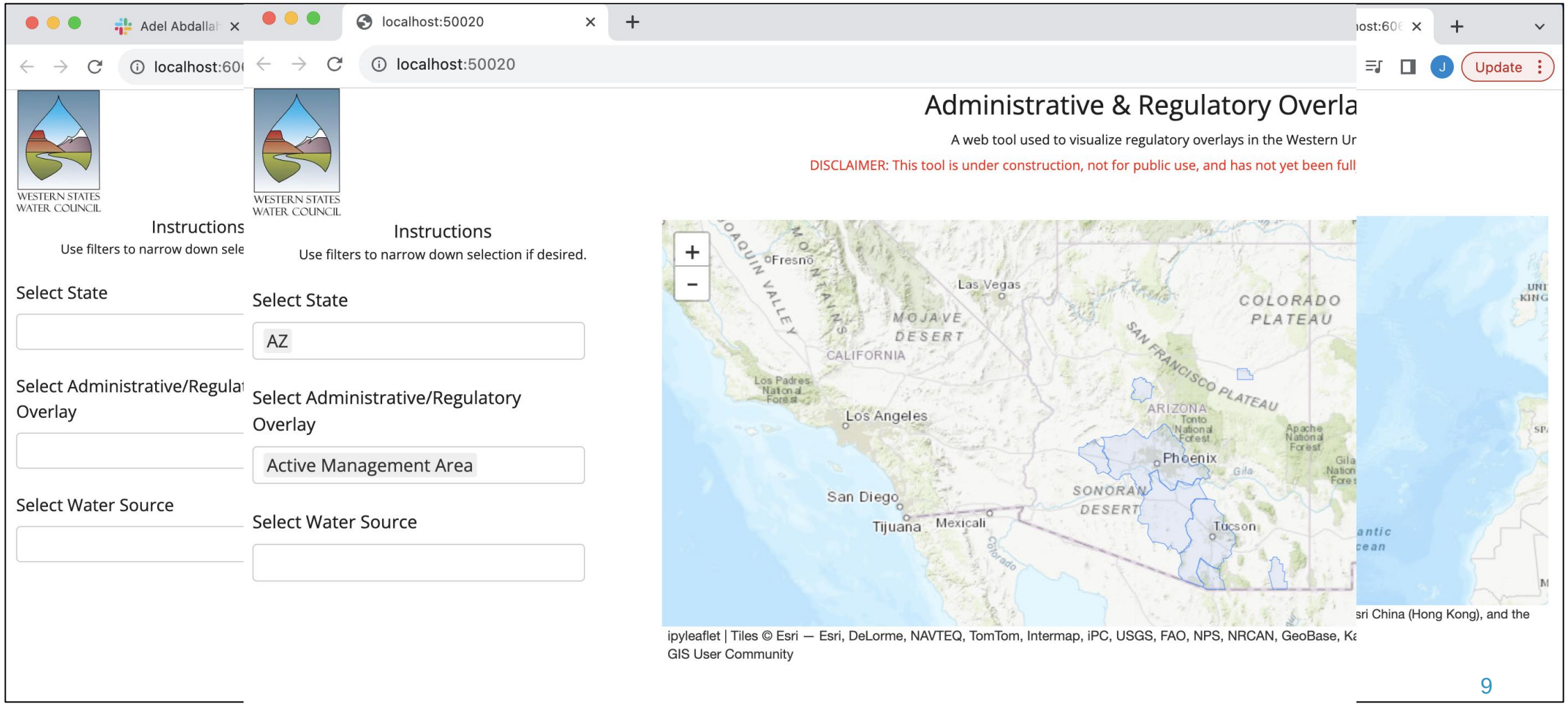
WestDAAT unique visitors across the US from October 1, 2022, through August 29, 2023. Total 1,300 unique visitors



WestDAAT's Unique Daily Returning Visitors



Administrative and Regulatory Overlays



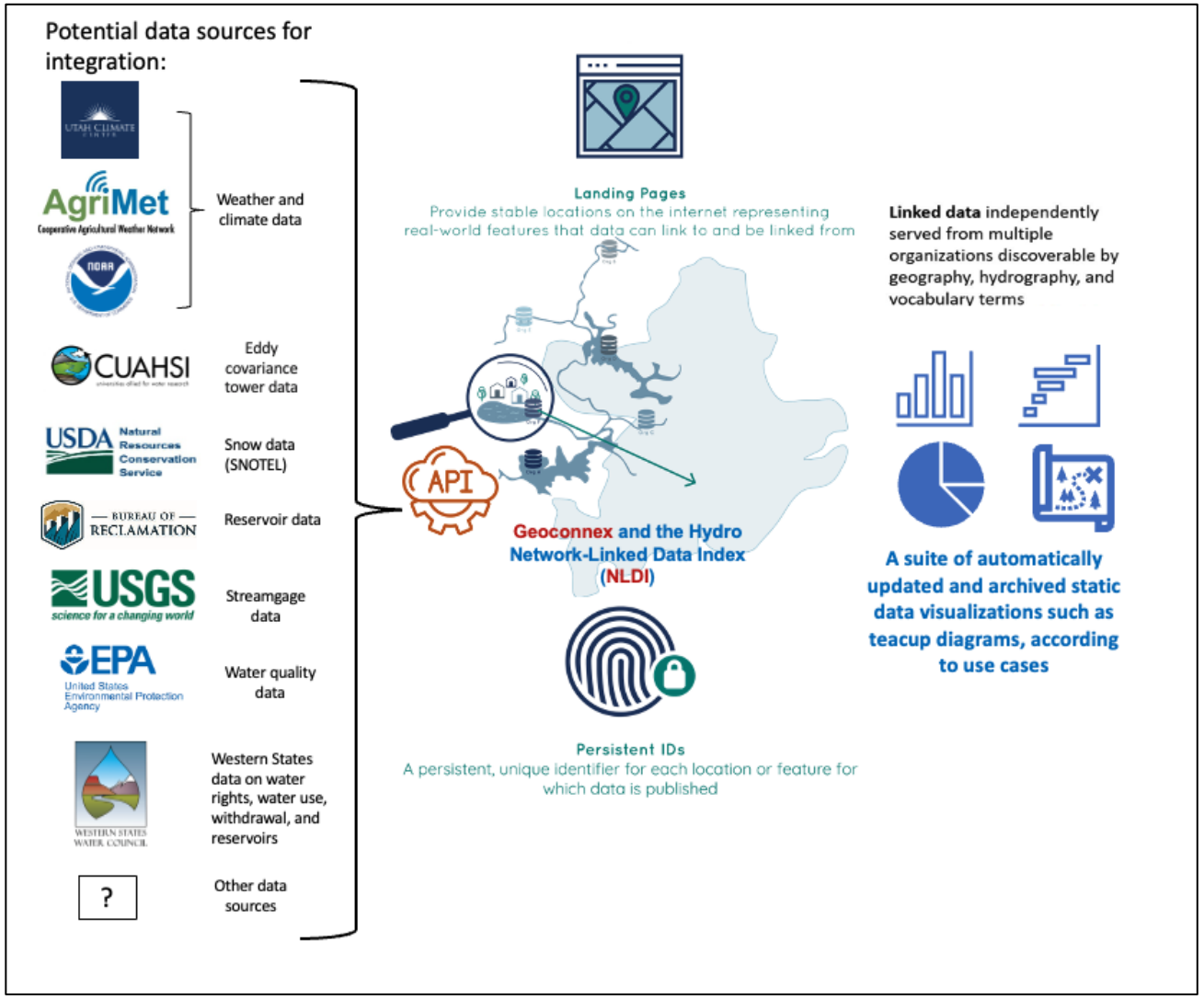
Interoperable Data Hub for Western Water Data

BUREAU OF RECLAMATION

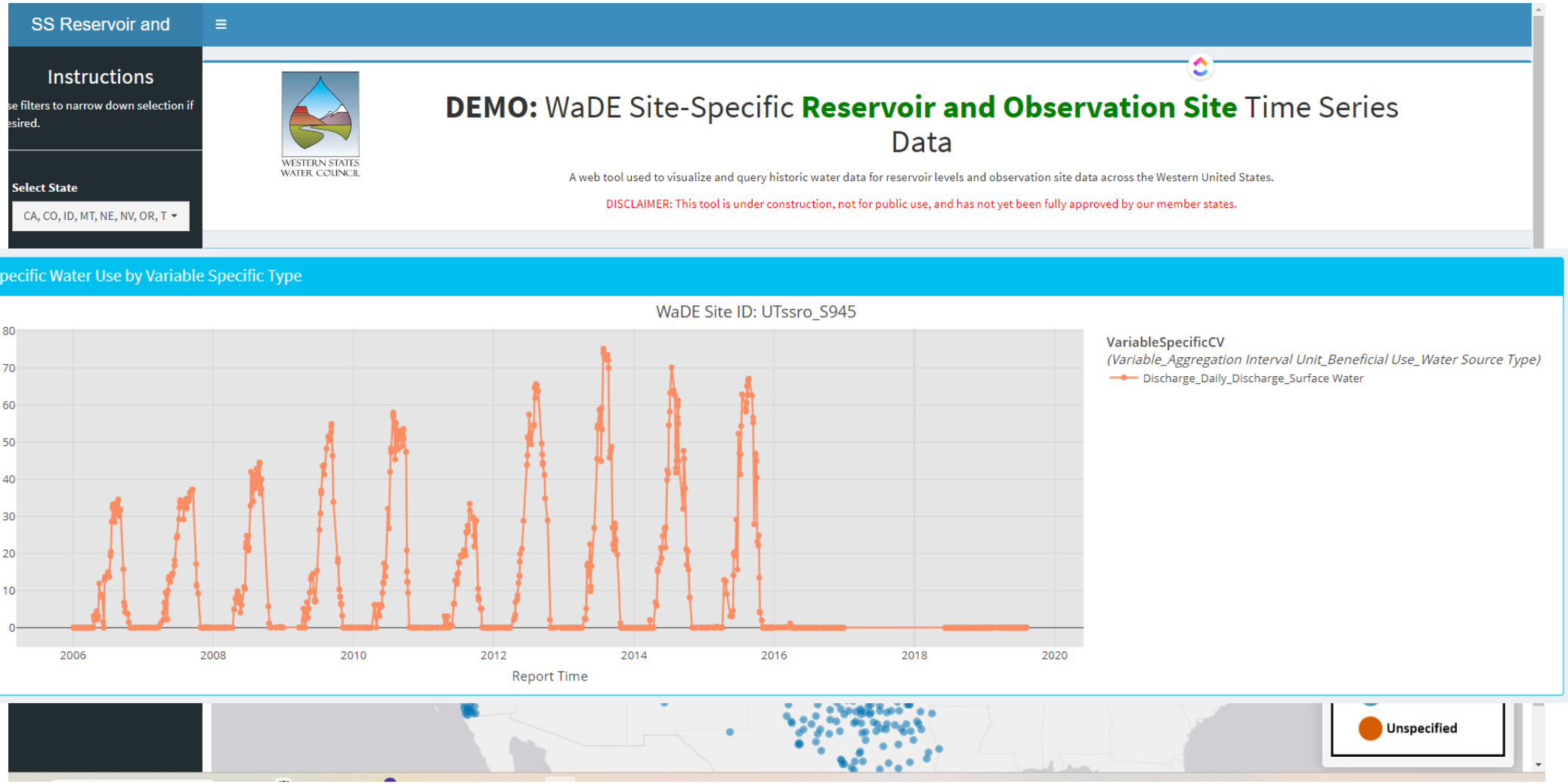
CENTER FOR GEOSPATIAL SOLUTIONS

Lincoln Institute of Land Policy

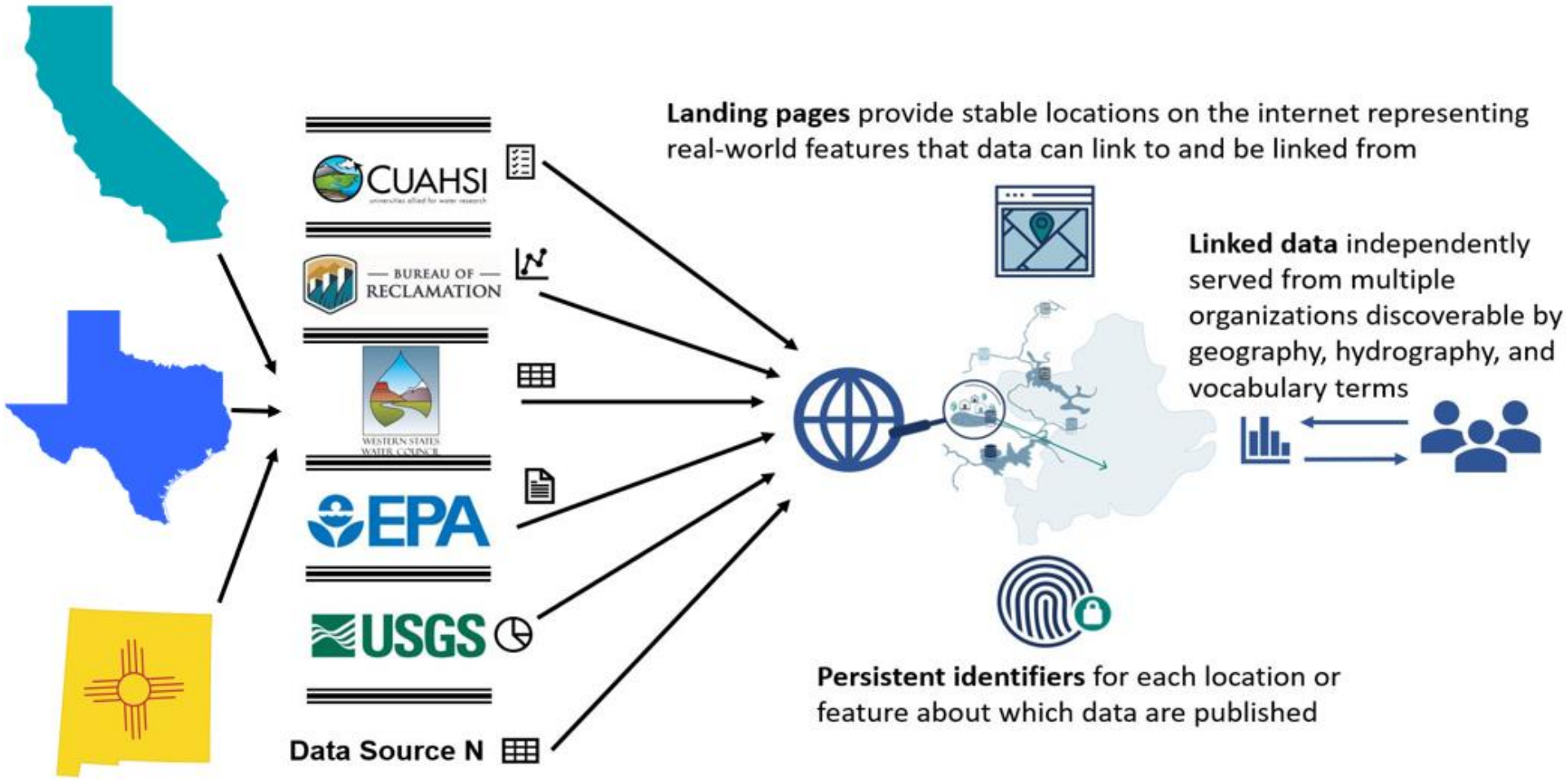
WESTERN STATES WATER COUNCIL



Interoperable Data Hub for Western Water Data



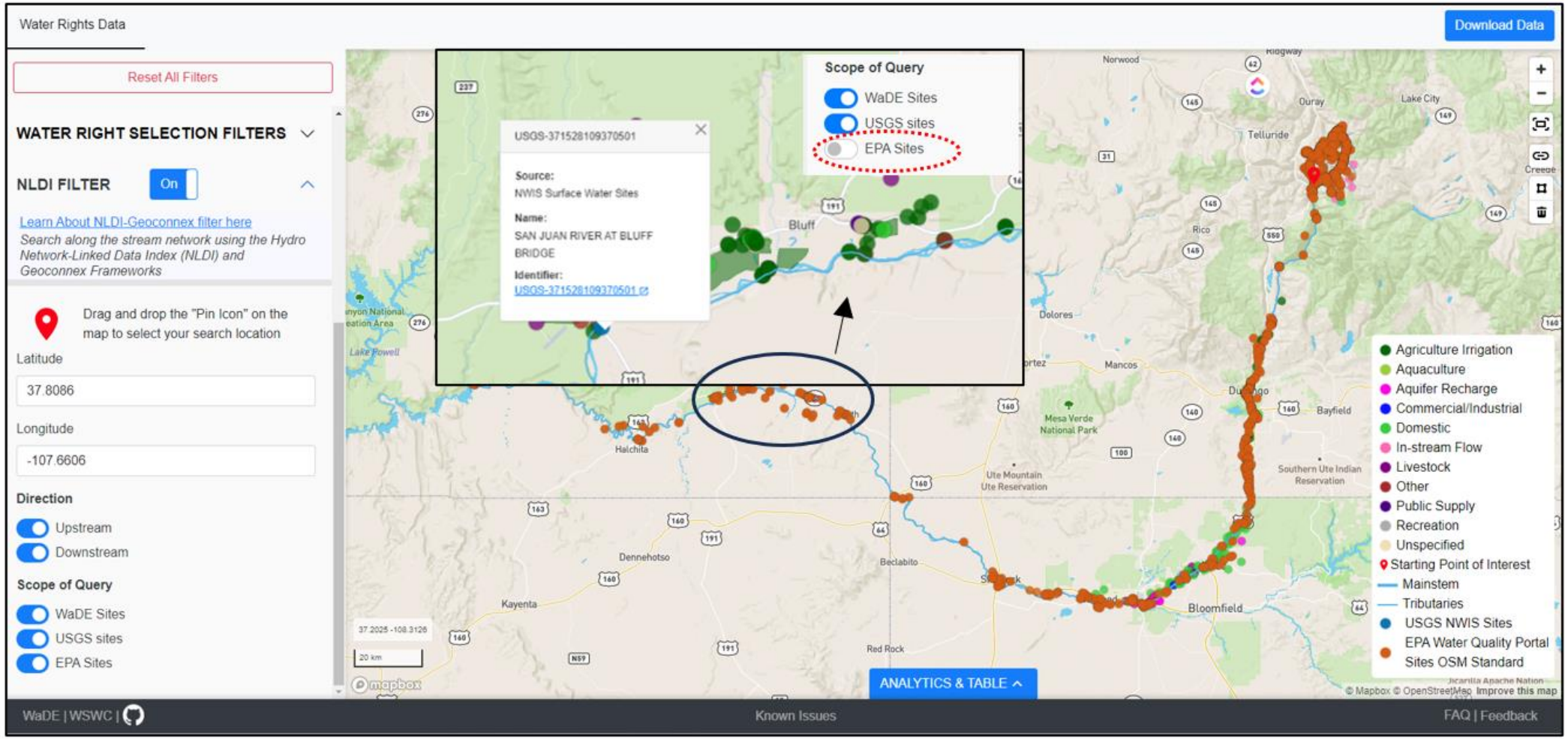
WaDE Integration with Geoconnex and NLDI



Geoconnex https://internetofwater.org/events/geoconnex-a-community-index-for-water-data/

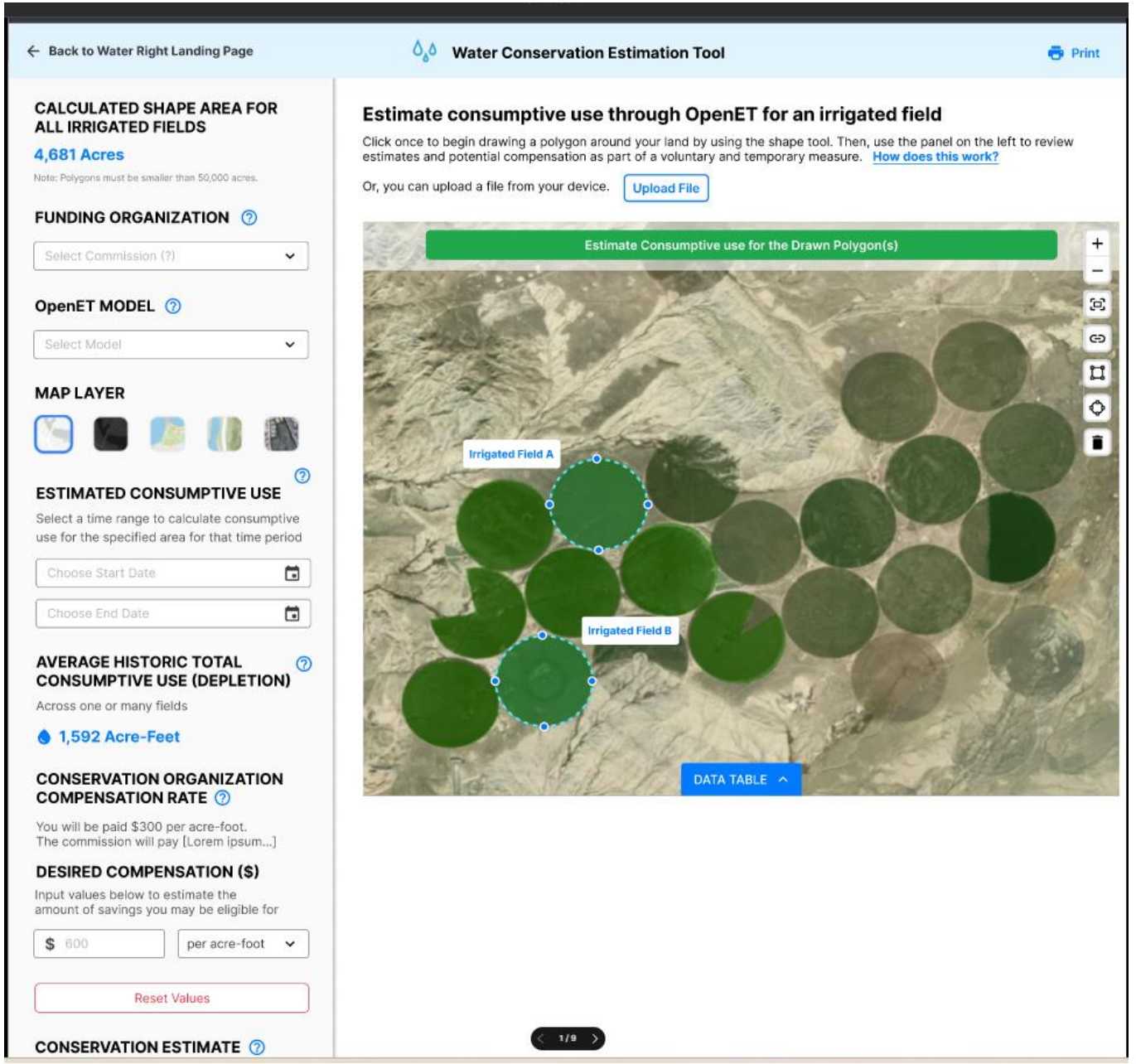
The Hydro Network-Linked Data Index (NLDI): https://waterdata.usgs.gov/blog/nldi-intro/

WestDAAT Integration with the Hydro Network-Linked Index (NLDI) System



http://tinyurl.com/3fmkmexn

Water Conservation Tool Mockup



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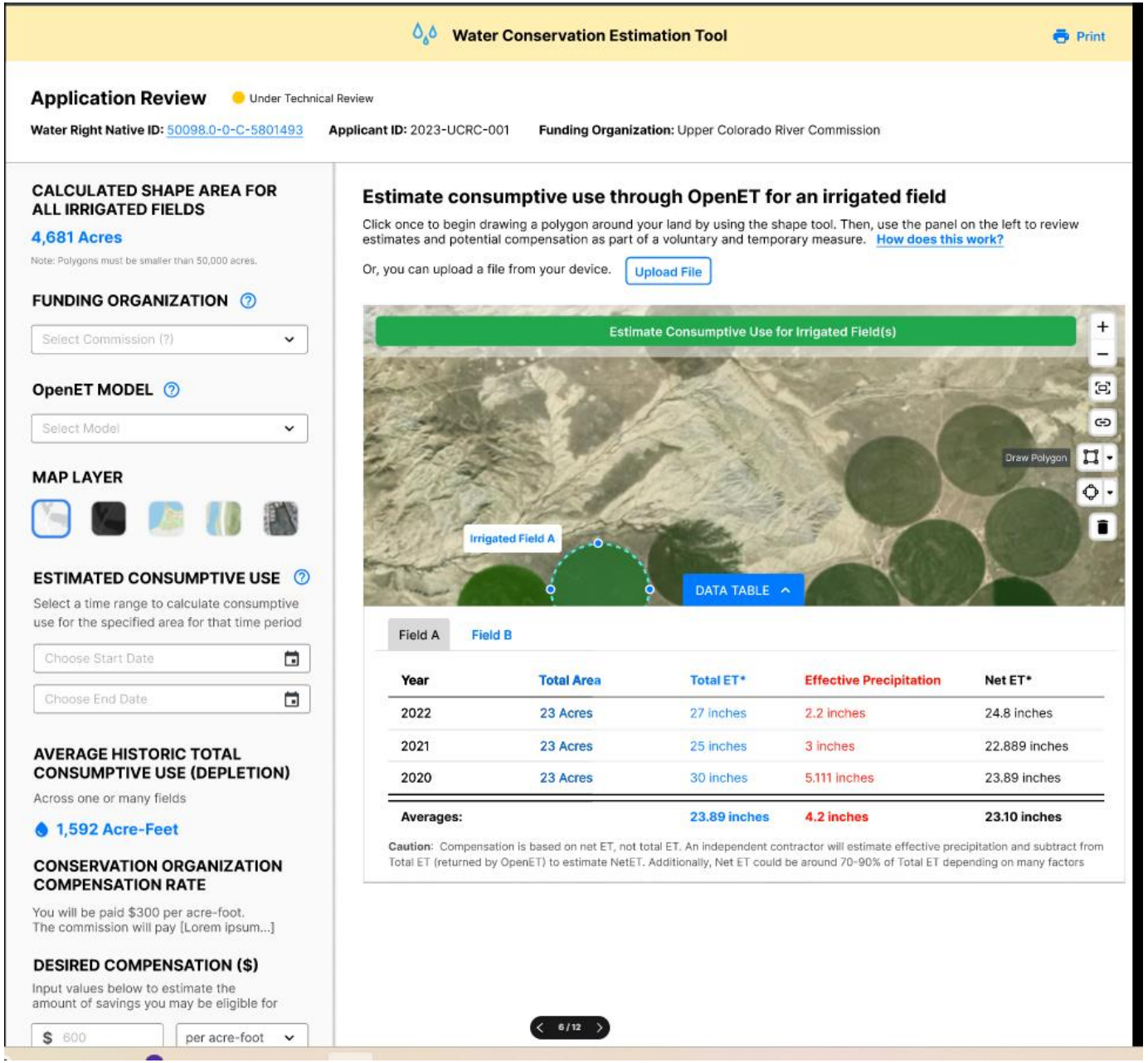

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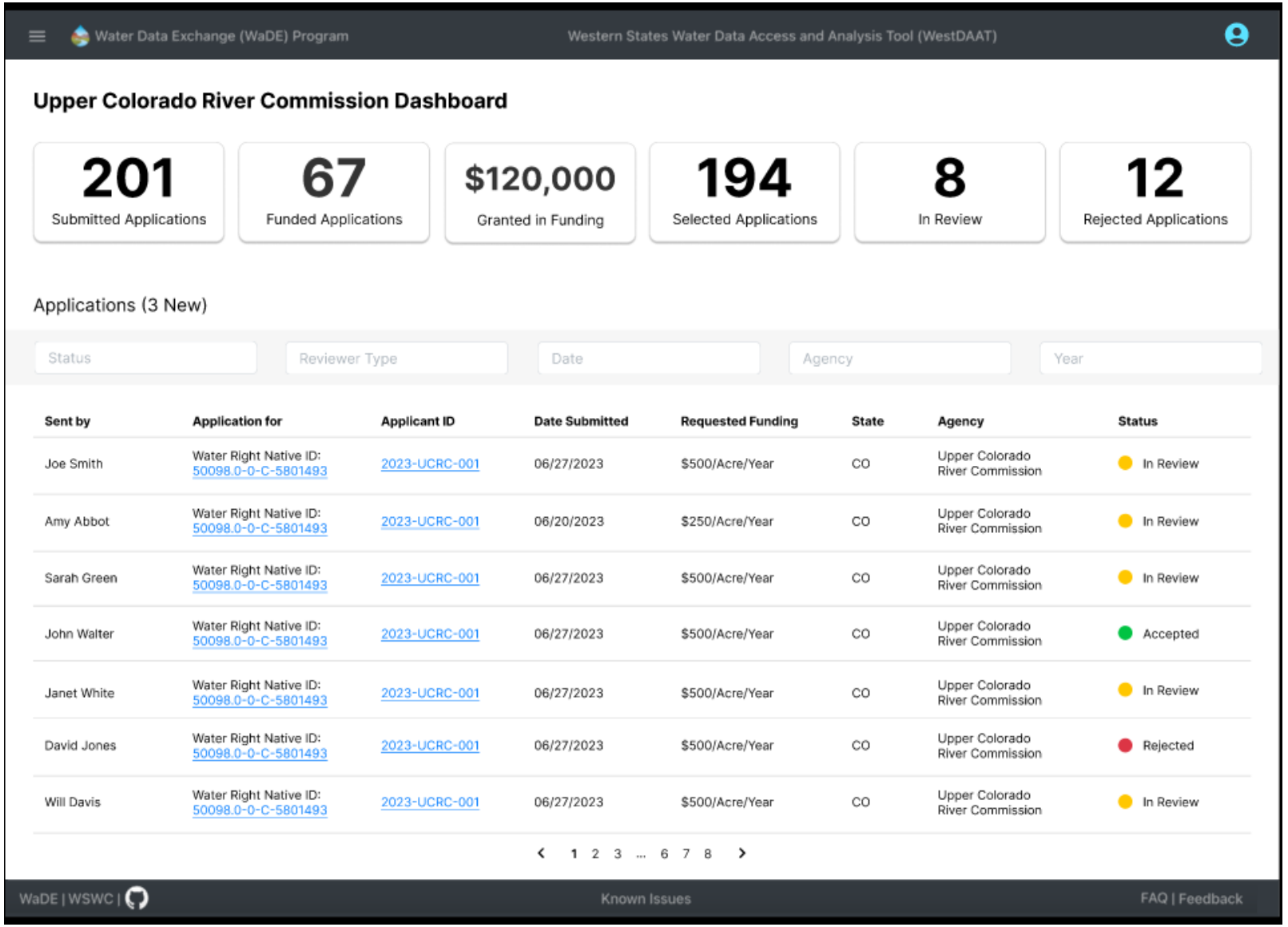
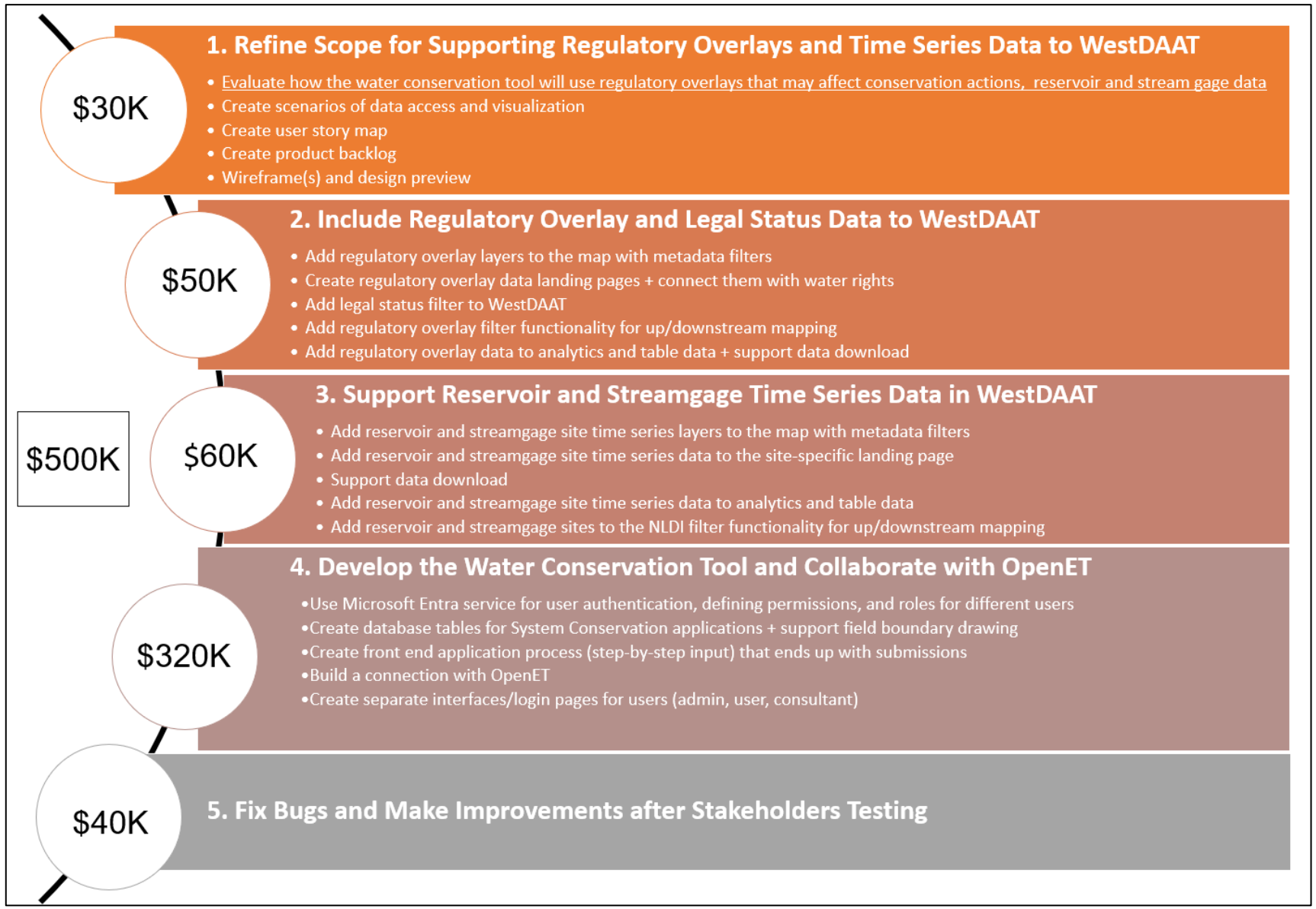


What's Next? Second Stage Development



BUREAU OF
RECLAMATION

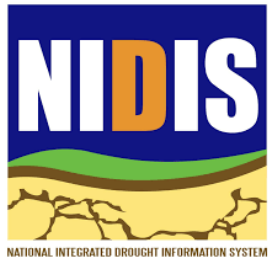
USDA
United States
Department of
Agriculture

CRWUA
COLORADO RIVER WATER USERS ASSOCIATION

WESTERN
GOVERNORS'
ASSOCIATION

NATIONAL SYSTEM OF PUBLIC LANDS
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

USGS
Water Resources


NIDIS
NATIONAL INTEGRATED DROUGHT INFORMATION SYSTEM

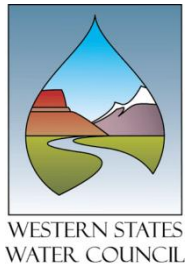
Family Farm
ALLIANCE®
PROTECTING WATER FOR WESTERN IRRIGATED AGRICULTURE

AMERICAN
WATER RESOURCES
ASSOCIATION

WestFAST

ONE WATER
SOLUTIONS
INSTITUTE

WestWater
Research LLC

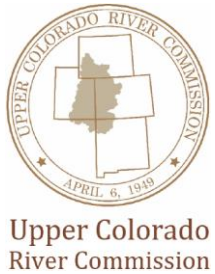

WESTERN STATES
WATER COUNCIL

Pacific
Northwest
NATIONAL LABORATORY

The Nature
Conservancy
Protecting nature. Preserving life.

OPENET

TROUT
UNLIMITED


Upper Colorado
River Commission

STRATECON
INC.

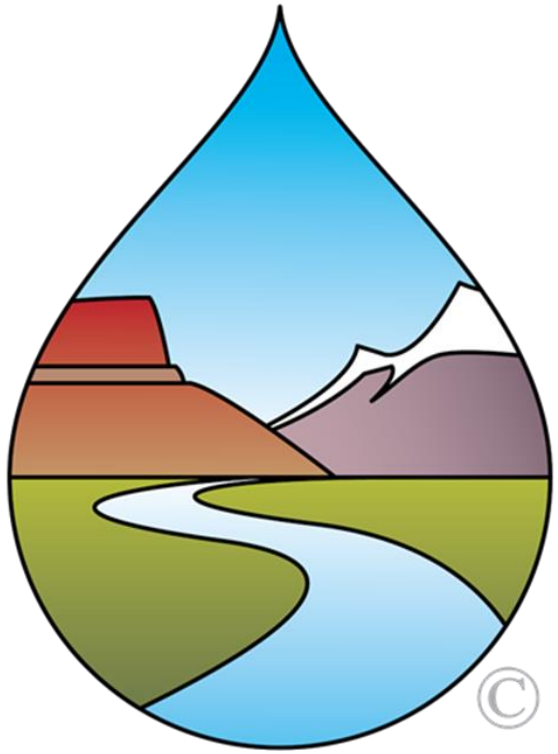
NWRA
National Water Resources Association

Funders, Collaborators & Partners

Water Foundation
Mitchell Foundation
BHP Foundation
MOORE Foundation
EPA Exchange Network

WSWC Member State Agencies

Thank You!



Adel Abdallah, WaDE Program Manager
Ryan James, WaDE Data Analyst
Western States Water Council
adelabdallah@wswc.utah.gov

Eklutna Historical Park

https://westdaat.westernstateswater.org/?state=N4IgtghgDiBcoC8D2SwBkCmA3DAbOAjAOwB0ArAJxkDMADAQEwAcNlRRTANCLhAC4BLPgFcAJhjgA2AiQAsk2tO64kAOwDmQsRNgBaArIolqCspIC%2B3MAGc4Ia3wBOGDH2u6sBAiHNA

Live Demo

WestDAAT
https://westdaat.westernstateswater.org/

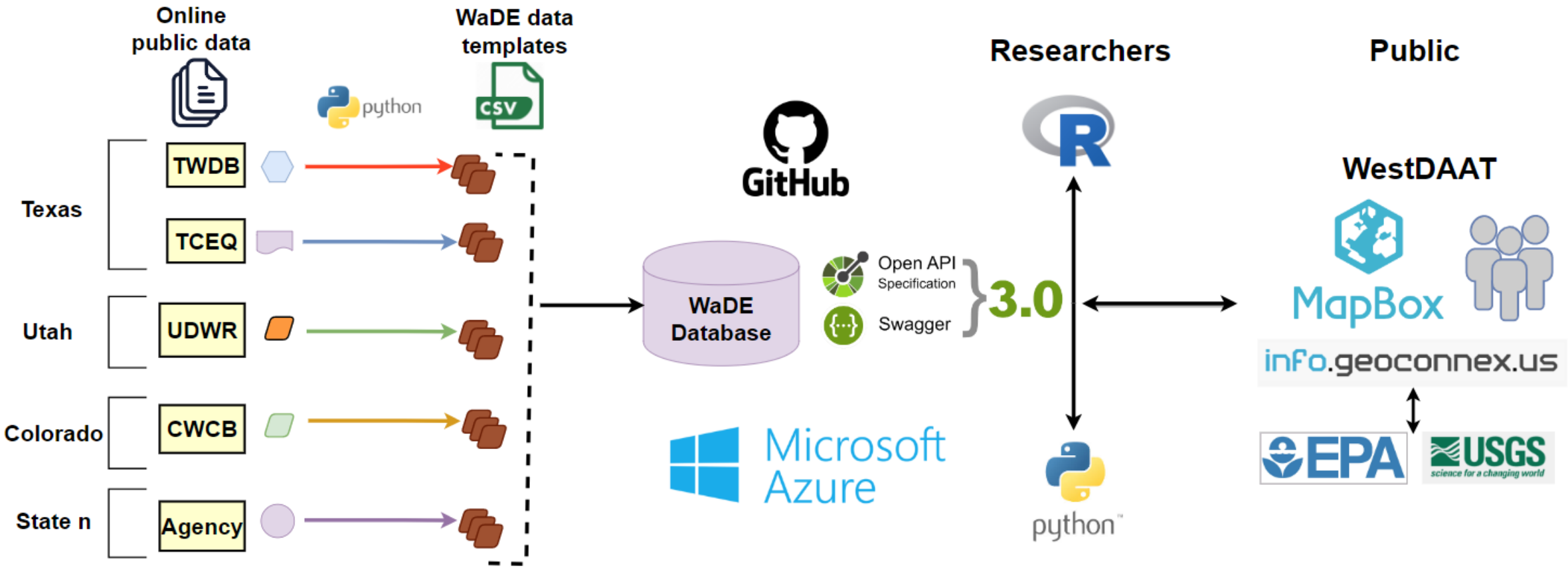
Prototypes

1. Reservoir and Gage Data
   https://waterdataexchangewswc.shinyapps.io/SiteSpecificReservoirAndObservationSiteDemo/

2. Aggregated Area Water Budget Data
   https://waterdataexchangewswc.shinyapps.io/AggregatedBudgetWaterUseDemo/

3. Public Supply Water Data
   https://waterdataexchangewswc.shinyapps.io/SiteSpecificPublicSupplyWaterDemo/

WaDE 2.0 Architecture



GitHub https://github.com/WSWCWaterDataExchange