



Impactful science, inspiring solutions.

**Washoe County Commission
January 16, 2024**

NEVADA SYSTEM OF HIGHER EDUCATION

NEVADA BOARD OF REGENTS

NSHE CHANCELLOR

NSHE SYSTEM OFFICE

UNIVERSITIES



COMMUNITY COLLEGES



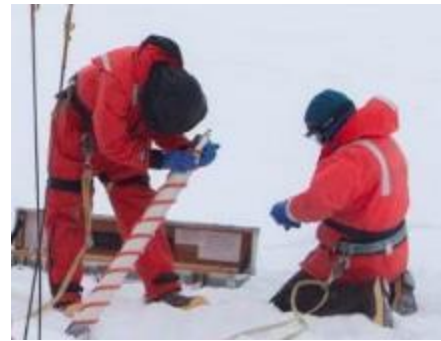
RESEARCH INSTITUTE

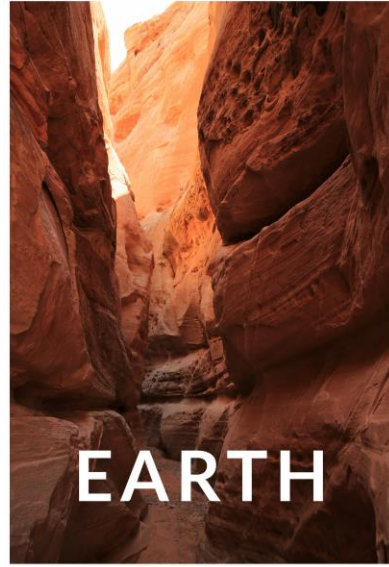


WHO WE ARE



- **One of eight** institutions within the Nevada System of Higher Education
- **Two** main campuses in Las Vegas and Reno
- Over **60 years** of environmental research and discovery
- More than **600** scientists, engineers, students, and support staff
- More than **140** PhDs in more than **40** disciplines
- **\$47M** in sponsored research grants and contracts annually





INVESTIGATING HUMAN'S IMPACT ON THE ENVIRONMENT
AND THE ENVIRONMENT'S IMPACT ON HUMANS



NATIONAL SCIENCE FOUNDATION RANKING

Top 9%



GEOSCIENCES OVERALL

39 out of 437 Institutions

Top 6%



ATMOSPHERIC SCIENCE

24 out of 437 Institutions

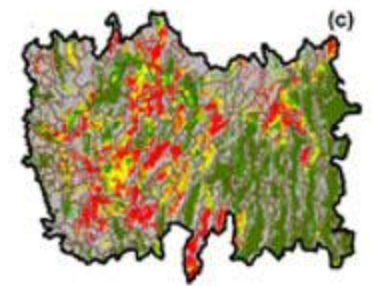
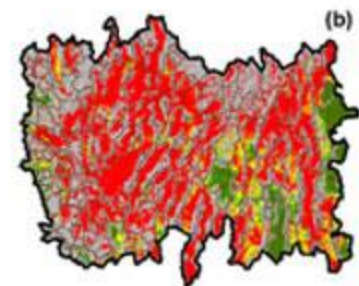
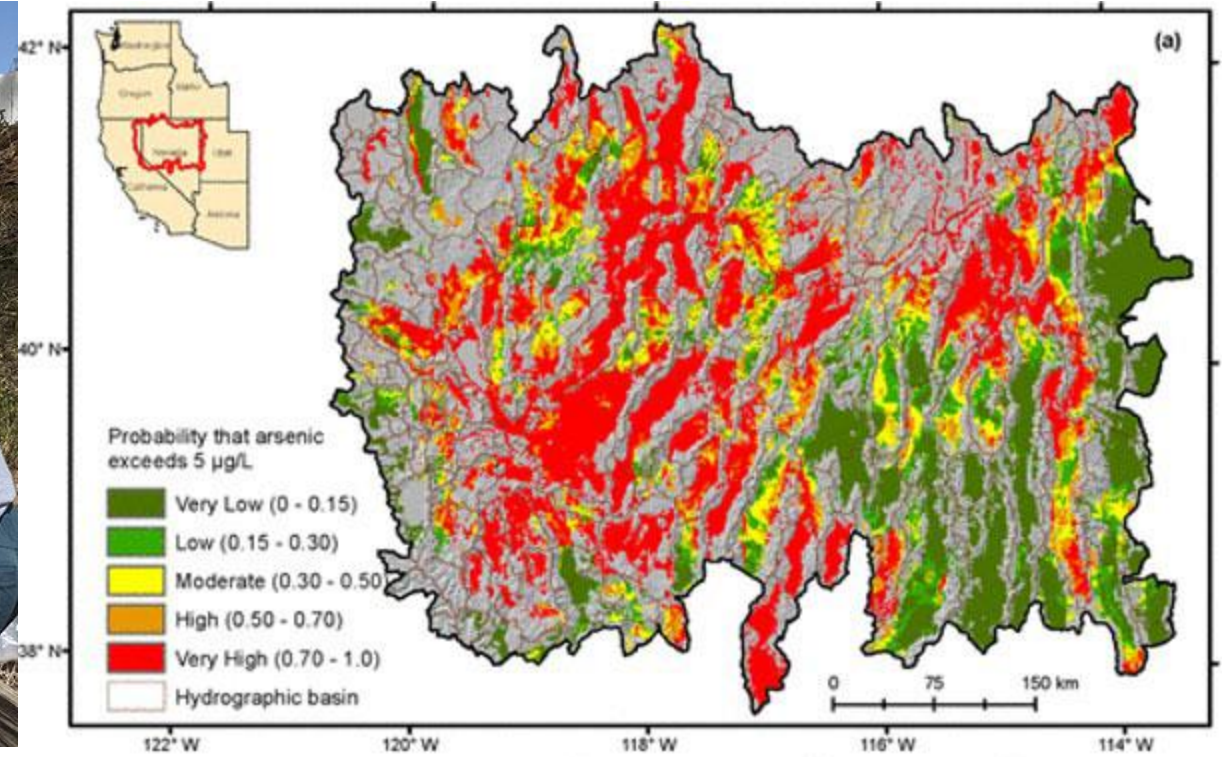
Top 3%



GEOLOGICAL & EARTH SCIENCES

13 out of 437 Institutions

PRIVATE DRINKING WATER WELLS





M I C R O P L A S T I C S



A
W A R M I N G
P L A N E T



URBAN HEAT ISLAND MODELING

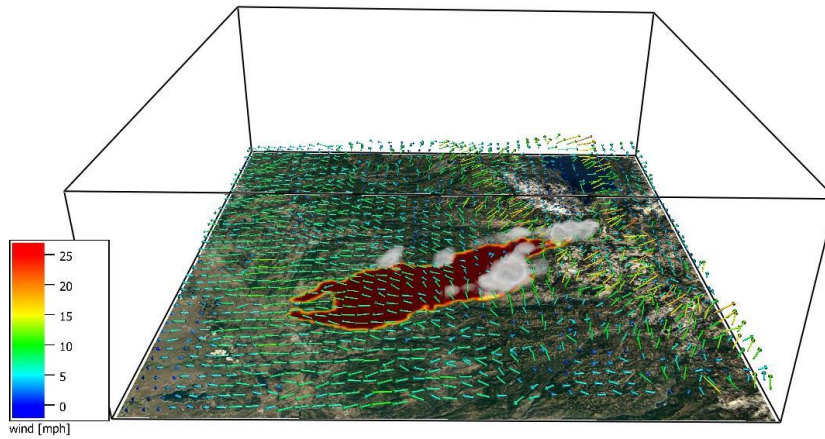


CLIMATE RESILIENCE

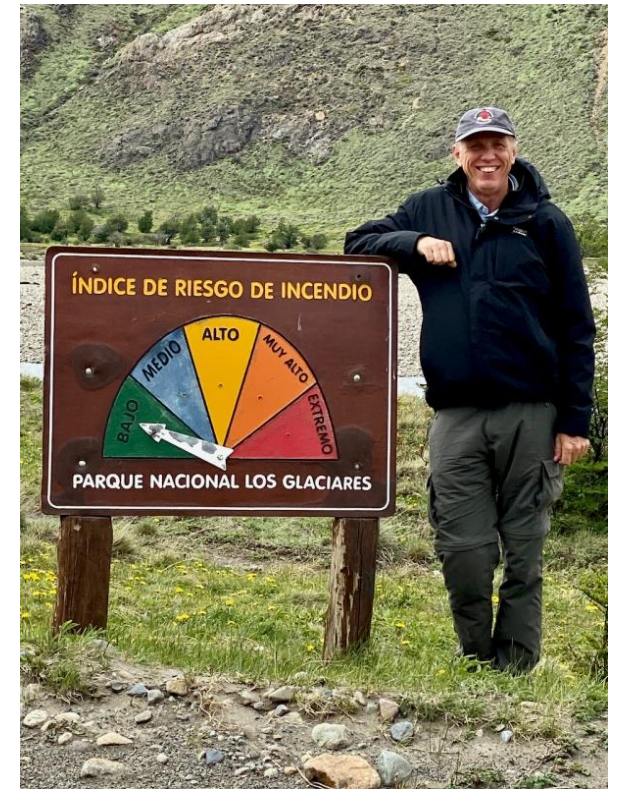
PREDICTIVE WILDFIRE & SMOKE MODELS



TIM BROWN, Ph.D.



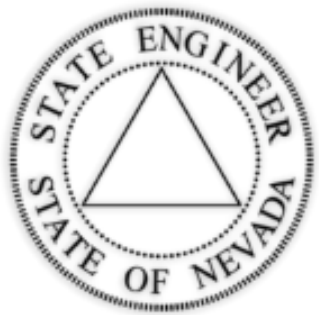
Model constructed by Adam Kochanski, Ph.D., San Jose State University



DROUGHT



THE NEVADA WATER RESOURCES INITIATIVE





**WESTERN
REGIONAL
CLIMATE CENTER**

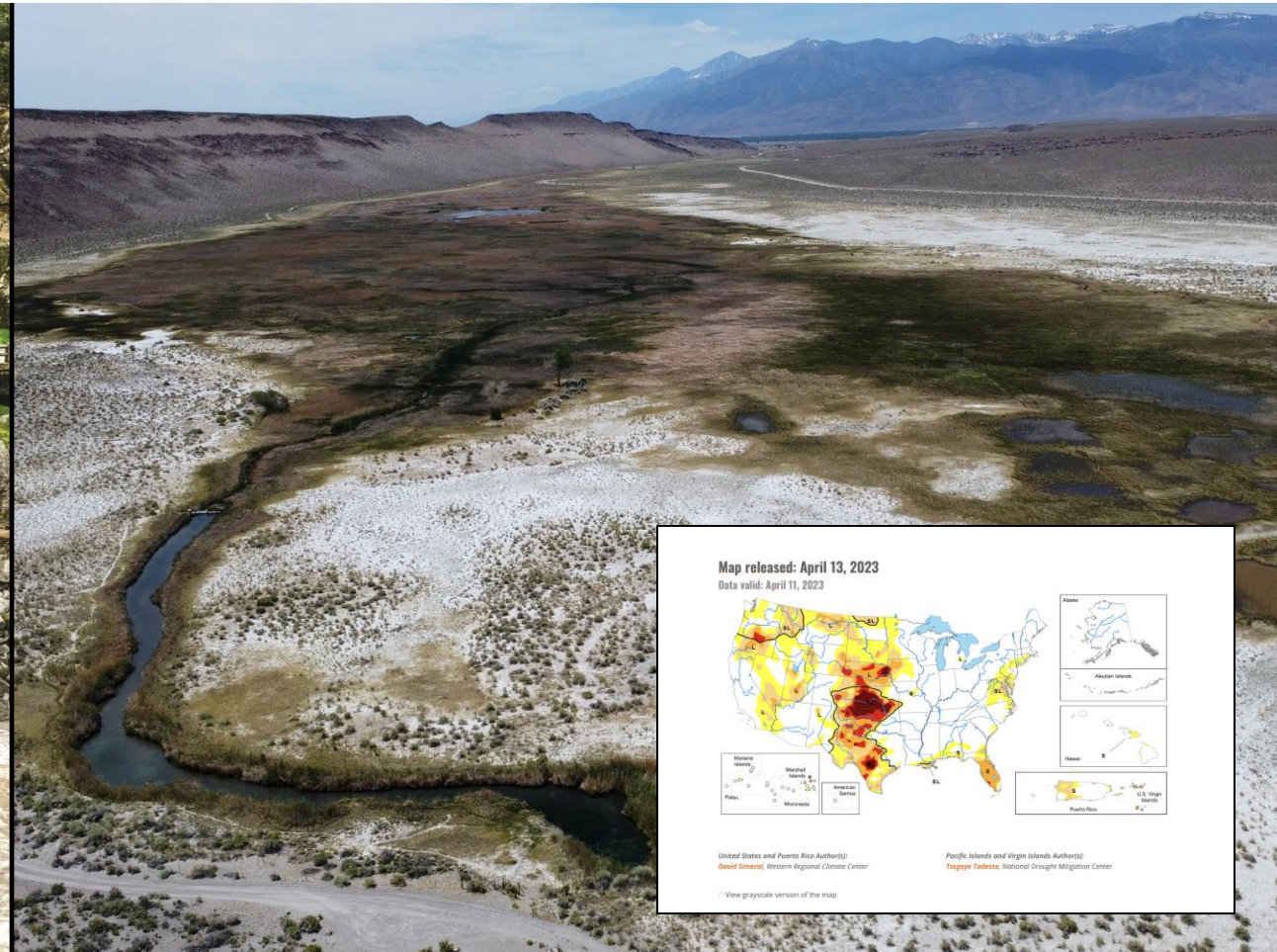
PROVIDING IMPACTFUL DATA FOR
LOCAL AND REGIONAL DECISION-MAKING



WEATHER MODELING



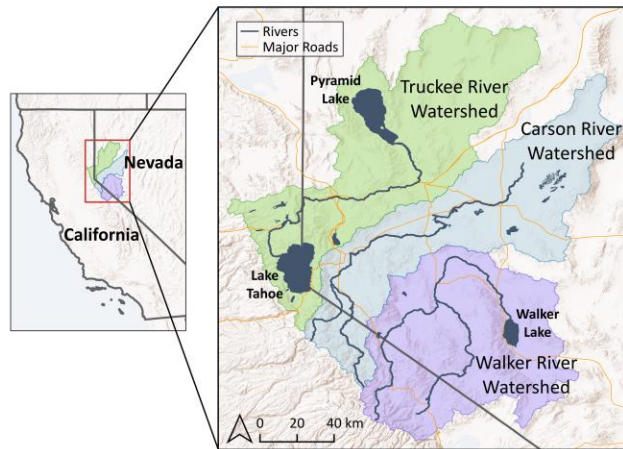
ATMOSPHERIC RIVERS



DROUGHT MONITOR

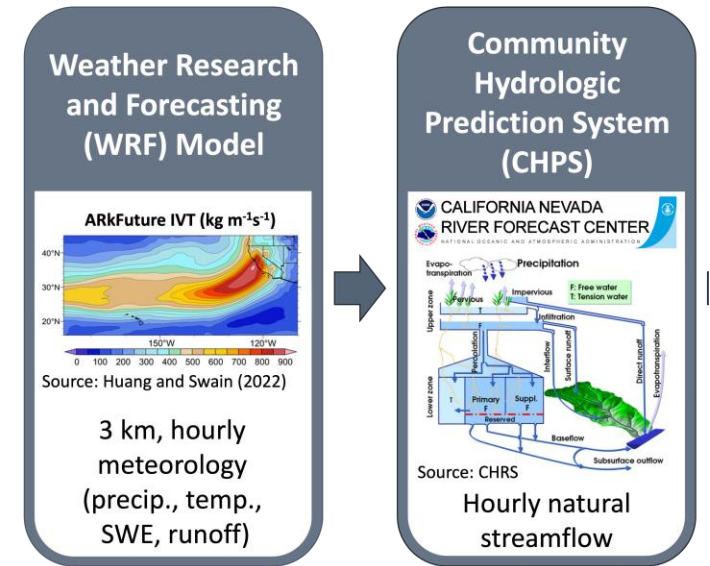
ARkStorm2.0 @ Sierra Front

Engaging emergency planners to anticipate impacts of extreme storms after wildfires



Sierra Front watersheds
Truckee, Carson, Walker

AR2.0 scenario used as input to hydrologic models then overlaid with socioeconomic data, wildfire burnscars, landslide/debris flow predictions, and critical infrastructure.

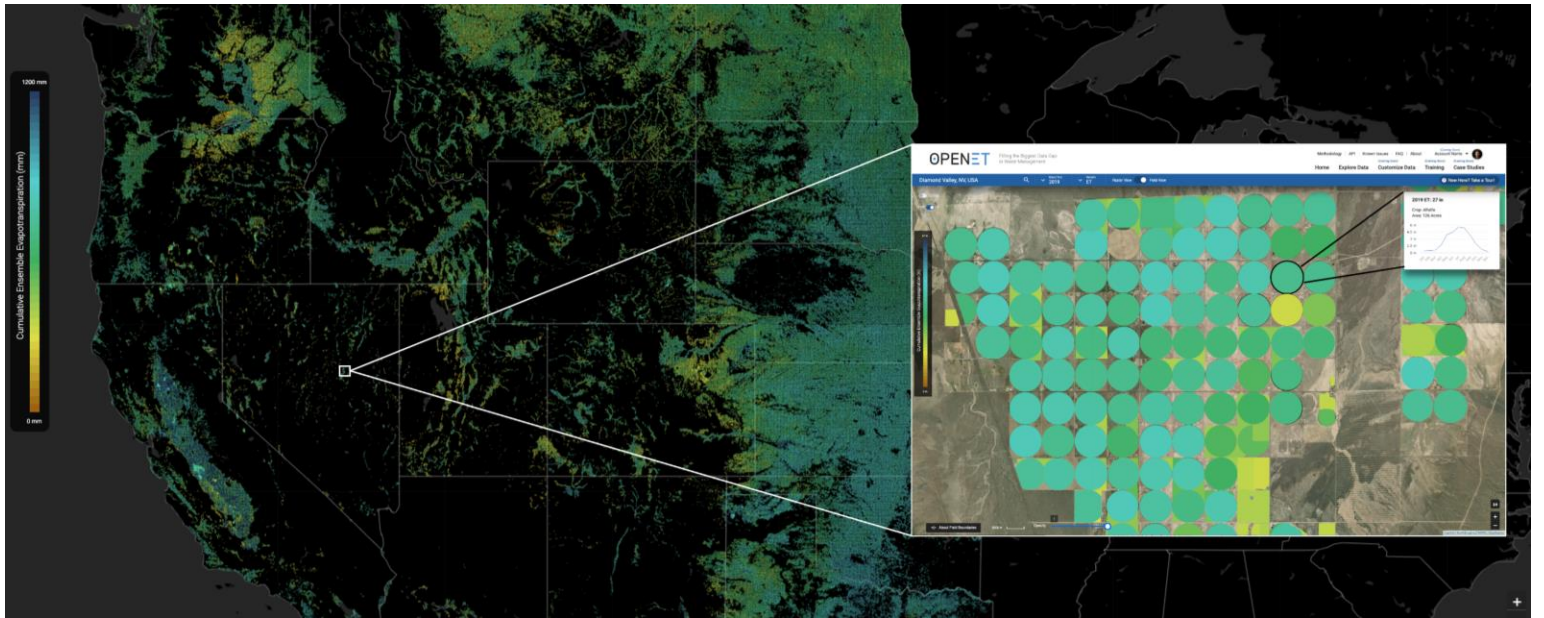
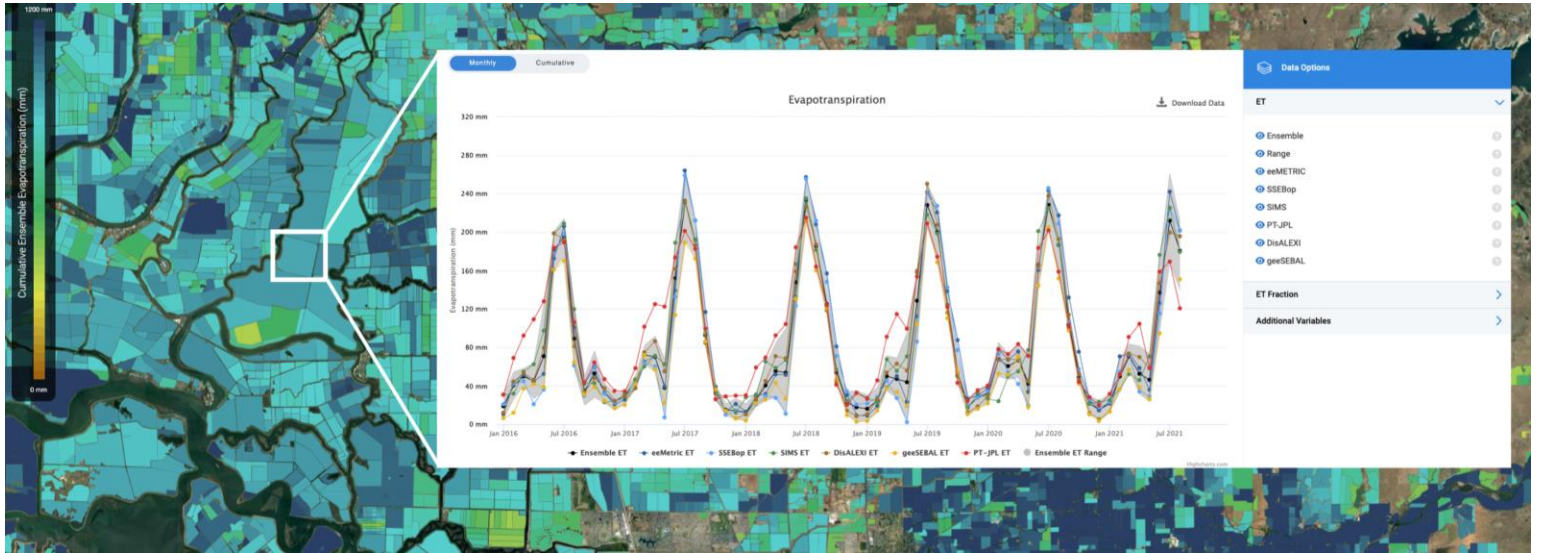


Visualized in a map App to support ER planning and exercises



OPENET

FILLING THE BIGGEST DATA GAP IN WATER MANAGEMENT

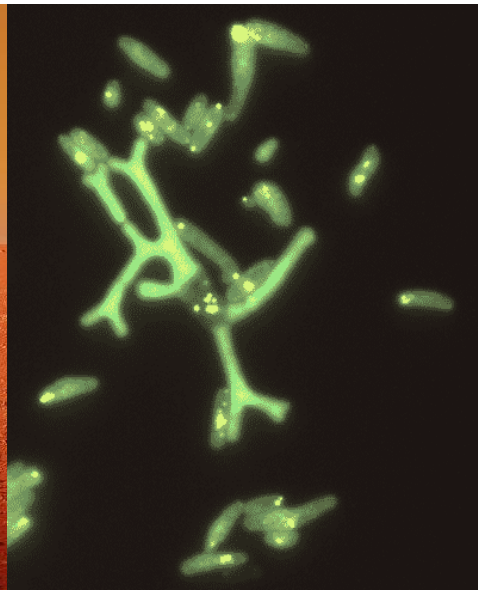




ARCHAEOLOGY



LIFE IN EXTREME ENVIRONMENTS





SOLAR



ECOCELLS



P R O T E C T I N G N A T I O N A L P A R K S C E N E R Y

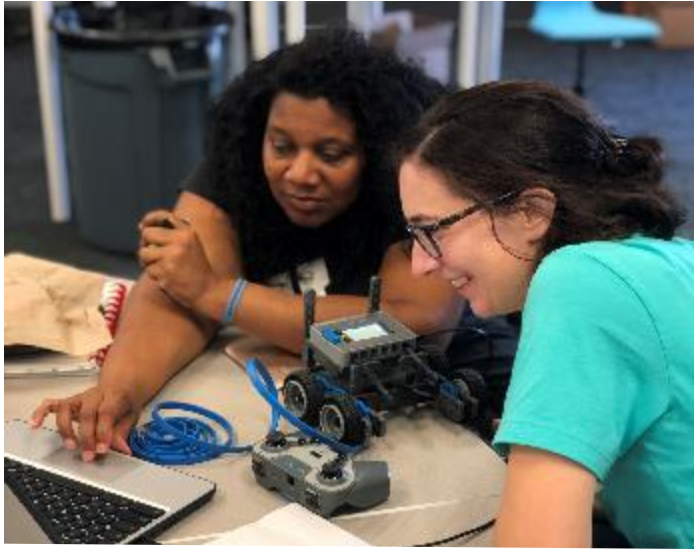




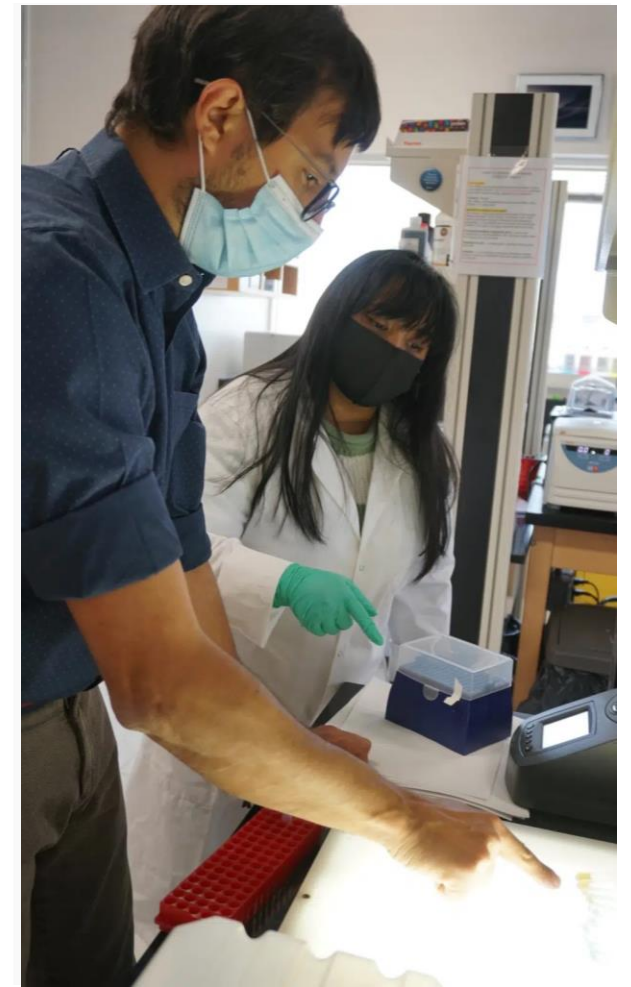
K - 1 2
GREEN BOX
PROGRAM



STEM EDUCATOR PROFESSIONAL DEVELOPMENT



UNDERGRADUATE RESEARCH IMMERSION INTERNSHIP PROGRAM



SUPPORTING STUDENTS





COMMUNITY OUTREACH AND ENGAGEMENT

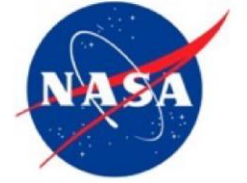
PUBLIC EVENTS

SOCIAL MEDIA
ENGAGEMENT

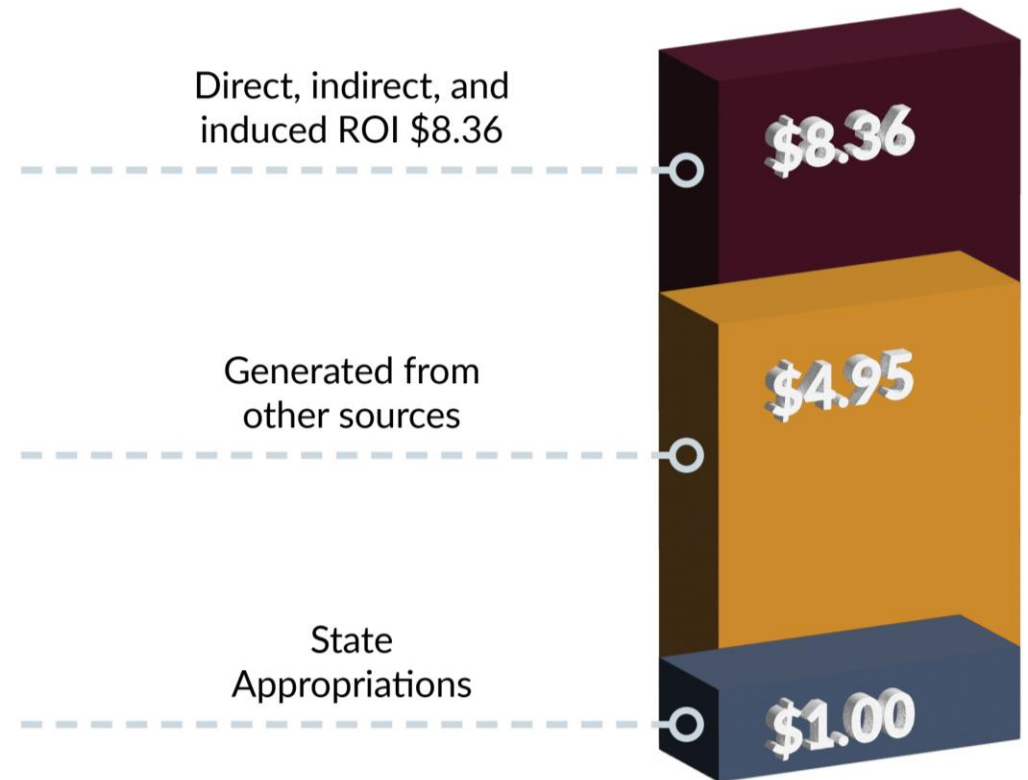
COMMUNITY OUTREACH



DIVERSITY OF FUNDING SOURCES



ECONOMIC IMPACT & RETURN ON STATE INVESTMENT



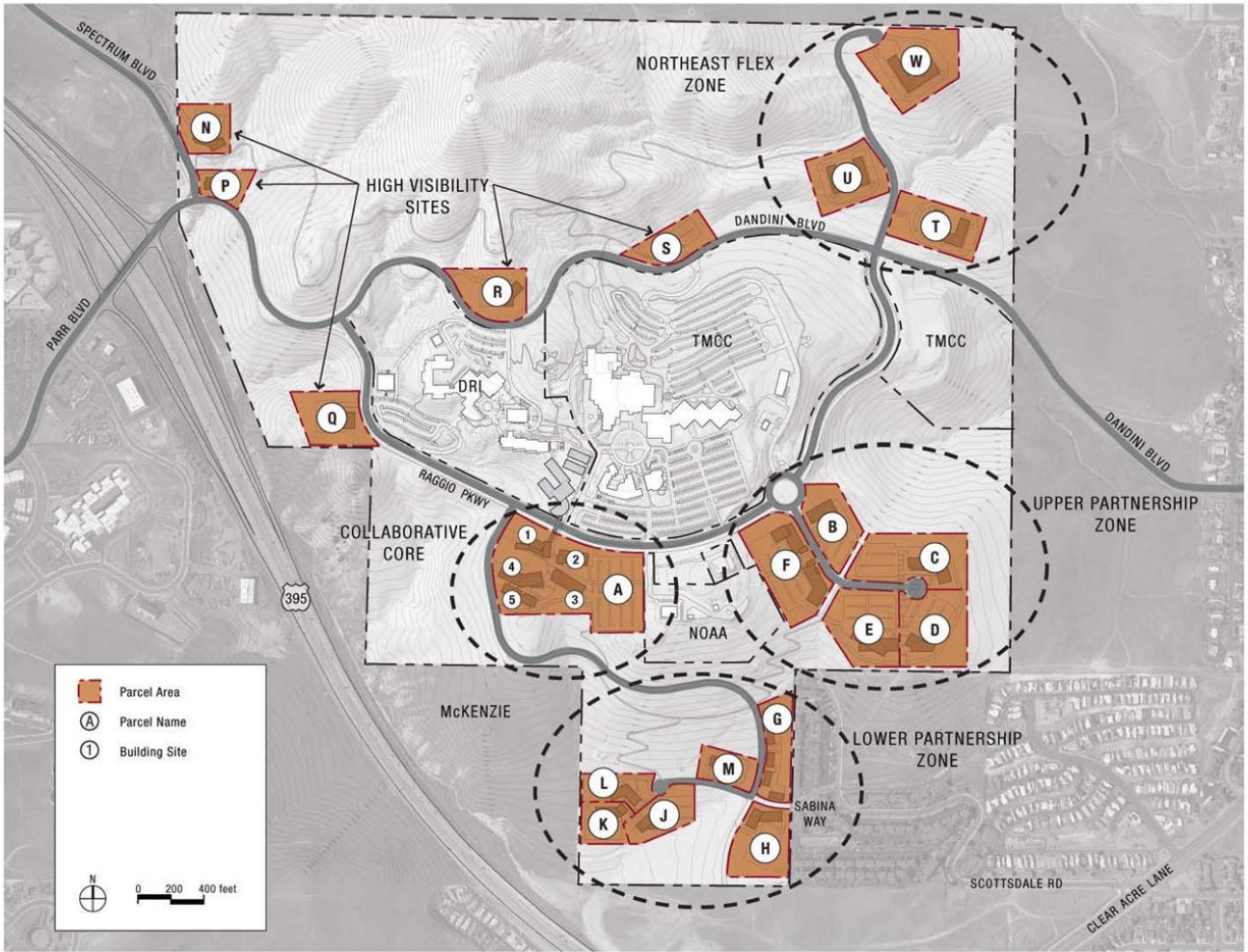


Figure 3.1 | Development Zones and Parcels



THANK YOU



RESEARCHING THE HUMAN IMPACT ON
THE ENVIRONMENT
AND THE ENVIRONMENT'S IMPACT ON
HUMANS