

# Institutional Metrics 2021

Presentation to the Nevada System of  
Higher Education Board of Regents

June 2021

Kumud Acharya, Ph.D.  
President



**Desert Research Institute**

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*Scientific research and solutions  
for a changing planet*

## VISION

We envision a world in which trust between scientists and the public forms the basis for a more sustainable and resilient environment for all people to live, grow, and prosper.

## MISSION

We are a home for science to create a better future for the people of Nevada and the world.  
We implement our mission through shared governance and by fostering diverse talent.

## CORE VALUES

At DRI,  
**Impactful Science,  
Community, and  
Diversity**  
are the core values that we uphold and seek to serve above all else.

# Local, Regional, and International Research Impact



# Innovation and Invention



## Tū Biomics

First spinout from DRI research

***Lab-to-Field antifungal solutions addressing soil and crop health.***



## waterstart

channels for innovation

Spun out of DRI

***Connecting water technology companies with cutting-edge solutions to utilities and large water consumers.***



## Renown<sup>®</sup>

INSTITUTE FOR  
HEALTH INNOVATION

Spun out of DRI

***DRI and Renown IHI have received more than \$40 million in combined research funding.***



# Solar Power Research

- Eric Wilcox, John Mejia and Marco Giordano, Division of Atmospheric Sciences, DRI
- Prof. Poria Fajri, Dept. of Engineering, UNR

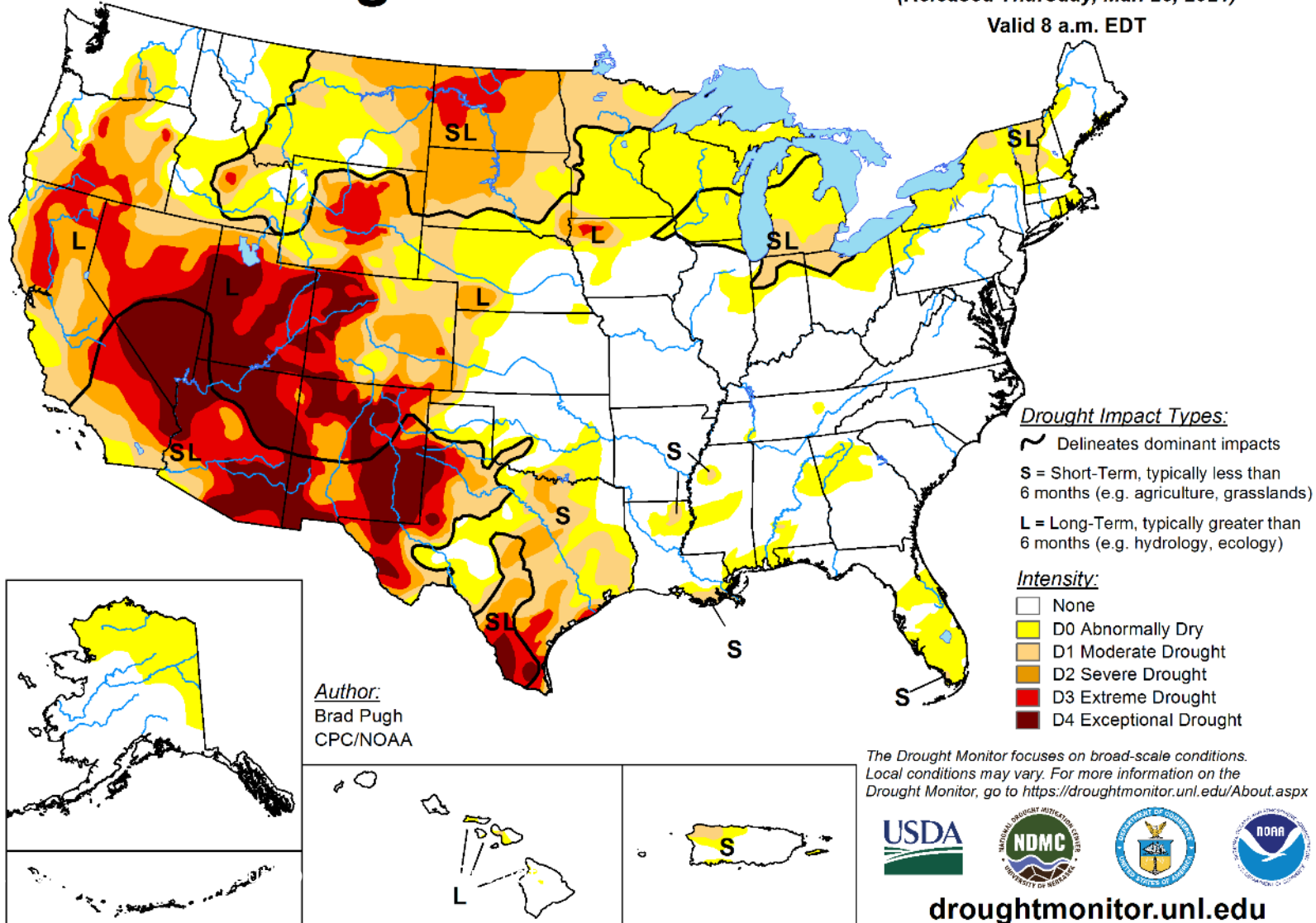
Research to advance forecasting of fluctuations in solar power generation due to clouds, and use forecasts to optimize solar power systems coupled to battery storage.



obtained from Reno Gazette Journal

# U.S. Drought Monitor

**March 23, 2021**  
(Released Thursday, Mar. 25, 2021)  
Valid 8 a.m. EDT

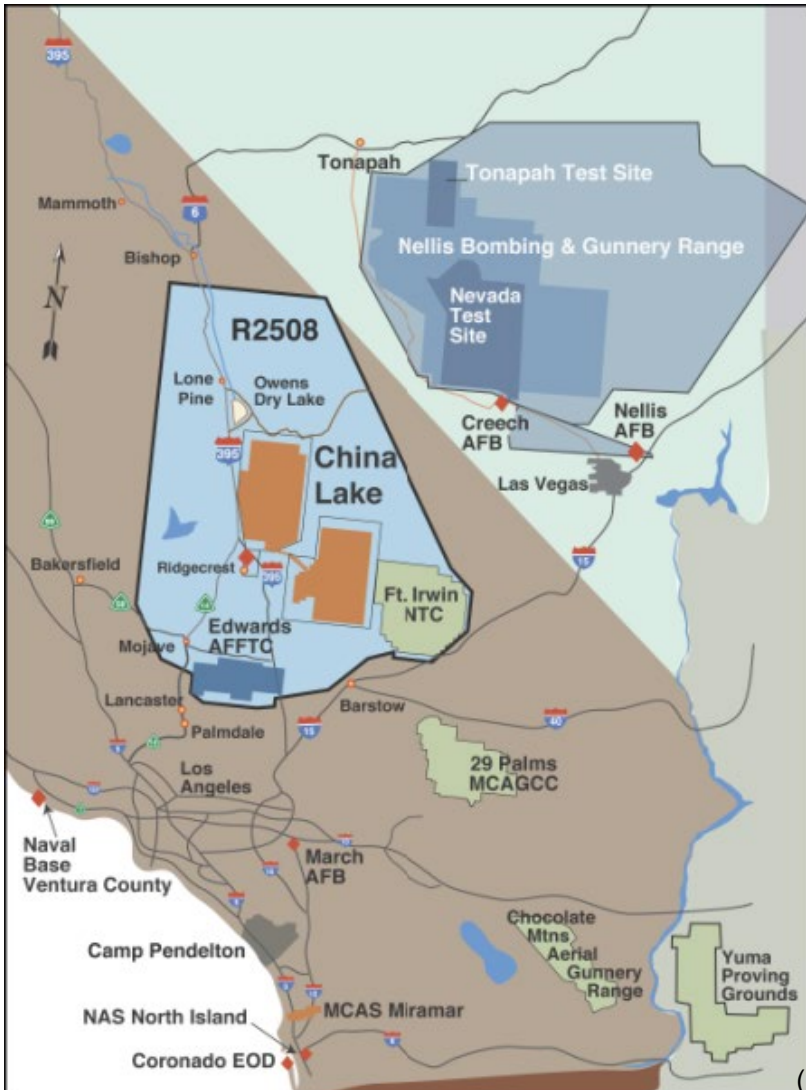


# Regional-to-Global Drought Early Warning and Wildland Fire Danger Monitoring

- DRI Team: Dan McEvoy, Justin Huntington, Charles Morton
- External Team: Mike Hobbins (NOAA PSL, Boulder, CO), Shrad Shukla (UC Santa Barbara, CA)
- Sponsors/Partners: National Integrated Drought Information System (NOAA), NASA SERVIR, Google, Predictive Services, Cal Fire, Bureau of Land Management



# Naval Earth Sciences & Engineering Program



**DRI Mission:** Support the Navy's research, development, acquisition, testing and evaluation (RDT&E) programs at China Lake







- Engineering & hydrologic science support
- National security program support
- Environmental monitoring & CEMP
- Cultural resources & historical preservation
- Supports the NNSA/NFO in government-to-government interactions with Native American tribes
- Develop, evaluate & implement methods, models & processes for soils sites to better understand the transport of contaminants
- Defense nuclear nonproliferation program support








# Looking for microplastics in Nevada's waterways

# Community Outreach and Engagement

## Science Distilled Lecture Series

- Converted to a virtual series, which has more than doubled our audience.

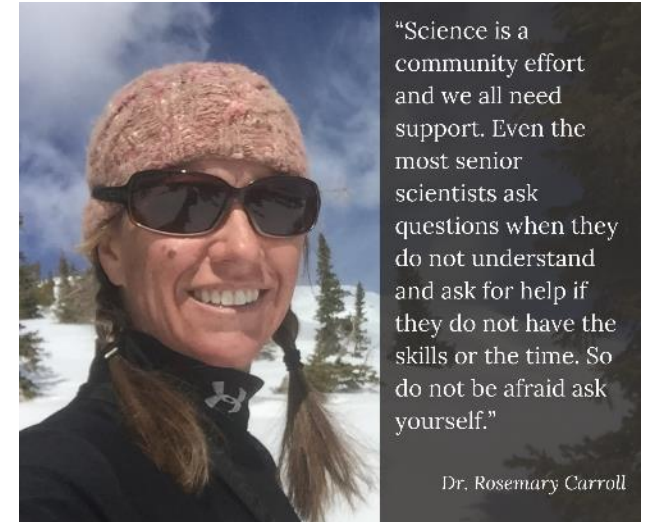
## Social Media Engagement in 2020

-  up 12% over previous year
-  up 11% over previous year
-  up 12.5% over previous year

DRI was the recipient of **FIVE** awards from the PRSA Las Vegas Pinnacle Awards in 2020



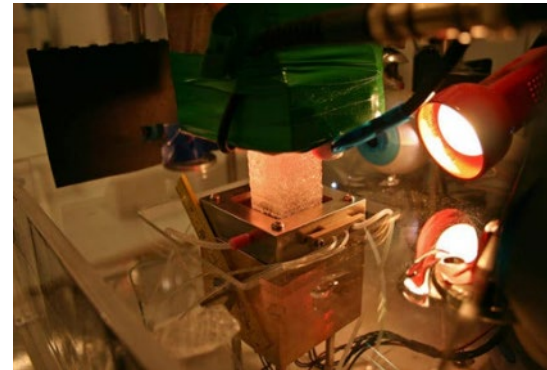
A NOVA Science Café presented  
by DRI and The Discovery



# Media Coverage

- *New York Times* - In Oregon, a New Climate Menace: Fires Raging Where They Don't Usually Burn – September 12, 2020
- *New York Times* - Ancient Rome Was Teetering. Then a Volcano Erupted 6,000 Miles Away – June 22, 2020
- *NPR* - How Climate Change Is Setting The Stage For Natural Disasters – December 22, 2020
- *Vice* – Microbes Are Aerosolized and Moved Around by Wildfire Smoke – January 25, 2021

The New York Times



# DRI Contributions to the System

- Increasing cooperation & collaboration with NSHE institutions
- Research task force
- Undergraduate internship program



# NSHE Teaching and Student Advising (2020/2021 Academic Year)



**34** ↓

UNR/UNLV grad students with DRI research faculty as primary advisors



**23** ↓

UNR/UNLV graduate students supported by DRI



**11** ↓

NSHE classes taught by DRI research faculty



**29** ↓

DRI research faculty involved in teaching and advising at NSHE institutions

# K-12 Education and Outreach (AY 2020-21)



**4,793** ↓

Nevada students reached by DRI Science Alive K-12 programming



**8,591** ↓

Nevada students reached by DRI Green Box and STEM Kits



**758**

Views of online content

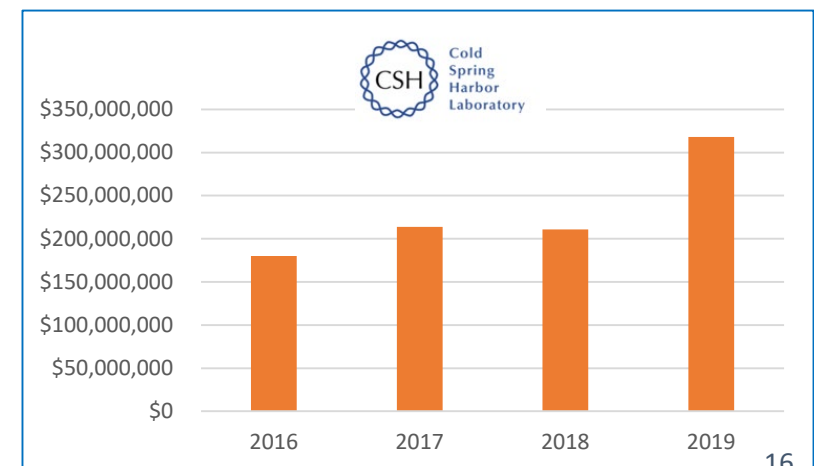
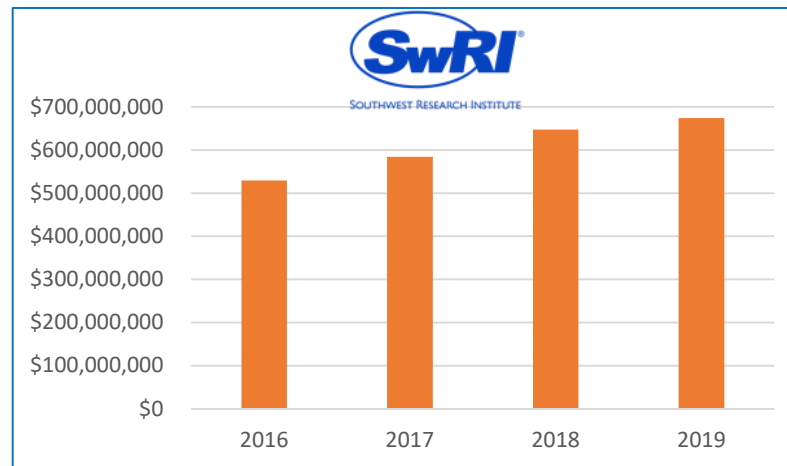
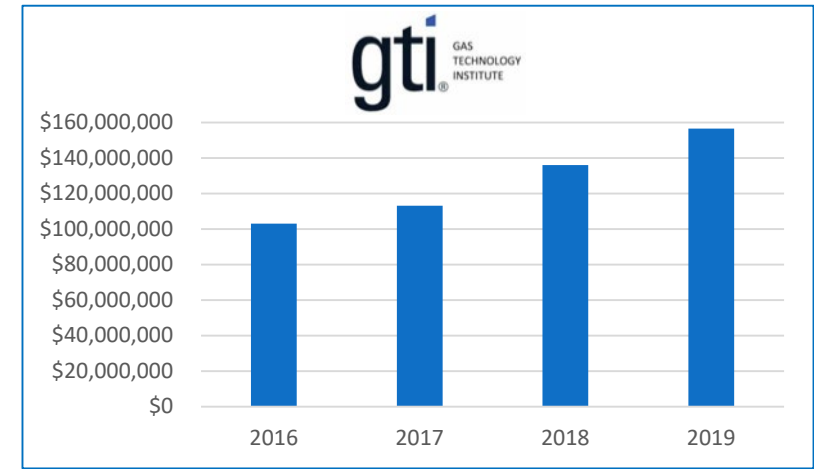
**NEW!**



**536** ↓







Nevada K-12 teachers and educators trained through DRI-led training programs

# Revenue Trends





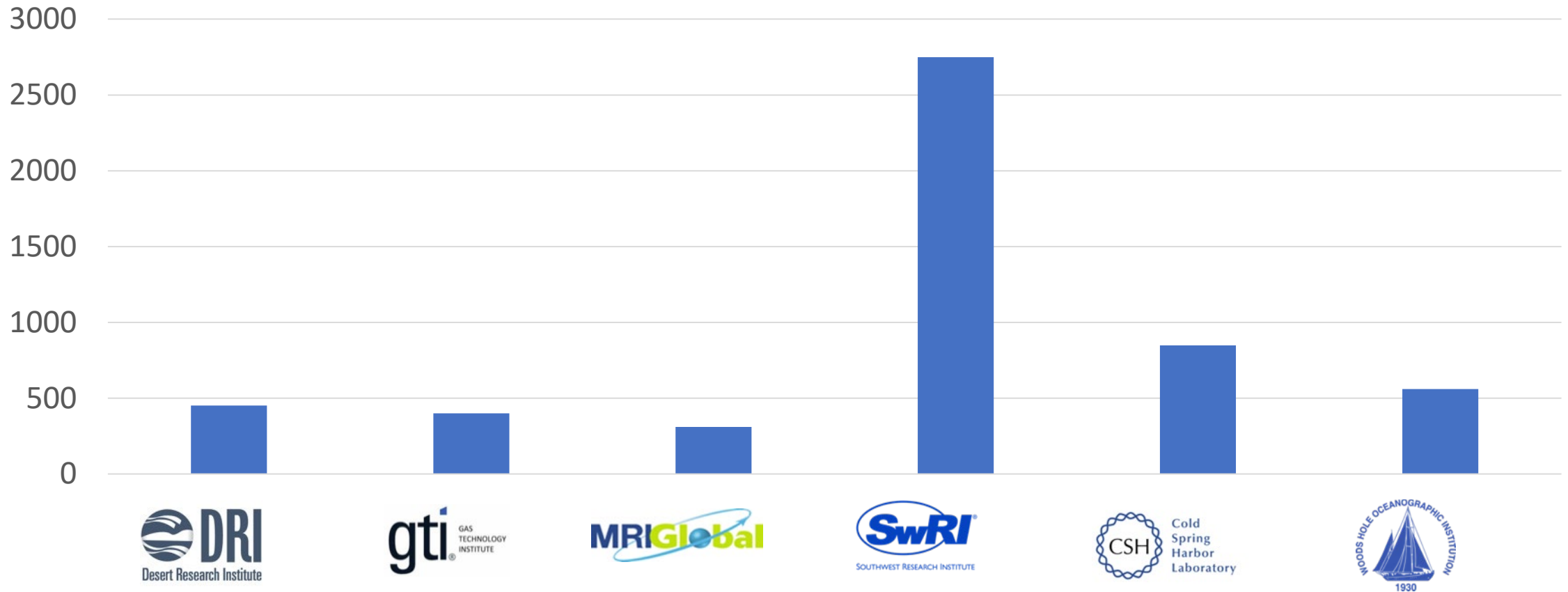
# DRI Peer Research Revenue Per Faculty Ratio

DRI Peer (Comparison and Aspirational)	FY19/CY19 Research Revenues	Research Faculty (2019)*	Estimated Revenue Per Faculty
	\$ 32,288,000	135	\$239,170
	\$ 150,800,000	128	\$1,178,125
	\$ 104,000,000	200	\$520,000
	\$ 395,911,650	1,881	\$210,479
	\$ 52,296,078	241	\$216,996
	\$ 165,653,203	241	\$687,358

Sources: NSF HERD Survey (FY19) and publicly available annual report data.

\*Definition of research faculty may vary by institution (BOARD OF REGENTS 06/10/21 & 06/11/21) Ref. BOR-18, Page 17 of 28

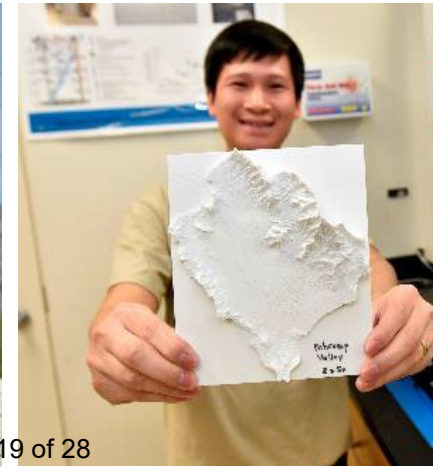
# 2019 Headcount Comparison



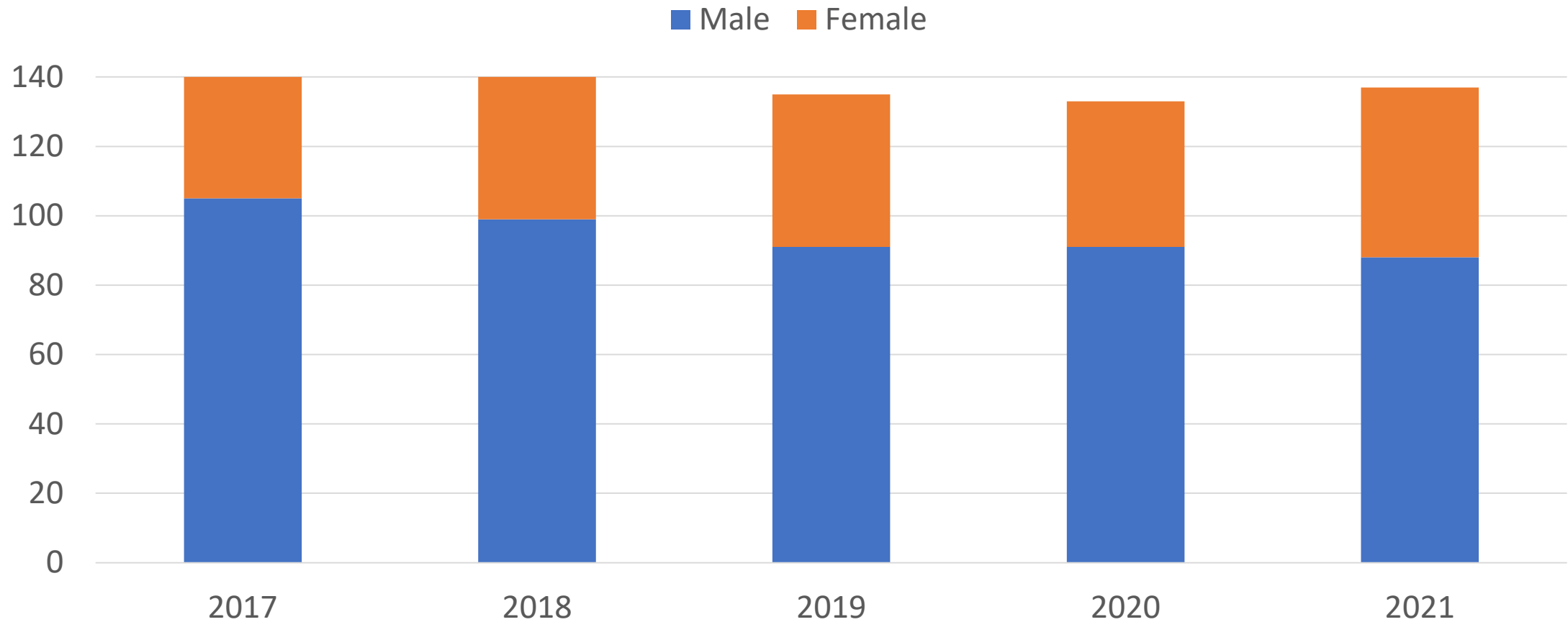
Sources: NSF HERD Survey (FY19) and publicly available annual report data.

# DRI's Research Faculty Diversity Trends

Research Personnel	2017	2018	2019	2020	2021
Minority Groups <i>(percent of total)</i>	14%	15%	15%	13%	15%



# DRI Research Faculty Diversity Trends

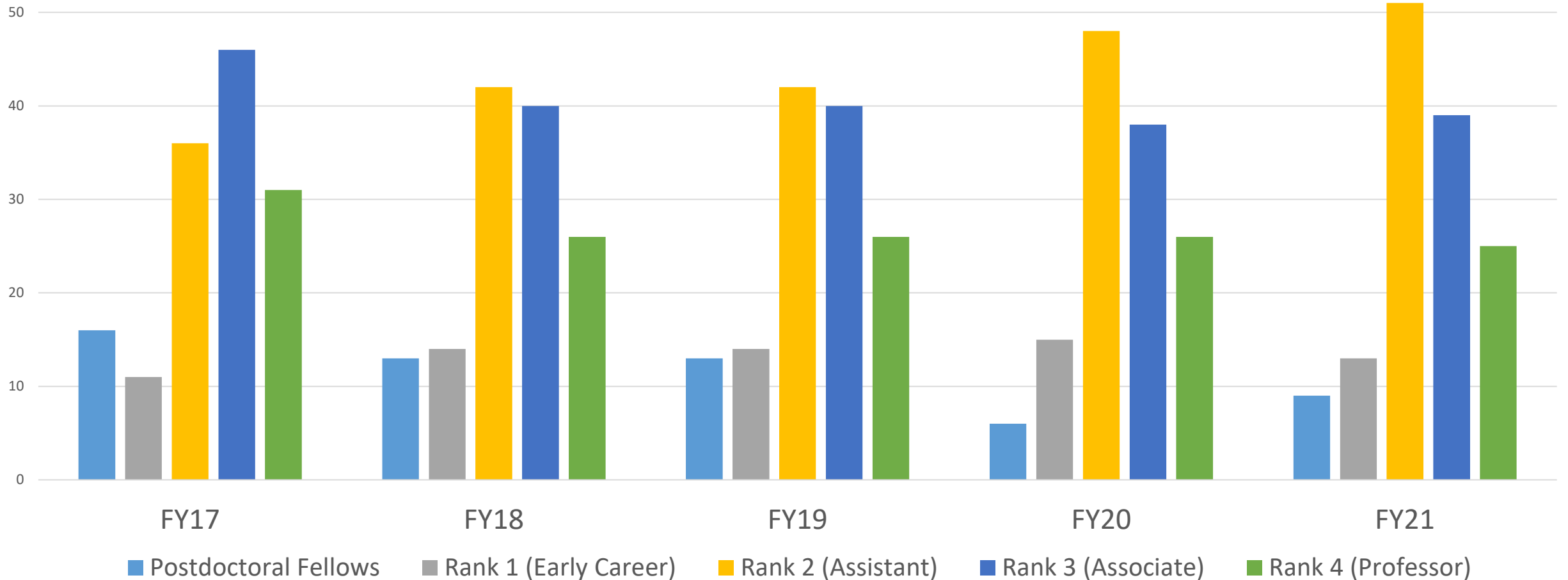


# IDEA Committee: Inclusion, Diversity, Equity and Accessibility



- Raise awareness of diversity challenges through education on IDEA-related issues and offer opportunities that encourage all employees to engage as positive agents of change related to DRI culture.
- Promote best practices for a more inclusive and equitable organization by collaborating cross-institutionally, including direct engagement with department heads and supervisors.

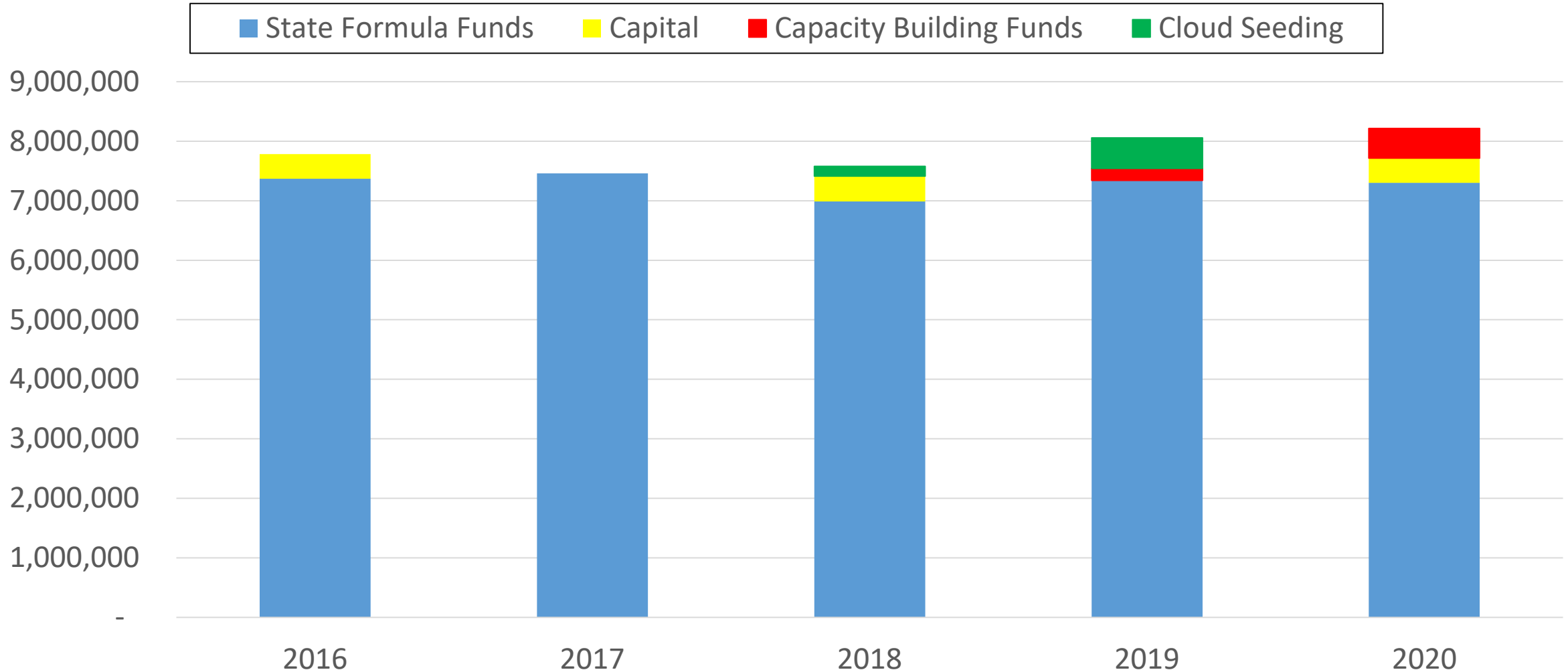
# Research Faculty Workforce



# Diversity of DRI Sponsored Research Contracts



# State Funding



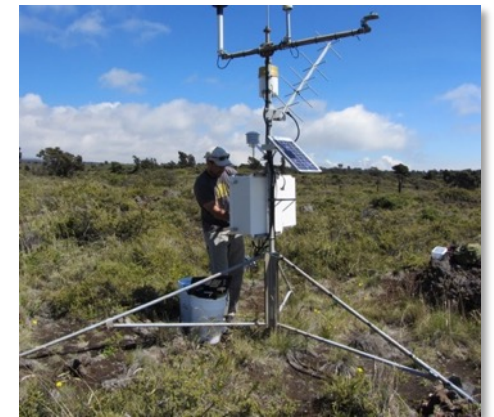


# Economic Impact and Return on State Investment

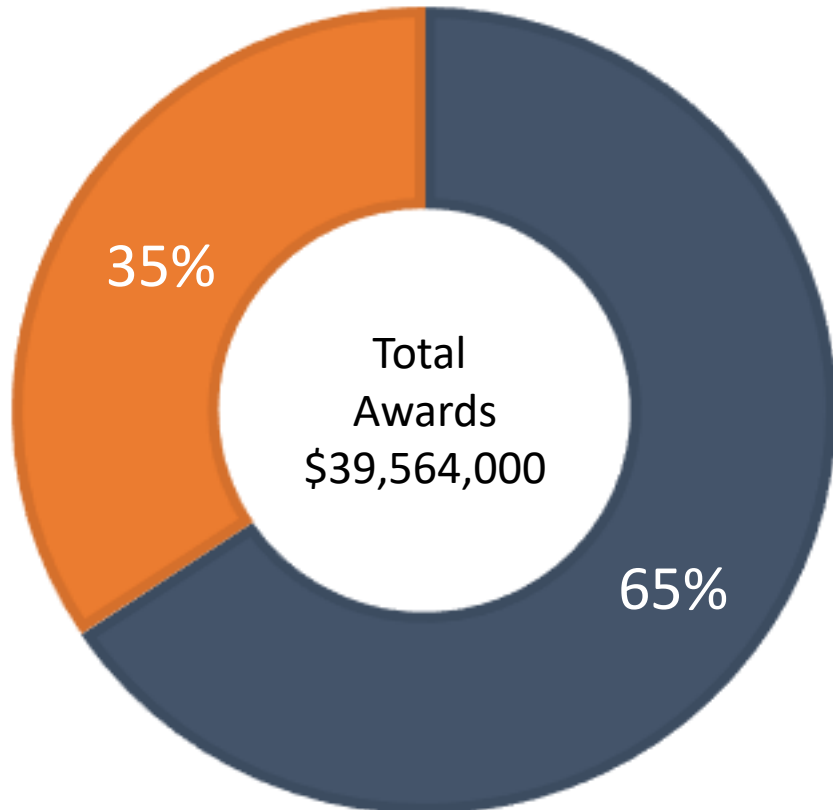
*DRI's State appropriations in the amount of **\$7.8 million** make up 17.2% of total FY18 DRI revenues of **\$45.5 million**.*

*In other words, for every **\$1** provided through State appropriations, **\$4.82** are generated from other sources for a total of **\$5.82** in revenues.*

*- Source: DRI institutional economic impact and fiscal benefit report. EKAY Economic Consultants, April 2019*

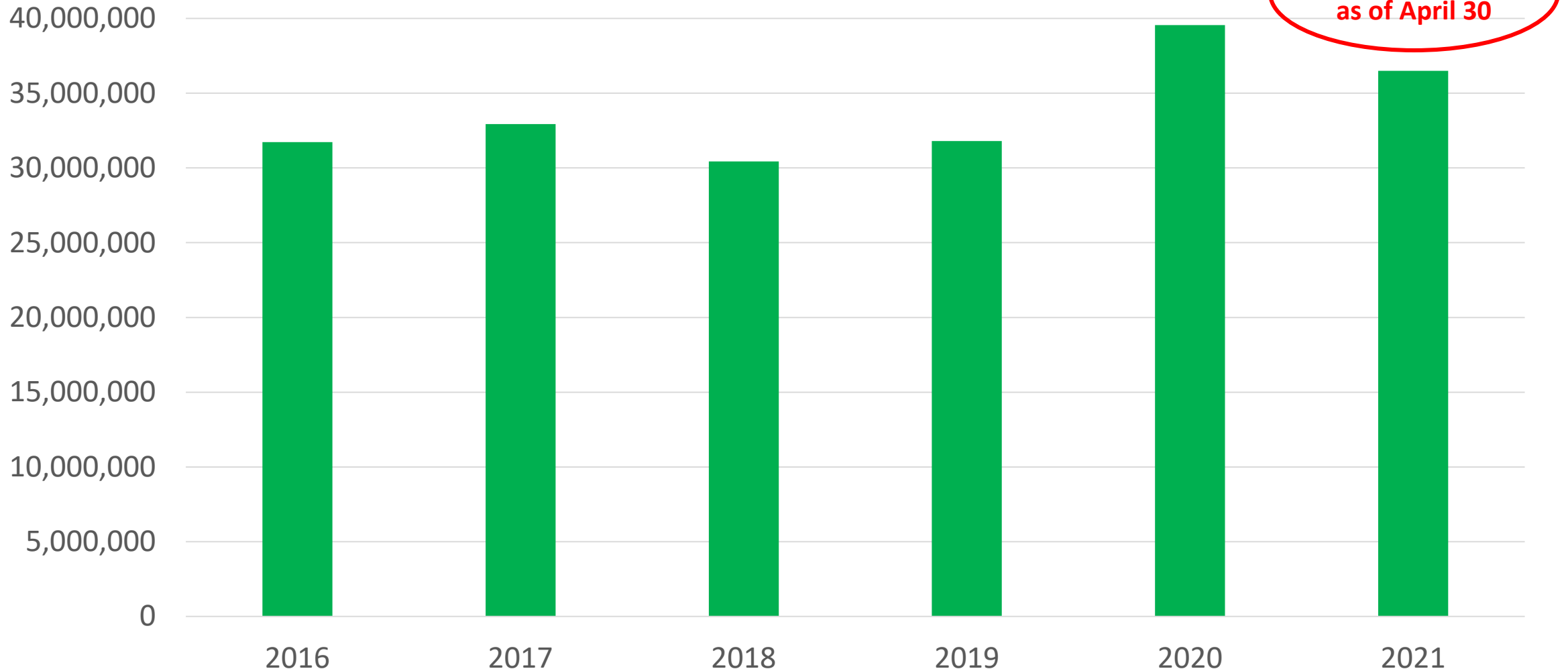


# FY20 Grants and Contracts Funding *(by source)*



<b>Total Federal</b>	<b>\$25,966,000</b>	<b>65%</b>
Dept of Defense (DOD)	\$7,804,000	20%
Dept of Energy (DOE)	\$6,732,000	17%
Dept of Interior (DOI)	\$2,843,000	7%
Dept of Commerce (DOC)	\$2,536,000	7%
National Science Foundation (NSF)	\$1,713,000	4%
NASA	\$1,502,000	4%
USDA	\$1,355,000	3%
Dept. of Health and Human Services (HHS)	\$898,000	2%
Environmental Protection Agency (EPA)	\$583,000	1%
<b>Total Non-Federal</b>	<b>\$13,598,000</b>	<b>35%</b>
Private/Business	\$4,817,000	12%
Other Non-State Government	\$4,213,000	11%
State of Nevada	\$2,674,000	7%
Non-Profit Foundations	\$1,894,000	5%

# Research Awards By Fiscal Year





Thank you!