



Annual Report FY2022

Institute for Public Policy
Research and Analysis

University of Oklahoma



INSTITUTE FOR
PUBLIC POLICY
RESEARCH & ANALYSIS
The UNIVERSITY of OKLAHOMA

A MESSAGE FROM OUR DIRECTORS

Dear IPPRA Colleagues and Friends,

IPPRA's new brand has broadened and accelerated the work at OU's Institute for Public Policy Research and Analysis. Our new name reflects our goal: to be a nationally visible research powerhouse, focused on both basic and applied research in public policy, with an international reputation for providing knowledge that advances understanding of public policy processes and promotes evidence-based policies for sustainable and effective democratic governance. IPPRA's approach is to engage and collaborate with OU's faculty and the broader academic community, to embed the importance of public policy in our research across policy domains, and to enhance the positive impact of science and technological solutions to our most pressing problems. In keeping with our goals and approach, throughout FY 2022 the IPPRA team worked with a broad array of faculty at OU and across the nation to sharpen policy theory and its application in an array of research projects that advance sustainable energy and national security policies and enhance effectiveness of education, public health and disaster responses. This report summarizes those efforts.

IPPRA-led and supported projects have focused on bringing public policy scholarship to bear in a wide array of problem areas, acting as a "force multiplier" in addressing problems in the weather forecasting enterprise, energy engineering, educational arena, national security programs, and climate change adaptation. IPPRA has utilized a diverse set of channels for communicating that knowledge to scholars, decision makers and the broader public. In articles, books, workshops, seminars and podcasts we have advanced understanding of public policy process, with a focus on both the institutions that enable effective policy and the ingredients for effective policy implementation.



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Substantively IPPRA has focused on a range of important policy domains, including:

- the implications of disinformation for evolving national security concerns;
- the role of trust for experts and agencies in shaping the effectiveness of public health programs;
- the impact of cascading disruptions on critical national security programs;
- effective risk communication for public response to weather threats;
- the implications of educational policies for outcomes in American public schools;
- processes for siting critical national energy facilities;

and many others. The scope of IPPRA's work continues to expand with new grants and contracts, new hires, and collaborations that take advantage of existing expertise and develop new capacities. Of particular importance has been IPPRA's addition of a strong group of IPPRA postdoctoral and masters-level researchers who play critical roles in data collection, analysis and research reporting.

The scope and pace of our work is evident in IPPRA's KPIs, and detailed in this report. In FY 2022 the IPPRA team published 28 articles and submitted 24 new research proposals and obtained over \$3 million in new research funding while engaging in workshops, seminars, conferences and other venues for communicating the results of our research. These efforts built upon extensive collaborations with engineers, biologists, and physical scientists at OU and other institutions to produce the kind of transdisciplinary work that is required to address the complex, wicked problems with which Oklahoma, the U.S., and the world are confronted. This work is getting attention, as indicated by the 958 specific citations of IPPRA publications recorded on Google Scholar. Of particular importance has been our ongoing engagement and collaboration with an array of federal, state and local government agencies that provide critical services to the American public. In all of these ways, IPPRA seeks to advance the understanding of public policy and promote evidence-based policies to support sustainable and effective democratic governance.



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To carry out this research requires a top notch team of faculty, staff and students, and a robust network of collaborations and partnerships. IPPRA continues to expand its collaborations with US national laboratories, other universities, federal agencies, practitioners and others. IPPRA continues to expand and provide support professional growth for its research team, including research scientists and associates, postdoctoral and graduate researchers, and a very strong group of affiliated faculty from OU and elsewhere. And IPPRA strives to provide a supportive and creative organizational environment to assure that our work is sustainable.

Overall, as this report makes clear, IPPRA continues to expand the reach and impact of its work. And we expect FY 2023 to be even better. So keep an eye on IPPRA, via on our website (ou.edu/ippra) and its social media (@OUIPPRA).

DR. CAROL SILVA & DR. HANK JENKINS-SMITH
Co-Directors, OU IPPRA

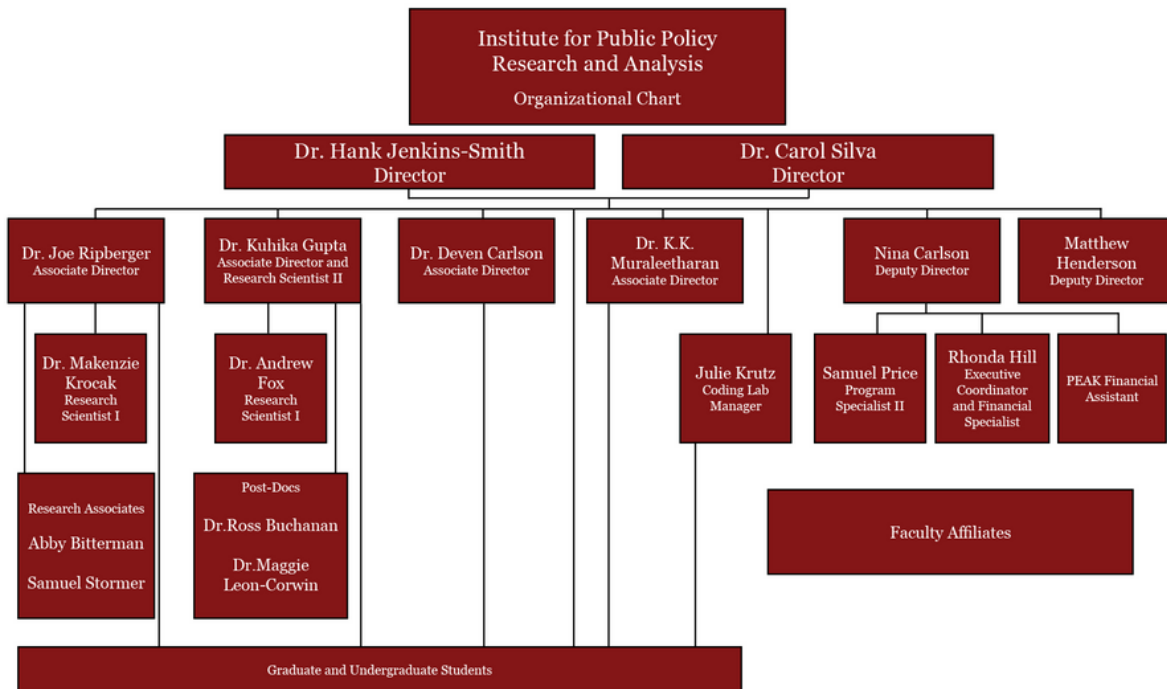
Mission

The IPPRA team builds partnerships and conducts research by integrating public policy scholarship with the physical and engineering sciences to increase human well-being, improve our social choice infrastructure, and enhance resilience by addressing complex public policy problems and creating opportunities that span natural, technological, and social systems.

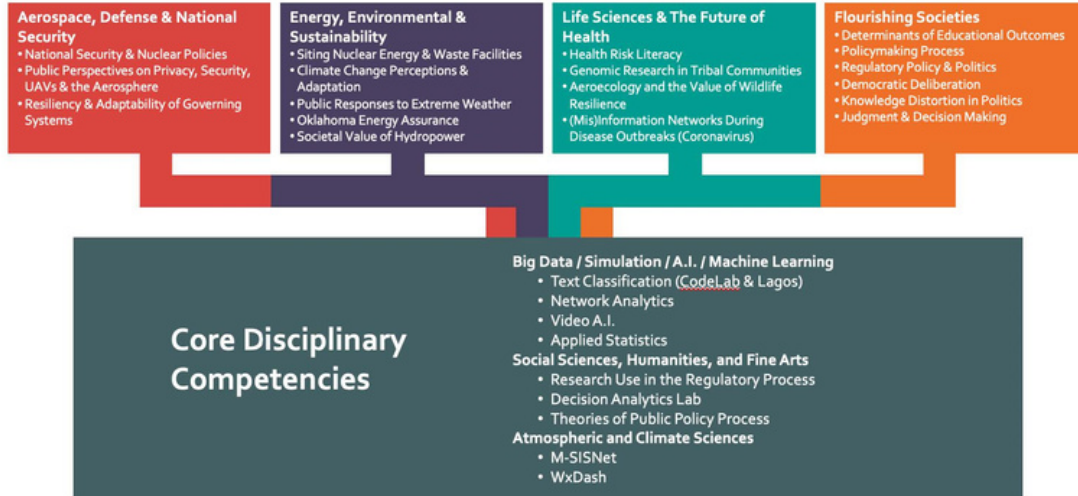
Strategic Vision

The institutional culture at IPPRA is grounded in transdisciplinary thinking and collaboration. We emphasize finding new ways to bridge basic and applied research, thereby bringing fundamental knowledge to bear on urgent public problems.

Organizational and Research Structure



IPPIRA RESEARCH IN RELATION TO THE OVPRP STRATEGIC FRAMEWORK



STRATEGIC RESEARCH VERTICALS



Outcomes and Key Performance Indicators

Exceptional Research Products

Publications	28
New Citations/Impact	958
New Research Awards	\$3,036,870
Research Expenditures	\$2,001,676
Proposals Submitted	24
Public Datasets/Data Sharing Tools	4

High Quality Expertise

Collaborations on Interdisciplinary & Transdisciplinary Proposals	1
Policy Reports/Presentations/Briefings	57
Workshops, Conferences, & Policy Events	19
Consultations/Collaborations with Decision Makers, Officials, & Industry	36

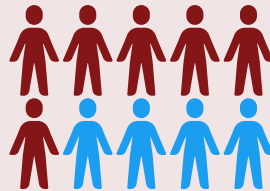
Across all key performance metrics, IPPRA had a record year of growth. In FY22, the IPPRA team again demonstrated its ability to both produce powerful new research products (28 publications, 57 policy reports/presentations) and grow its impact of existing/prior publications, with 958 new citations on papers published since 2016.

The IPPRA group also saw a record year for new research awards, totaling over \$3 Million in awarded projects in FY22, and continued our increased trajectory of research expenditures with another year of over \$2 Million in expended funds, reflecting our continued growth as an organization.

Outcomes and Key Performance Indicators

Workforce Development

Post-Docs/ Graduate
Students/
Undergraduate
Students



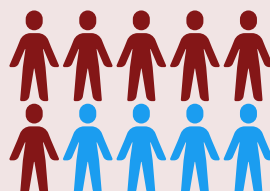
36

IPPRA-Supported
Trainings



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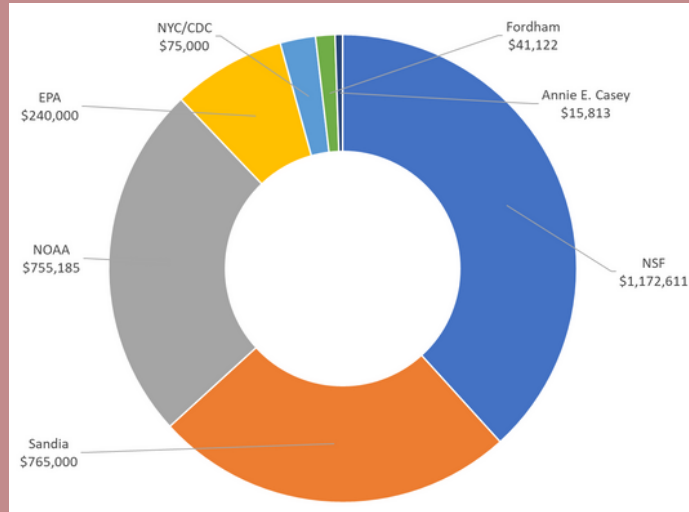
Job Placement of
Post-Docs/
Graduate Students/
Undergraduate
Students



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In addition, furthering the breadth of our workforce development impact, our team funded and mentored 36 students and post-doctoral research associates in FY22, focusing on embedding students within applied research projects and providing training opportunities that are directly translating into competitive workforce readiness and job placement success.

New Sponsored Research

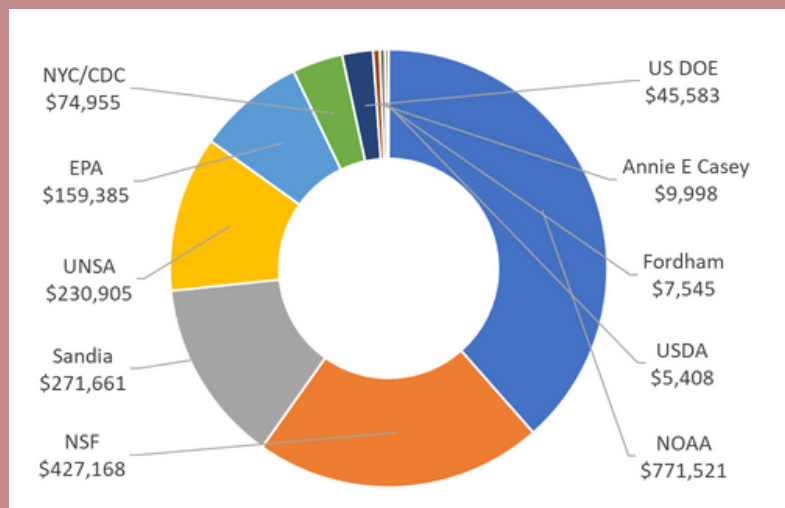


Sponsor	Amount
NSF	\$1,172,611
Sandia	\$765,000
NOAA	\$755,185
EPA	\$240,000
NYC/CDC	\$75,000
Fordham	\$41,122
Annie E. Casey	\$15,813
TOTAL	\$3,064,731

Sponsored Research Expenditures

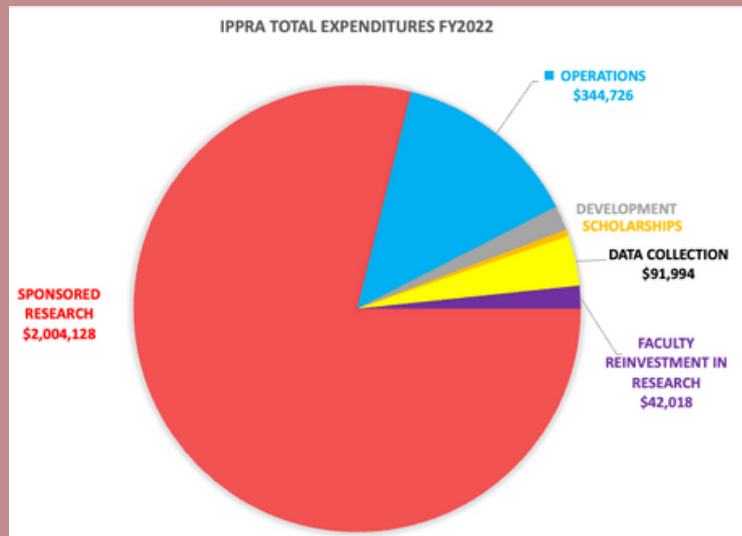
Source	Amount
NOAA	\$771,521
NSF	\$427,168
Sandia	\$271,661
UNSA	\$230,905
EPA	\$159,385
NYC/CDC	\$74,955
US DOE	\$45,583
Annie E Casey	\$9,998
Fordham	\$7,545
USDA	\$5,408
TOTAL	\$2,004,128

Total Sponsored Research Expenditures



Total Departmental Expenditures

SPONSORED RESEARCH	\$2,004,128
OPERATIONS	\$344,726
DATA COLLECTION	\$91,994
DEVELOPMENT	\$45,541
FACULTY REINVESTMENT IN RESEARCH	\$42,018
SCHOLARSHIPS	\$12,329
TOTAL	\$2,540,736



In FY 2022, IPPRA expended just over \$2.5 million department-wide. Of this total, the vast majority (80%) were research expenditures directly made for sponsored research. In addition, our organization utilized approximately 13 percent of total expenditures for operational support, 7 percent of total expenditures for research support and development work, and 0.5 percent of total expenditures for non-sponsored student support.

Research Highlights

Awards and Accolades

Dr. Joseph Ripberger won the Outstanding Early Career Award from the American Meteorological Society (AMS) Board for Societal Impacts. This award is given to an individual within 10 years of having earned their highest degree, or are under 40 years of age when nominated, who has made significant contributions to the discipline and is on a path to becoming a science leader in the community.

Dr. Deven Carlson was awarded the Raymond Vernon Memorial Award from the Association for Public Policy Analysis & Management (APPAM) for excellence in research for his Journal of Public Administration and Management (JPAM) co-authored publication “Kids on the Bus: The Academic Consequences of Diversity-Driven School Reassignments.”

Sustainable Solutions to Wicked Problems In Oklahoma

IPPRA leadership continued to recruit new membership for the innovative Opinion Leader Advisory Network (OLAN), which connects researchers from multiple Oklahoma research institutions to dozens of opinion leaders across the state of Oklahoma. OLAN members are drawn from the public, private and non-profit sectors and represent high level decisionmakers with deep expertise across a variety of subject matter areas.

Currently, the OLAN provides in-depth feedback to and applied collaborations for researchers across the National Science Foundation-funded S3OK project, which includes researchers from multiple Oklahoma institutions working collaboratively to iterate towards a framework for actionable and sustainable solutions to Oklahoma’s wicked problems in water, agriculture, land use and infrastructure.

“I have a place to share stories, to learn and to help. What a breath of fresh air!”

~OLAN member

“I love being part of the OLAN group. I know that there are people on this project that I would not come into contact with other than here.”

~OLAN member

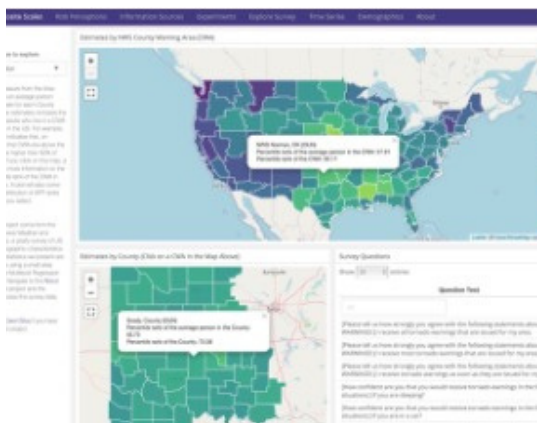
Research Highlights

Know your Audience

In FY22, the IPPRA team executed a project that analyzed multiple data streams, including social media and survey data, to offer actionable recommendations to the US Environmental Protection Agency (EPA) in developing risk communication strategies to improve public knowledge and responsiveness to a variety of environmental risks, initially focusing on wildfire smoke.

Data and Decisionmaking Tools for Applied Use

IPPRA has created a variety of interactive data dashboards that offer wide audiences, including sponsors, collaborators, policymakers and the public, the ability to interact and analyze large datasets. Recent users of these analytical tools include NOAA Forecasters, EPA professionals, and the Oklahoma public and decisionmakers. Historically, we offered 3 dashboards that analyze data on Risk Communication, COVID-19 perceptions, and Wicked Challenges facing Oklahoma. In FY22, IPPRA researchers added two new data dashboards that focus on Extreme Weather and Wildfire Smoke.



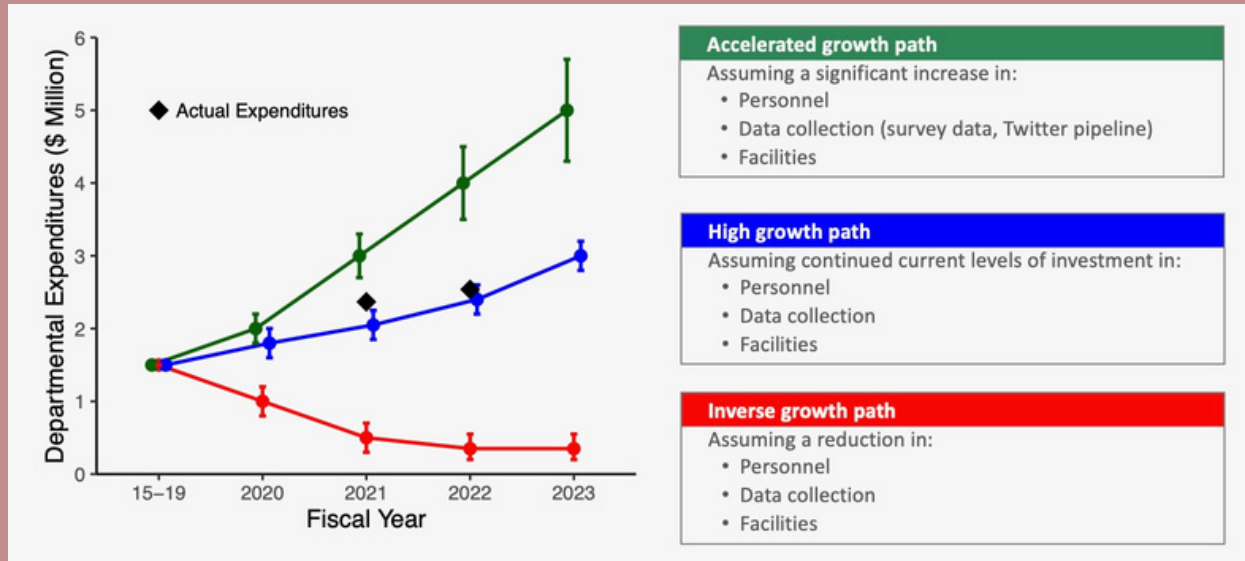
“Static policy reports are increasingly a product of the past. Experts and policymakers are always asking for dynamic tools and visualizations that allow them to interact with data to facilitate more in-depth and custom analyses. OU IPPRA is leading the charge in this direction by developing a variety of web applications and dashboards that experts and policymakers rely on to make important decisions.”

~ Dr. Joseph Ripberger, IPPRA Deputy Director for Research

Establishing the Extreme Weather and Emergency Management Survey

In FY 22, IPPRA established the Extreme Weather and Emergency Management Survey (WxE), which used state-of-the-science survey design and sampling techniques to implement a yearly survey of the emergency management community (EMs) that will provide longitudinal data on how EMs use National Weather Service (NWS) data, products, information, and decision support when responding to high impact weather events. Data from the WxE Survey will allow the project team to develop composite metrics that provide direct information to forecasters at weather forecast offices about the most effective way to structure IDSS communication and feedback to administrators in the NWS about how to improve IDSS programs in the future.

Looking to the Future



As we look to the future, IPPRA continues to exceed a high growth path as outlined through our previous strategic planning processes. To remain on this trajectory, we will seek to increase our sponsored research success, expand our faculty affiliations and research staff to support these research endeavors, and seek additional funding streams to support maintenance and expansion of our highly successful research infrastructure programs.

IPPRA's established reputation as a premier research institute at the University of Oklahoma is a result of the dedication and expertise of its faculty, staff and students and is also made possible through sustained investments that ensure the longevity of our research infrastructure and allow us to continue to participate in large-scale, cross-disciplinary initiatives. We look forward to continuing these partnerships in FY23 and beyond!

Connect With Us



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