What is NSHE?

Board of Regents

Chancellor
Daniel Klach

Vice Chancellor of Student and Academic Affairs
Crystal Abba

State EPSCoR Director
Gayle Dana

NSHE Research Affairs Council
Crystal Abba, Chair
Mridal Gautam, VPRI - UNR
Tom Piechota, VPR - UNLV
Alan Gertler, VPR - DRI

Nevada EPSCoR Office

NV EPSCoR Advisory Committee

UNR
UNLV
NSC
CSN
GBC
TMCC
WNC
DRI
System Sponsored Programs and EPSCoR

To promote the opportunities and collaborations within science, research, education, and technology for NSHE institutions in Nevada

- Housed within the Chancellor’s office in System administration
- Charged with administrative and financial regulations and compliance requirements that govern grants and contracts for EPSCoR and other statewide programs
- Facilitate statewide and system-wide collaborations
- Promote research administration infrastructure improvement throughout NSHE
Continued Services

- Currently manage approximately $25 million/year in sponsored projects
- Administration for EPSCoR
- Administration of special projects match
- Interact with the Research Affairs Council
- Liaison with EPSCoR Coalition
- Capitol Hill visits
What is EPSCoR?

Established Program to Stimulate Competitive Research
National EPSCoR Programs
Congressional Mandate in 1979

- National Science Foundation (NSF) *NV 1985
- National Aeronautics and Space Administration (NASA) *NV 1993
- Department of Energy (DOE)
- Department of Defense (DOD)
- United States Department of Agriculture (USDA)
- National Institutes of Health (NIH) – Institutional Development Award (IDeA)
<0.75% of NSF’s funding
Nevada = 0.24%
California = 14%

25 states + 3 jurisdictions
Hold 20% of U.S. academics
Receive 10% of federal research dollars
The Purpose of EPSCoR

- Stimulate R&D capacity and competitiveness in EPSCoR jurisdictions
- Advance and broaden participation in science & engineering
- Utilize statewide participation
- Catalyze key research themes
- Activate collaborations among academic, government, and private sector stakeholders
EPSCoR/IDeA Impacts

Ensuring the benefits of scientific research in all states

Bolstering

NATIONAL RESEARCH COMMUNITY
Employing the expertise, experience, and efforts of all states to advance innovation and the quality of life

Building

STATES’ PARTICIPATION
Integrating 25 states and 3 territories more fully into federal research opportunities and benefits

Guaranteeing that all states and regions benefit from the U.S. research investment

Benefiting

INDIVIDUALS AND COMMUNITIES
Training our students for high-paying jobs in today’s ‘high tech’ workforce

Bringing science and engineering solutions to state and local issues

Enhancing knowledge and research potential of our world class faculty and graduate students
Nevada EPSCoR Funding 1985 - 2016

Return on investment from past projects = $174,912,103
EPSCoR Myths

- **EPSCoR funding is an entitlement**
  - No – funding is competitive, peer-reviewed

- **Each institution gets equal amounts of funding**
  - No – funding to each institution can range 20 – 50% of total budget

- **The same faculty are involved in EPSCoR proposals**
  - There is minor overlap – of the 101 faculty involved in the last 3 NSF EPSCoR proposals (2005-present):
    - 85 faculty have participated in only 1 proposal
    - 14 faculty have participated in 2 proposals
    - 2 faculty have participated in all 3 proposals

- **Nevada should graduate from EPSCoR**
  - There is no graduation
  - EPSCoR status is determined by federal research funding in the state
NV EPSCoR Office Roles

- A Research Administrator is assigned to each proposal/award/project.

- The RA works collaboratively with the Project Director/Principal Investigator.

- RA is an integral part of the management team.
Research Administrator Functions

Proposal Phase

- Prepare solicitation and schedule review panel
- Organize planning meetings and setting timelines
- Budget
  - Preparation of proposal budget sheets and budget narrative
  - Work with institution Sponsored Programs/Business Offices
- Supporting documentation
  - Gathers all supporting documentation (facilities, biosketches, etc.)
- Load all proposal documents
- Authorized Official to submit proposals
Research Administrator Functions

Pre-Award

- Work with PD/PI to answer any questions from Sponsor
- Review and approve terms and conditions
- Ensure compliance documents are in order (IACUC, human subjects)
- Negotiate any changes with the Sponsor
Research Administrator Functions

Implementation

- Organize implementation meetings
- Set up NSHE accounts
- Complete subawards for the partner institutions
- Ensure independent contractor agreements are in place (external evaluator or other vendors)
Research Administrator Functions

Life of the Award

- Organize regular leadership team meetings
- Manage incoming funds (if awarded incrementally)
- Approve all invoices from subawardees
- Monitor all spending on subawards
- Manage annual report process
  - PD/PI leads the narrative development
  - RA leads data collection
  - Ensures all standard and specific terms & conditions are met
- Attend required meetings with Sponsor
- Work with external evaluator as required
- Work with Communications Specialist to market the project (websites, social media, news stories)
Research Administrator Functions

Close Out

- Monitor spending on all subawards
- Ensure subawards are closed
- Work with post award on final financial reporting
- Organize final report
- Ensure compliance documents are completed
NV EPSCoR Office

Research Administrators

Michele Casella
NSF EPSCoR Track 3
EOD on NSF EPSCoR Track 1 & 2

Gibran Chavez-Gudino
NASA EPSCoR & Space Grant
RID and CAN

Marcie Jackson
NSF EPSCoR
Track 1 and Track 2

MinSun Park
Department of Education
Gear Up, NeCoTIP
Location

5550 W. Flamingo Road, Ste A2
Las Vegas, NV  89103
W. Flamingo/Lindell
Nevada EPSCoR Advisory Committee
Nevada EPSCoR Advisory Committee

Provides guidance to Nevada’s EPSCoR Programs by:

- Supporting development of science, technology and education in Nevada
- Connecting STEM advancements to NV workforce and economic development
- Advising State EPSCoR Director on strategic directions for sustained health and growth of NV EPSCoR programs
- Ensuring NV EPSCoR programs are aligned with the NV S&T and Governor’s economic development plans
- Facilitating linkages of NV EPSCoR programs with legislators, businesses, committees, associations
Nevada EPSCoR Advisory Committee

Consists of up to 15 members, with representatives from:

- Nevada State Department of Education with STEM/GEAR UP/P-20 background
- Private sector entity related to NV EPSCoR’s technology and/or research focus
- Academia: 1 each from DRI, UNR, and UNLV in the following positions and/or expertise: Provost; government relations; or economic development/technology transfer
- Nevada Governor’s Office of Economic Development (GOED)
- Nevada Legislature
- Aerospace/defense sector (private or federal)
- Business information technology sector
- Business, entrepreneurship and technology sector
- Nevada EPSCoR Director as ex officio member
Nevada EPSCoR Advisory Committee

- Greg Ihde, URS Corporation, Chair
- Joe Grzymski, Desert Research Institute, Vice Chair
- Dave Archer, Nevada's Center for Entrepreneurship and Technology
- Tammy Bolen, Nevada Department of Education
- Cory Hunt, Governor's Office of Economic Development
- Jason Mendenhall, Switch
- Zach Miles, University of Nevada, Las Vegas
- Ellen Purpus, University of Nevada, Reno
- Carl Reiber, University of Nevada, Las Vegas
- Joyce Woodhouse, State Senator District 5
- *Ex officio, Gayle Dana, NV EPSCoR
- *Administrative, Lori Brazfield, NV EPSCoR
EPSCoR Activities
Education, Outreach, and Diversity
Broadening Participation

Priorities:

- Increase participation of women and underrepresented minorities in science, technology, engineering, and math (STEM)
- Coordinate resources to help faculty, staff, and students create a more welcoming environment with sustainable support systems for success of all participants in STEM disciplines
- Foster collaborations in order to leverage and sustain EOD programs and events
  - Internal and external engagement
Current EOD Efforts

- Undergraduate Research Opportunity Program (UROP)
  *Current solicitation available*
  [http://epscorspo.nevada.edu/solicitations-2/](http://epscorspo.nevada.edu/solicitations-2/)

- Field trip and laboratory experiences
  - Nexus Solar Labs
  - Green Power Kits
  - CI Days (UNLV/UNR)
  - Science Careers Investigation Program
  - NERDS

- Student application writing workshops

- STEM Mentor assistance
  ([https://stemmentor.epscorspo.nevada.edu/](https://stemmentor.epscorspo.nevada.edu/))

- Nevada STEM Pipeline ([www.nvstempipeline.org](http://www.nvstempipeline.org))
Current EOD Efforts

Faculty workshops/trainings
- New Faculty Training (June 2017)
- Undergraduate and Graduate Writing Workshops
- BrightStars workshops

Participation – Coordination – Collaboration
Current EPSCoR Programs
Nevada EPSCoR Project Directors

Dr. Gayle Dana (DRI) - NSF EPSCoR Project Director & Nevada State EPSCoR Director

Dr. Lynn Fenstermaker (DRI) - NASA EPSCoR and Space Grant Consortium Project Director

Dr. Ana de Bettencourt-Dias (UNR) - DOE EPSCoR Project Director

EPSCoR projects require that the Project Director must be the lead Principal Investigator and be employed by the fiscal agent/proposing organization
NSF EPSCoR Portfolio

- Research Infrastructure Improvement (RII)
  - Track-1
  - Track-2
  - Track-3

- Co-Funding with NSF Directorates and Offices

- Workshops & Outreach
Research topics in fields supported by both NSF and State’s S&T Plan

- NSF Merit Review Criteria
  - Intellectual Merit
  - Broader Impacts

- Up to $4M/year for ≤ 5 years
(Track-1)

Gayle Dana (DRI), Bob Boehm (UNLV), Jaci Batista (UNLV), Markus Berli (DRI), Sergiu Dascalu (UNR)

- 5 years (2013-2018)
- $20M federal and $4M in state matching
- Research on solar energy generation technology, its environmental impacts and associated water issues, accelerated by cyberinfrastructure
NSF EPSCoR RII
Track-2
(NSF 15-517)

- Disciplinary collaborations among EPSCoR jurisdictions
- Aligned with NSF and national priorities
  - BRAIN
  - Food-Energy-Water Nexus
- Investigator driven
- Emphasis on development of junior faculty
- Up to $1.5M/year for ≤ 4 years
- Nevada eligible to submit in 2016
Western Consortium for Watershed Analysis, Visualization, and Exploration (Track-2)

Gayle Dana (DRI), Fred Harris (UNR), Sajjad Ahmad (UNLV), Lynn Fenstermaker (DRI)

- 3 years (2013-2016)
- $2M
- Advance watershed science, workforce development, and education with cyberinfrastructure (CI)-enabled discovery and innovation
NSF EPSCoR RII
Track-3

- Pilot in FY13
- Educational program to support strategic goal of broadening participation to improve future R&D competitiveness of EPSCoR jurisdictions
- Up to $750K for 3-5 years
- May or may not be offered again
Cyber-Learning Activities to Scaffold STEM Practices

(Track-3)

PG Schrader (UNLV) and MaryKay Orgill (Co-PI, UNLV)

- 3 years (2013-2016)
- $749,700
- Cyber-learning methodologies/trainings for teachers to enhance STEM learning opportunities and achievement for underrepresented minorities and rural students

NSF

Nevada System of Higher Education Sponsored Programs
**NSF EPSCoR Co-Funding**

- Joint support of meritorious NSF proposals

**Steps**
- Proposal submittal to specific NSF Directorate/office (main point-of-contact for PI)
- Merit review in accordance with NSF policies
- EPSCoR review and co-funding decision
  - Merit review
  - Geographical and topical distribution
  - Availability of funds

**Co-funding priorities**

<table>
<thead>
<tr>
<th>New PI</th>
<th>Student involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaborative/Multidisciplinary</td>
<td>Synergistic with NSF investments</td>
</tr>
<tr>
<td>Broaden participation</td>
<td>Integration of research and education</td>
</tr>
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NSF EPSCoR
Workshops and Outreach Support

- Multi-jurisdictional workshops on themes of regional and national importance
  - Specific procedures for applying
- Travel by NSF Program Officers to jurisdictions to provide information on NSF programs and policies
  - Requests must be made by Project Director
  - Do not contact NSF PO
USDA EPSCoR Opportunities in Agriculture, Food, and Environmental Sciences

- NIFA-AFRI* Strengthening Grants and Pre- and Post-Doctoral Fellowship Grants
- Offered each funding cycle
- 15% of AFRI funds go to EPSCoR jurisdictions
- Eligibility: Degree-granting institution**
- Sign up for NIFA’s Newsletter
  - E-mail Judy Rude jrude@nifa.usda.gov
  - In body of message, type: subscribe NIFA Update

*National Institute of Food and Agriculture (NIFA) – Agricultural and Food Research Initiative (AFRI)
**DRI not eligible to apply directly, but may partner with UNLV or UNR
# Current USDA NIFA-AFRI Awards

<table>
<thead>
<tr>
<th>Title</th>
<th>Amount</th>
<th>Duration</th>
<th>PIs</th>
<th>Inst.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water quality implications of unique transformation processes of synthetic steroids used as agricultural pharmaceuticals</td>
<td>$496,000</td>
<td>2013-2016</td>
<td>E Kolodziej</td>
<td>UNR</td>
</tr>
<tr>
<td>Arid lands biofuels and bioproducts</td>
<td>$499,182</td>
<td>2013-2017</td>
<td>G C Miller</td>
<td>UNR</td>
</tr>
<tr>
<td>Water quality implications of unique transformation of synthetic steroids used as agricultural pharmaceuticals</td>
<td>$496,000</td>
<td>2013-2016</td>
<td>C Jeffrey</td>
<td>UNR</td>
</tr>
<tr>
<td>Sustainable rural development using the area sector analysis process</td>
<td>$490,486</td>
<td>2014-2017</td>
<td>T Harris</td>
<td>UNR</td>
</tr>
<tr>
<td>Mountain pine beetle pheromone production</td>
<td>$364,697</td>
<td>2014-2017</td>
<td>C Ttiger, GA Blomquist, KA Schlauch</td>
<td>UNR</td>
</tr>
<tr>
<td>Aromatic carbon-degrading microorganism-mediated uptake of carbon nanotubes by tomato plants</td>
<td>$150,000</td>
<td>2015-2017</td>
<td>Y Yang</td>
<td>UNR</td>
</tr>
<tr>
<td>Water for agriculture challenge are: enhancing climate resiliency and agriculture on American Indian land</td>
<td>$516,844</td>
<td>2015-2016</td>
<td>McCarthy, Emm, Singletary, Kauneckis, Phillips, Colby, Flint, Daniels, Curtis, Edwards, Dettinger</td>
<td>UNR</td>
</tr>
</tbody>
</table>
Current NASA EPSCoR Awards

- Two Cooperative Agreement Notice (CAN) Awards ($750K federal + $375K match)
  - Topic specific addressing high-priority NASA research and technology needs

- Research Infrastructure Development (RID) Award ($375K federal + $375K match)
  - Enables states to build and strengthen relationships with NASA researchers
Current NASA EPSCoR Awards

Advanced Transport Technologies for NASA Thermal Management/Control Systems
(Miles Greiner, UNR) (2015-2018)

Building Capacity in Interdisciplinary Snow Sciences for a Changing World
DOE EPSCoR New Opportunities

- DOE Implementation Program
- Three years
- Up to $2.5M per year
- 20% program office support

Not currently funded
Proposal Process for EPSCoR Programs
EPSCoR Proposal Process

- Statewide solicitation for white papers or pre-proposals with defined focus
  - Focus areas are defined by Agency or strategically selected by NSHE leadership (RAC, Project Director and NVEAC) which aligns to the state Science and Technology Plan

- Pre-Proposals/white papers are submitted from researchers to NSHE SPO/EPSCoR

- Proposal packets then are compiled and sent out for external review
  - External reviewers are independent peers outside of Nevada and content experts

- The reviews are then compiled and presented to the RAC with a summary and recommendations
  - The RAC then approves the pre-proposal(s) that will move forward for the State submission to the Agency
The NSHE Project Director then appoints proposal development team(s) to work on the proposal.

The NSHE Project Director assembles the full proposal with the assistance of the EPSCoR staff.

If time allows, the proposal will be sent out for another external review and technical writing assistance may be obtained.

Final proposal is submitted to the agency by the Nevada EPSCoR office.
NSF Track-1 Proposal Process

- Each state/jurisdiction can submit only one proposal
- State can have only one active Track-1 at a time
- NSHE runs internal pre-proposal competition
- Topics must be in alignment with Nevada Science and Technology Plan and NSF priorities
- Participation by UNLV, UNR, and DRI mandatory
- Budgets should be comprised of no less than 20% and no more than 50% of the total project budget from any given institution
Track-1 Timeline

- Fall 2015 NSHE announcement released
  http://epscorspo.nevada.edu/nevada-nsf-epscor-rii-track-1-program-announcement/
- Summer 2016 LOI/RPF/submission of pre proposals
- Fall 2016 Pre proposal review
- Winter 2016 Pre proposal(s) selected
- Winter-Summer 2017 Full proposal development
- August 2017 Submit Proposal
- June 2018 Award made
Each institution can submit one proposal

- Internal pre-proposal competition by institution
- Requires extensive coordination with partner jurisdiction(s)
- No limit on # of proposals in which an institution/jurisdiction can participate as a non-lead collaborator
- Prior submissions/awards do not affect eligibility
- FY2018 solicitation to be released before end of 2017 calendar year
NSF RII Track-1 Formal Process
National Science Foundation

Proposals Received | Panel Review | Contact PDs | Directors Review Board | PD Informed of Decision | POs Finalize Rec. | DGA Award
--- | --- | --- | --- | --- | --- | ---
6-8 wks | 2 wks | 6-8 wks | 2-3 wks | 4 wks | 30 days | 
Panel selection & proposal review by panelists and domain experts | NSF Program Officer Review | Questions (if necessary) to PDs & PD Response Evaluation | DRB Analyses | Finalize recommendations and budget negotiations | 
Decline Decision

Total time for review process for a successful proposal is **approximately** 6 months
USDA Proposal Process

• Only degree-granting institutions can apply (UNR, UNLV)

• PI submits directly to the NIFA-AFRI program, following institutional policies

• Does not go through the EPSCoR office – only institutional submission

• Multiple submissions allowed

• Have to be an EPSCoR jurisdiction to be eligible
NASA Proposal Process

CAN – 6 month timeline

Fall Release of RFP for pre proposals
  o LOI due

Winter Pre proposals due to NSHE
  o Proposals sent out for external review

Early Spring NASA CAN released
  o Proposals reviewed, summary sent to RAC
  o RAC recommends – proposal team determined
  o Full proposal development

Spring Submit Proposal
  o Award made

RID – 2 month timeline

Spring
  Project Director developed the statewide narrative
  o Internal solicitations are posted throughout the project period (3 years) for multiple RID focused projects

  o RFP posted
  o Proposals are submitted per RFP
  o Review of proposals
  o Internal awards made
DOE Proposal Process

**NSHE - Targeted Annual Solicitation** –
This is a draft process**

- **Fall 201X**
  - Release of RFP for pre proposals

- **Winter 201X**
  - Pre proposals to be reviewed by RAC
  - Determination by RAC for teams/collaborations, if applicable
  - Full proposal development of selected pre proposals

- **Early 201X**
  - Proposal(s) sent out for external reviews
  - Summary and reviews sent to RAC
  - Determination of final proposal to move forward

- **Spring 201X**
  - DOE announces FOA
  - Finalize and submit proposal
  - Award made

epscorspo.nevada.edu
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