



EPSCoR Eligibility

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Presentation Topics



- Current EPSCoR Eligibility
 - Criteria & Procedures
 - Losing Eligibility and Restoring It
- FY 2019 Eligibility Table
- Recap of Methodology Assessment Process
- Outcome



Current EPSCoR Eligibility Criteria

- Eligibility calculated annually based on a jurisdiction's portion of NSF's Research (R&RA) support over the prior three years.
 - R&RA does not include EHR or MRE funding
 - Some national facilities (Research Vessels, Polar Activities) are excluded from the calculation.
 - Other national facilities (e.g., Telescopes and Cyberinfrastructure) are not excluded.
 - EPSCoR's own investments are currently not excluded from the calculation.
- Current eligibility threshold is 0.75% of NSF R&RA
- Due to lag in data availability, the eligibility table for the fiscal year is usually not published until the new calendar year.

Losing Eligibility and Restoring It



- Five jurisdictions have crossed the threshold in recent years and lost eligibility:
 - IA, TN, UT (FY 2013)
 - MO (FY 2015)
 - NM (FY 2018)
- Two of these (IA and NM) fell back below the threshold based on FY 2018 data:
 - Procedures were established during FY 2019 to allow their re-entry to EPSCoR funding activities;
 - A process was initiated to improve the methodology for determining NSF EPSCoR eligibility over the long term.

FY 2019 Eligibility Table



NSF EPSCoR is re-examining its eligibility methodology to ensure that it is simple, transparent, fair, and stable. To avoid uncertainty during the methodology development process, no jurisdiction that was eligible in FY 2018 will lose eligibility until the process is complete.

STATE	FY 2016 Research		FY 2017 Research		FY 2018 Research		FY 2016-18 Research		% of Total \$
	Support		Support		Support		Support		
	Amt \$k	Cnt	Amt \$k	Cnt	Amt \$k	Cnt	Amt \$k	Cnt	
Grand Total	\$5,490,618	18,214	\$5,611,940	17,538	\$5,802,723	17,398	\$16,905,281	53,150	100.00%
Other	\$26,804	30	\$18,894	30	\$23,354	31	\$69,052	91	0.41%
US Total	\$5,463,814	18,184	\$5,593,046	17,506	\$5,779,369	17,367	\$16,836,229	53,057	99.59%
Guam	\$2,107	2	\$2,516	4	\$0	0	\$4,623	6	0.03%
Virgin Islands	\$4,249	2	\$3,684	2	\$4,903	5	\$12,836	9	0.08%
Puerto Rico	\$12,489	29	\$6,795	21	\$12,284	42	\$31,568	92	0.19%
South Dakota	\$6,671	38	\$14,415	32	\$11,747	26	\$32,833	96	0.19%
North Dakota	\$15,689	30	\$5,635	26	\$11,583	28	\$32,907	84	0.19%
West Virginia	\$12,309	38	\$12,605	39	\$13,145	40	\$38,059	117	0.23%
Vermont	\$8,629	31	\$13,755	33	\$16,837	39	\$39,221	103	0.23%
Wyoming	\$15,980	39	\$12,744	33	\$15,167	34	\$43,891	106	0.26%
Nevada	\$15,221	79	\$16,355	60	\$18,607	84	\$50,183	223	0.30%
Mississippi	\$20,940	57	\$12,357	56	\$17,531	63	\$50,828	176	0.30%
Idaho	\$16,070	66	\$17,431	54	\$20,411	55	\$53,912	175	0.32%
Maine	\$13,267	65	\$18,589	60	\$24,624	59	\$56,480	184	0.33%
Arkansas	\$18,610	51	\$14,340	61	\$26,414	65	\$59,364	177	0.35%
Montana	\$28,621	72	\$22,153	78	\$22,216	73	\$72,990	223	0.43%
Nebraska	\$24,454	78	\$28,948	81	\$25,605	95	\$79,007	254	0.47%
Oklahoma	\$25,460	106	\$34,555	103	\$19,582	85	\$79,597	294	0.47%
Kentucky	\$27,402	123	\$23,960	102	\$29,537	108	\$80,899	333	0.48%
Alaska*	\$25,340	98	\$33,745	100	\$33,382	96	\$92,467	294	0.55%
Hawaii*	\$30,881	101	\$28,748	93	\$36,629	95	\$96,258	289	0.57%
Delaware*	\$43,500	121	\$21,105	89	\$34,296	117	\$98,901	327	0.59%
Alabama	\$26,267	139	\$33,202	153	\$40,734	145	\$100,203	437	0.59%
Louisiana*	\$40,717	147	\$27,578	130	\$34,426	148	\$102,721	425	0.61%
Kansas	\$30,713	120	\$36,733	127	\$35,339	103	\$102,785	350	0.61%
New Hampshire*	\$38,300	116	\$35,598	117	\$32,937	106	\$106,835	339	0.63%
New Mexico	\$40,330	152	\$45,661	141	\$32,629	119	\$118,620	412	0.70%
Rhode Island*	\$37,023	182	\$43,627	174	\$38,690	191	\$119,340	547	0.71%
Iowa	\$40,607	179	\$40,452	164	\$42,948	163	\$124,007	506	0.73%
South Carolina*	\$38,546	151	\$48,597	154	\$40,690	164	\$127,833	469	0.76%
Tennessee	\$49,808	215	\$47,685	201	\$46,137	193	\$143,630	609	0.85%



Eligibility Methodology: Context

- It is in NSF's and the jurisdictions' interest to avoid circumstances where eligibility fluctuates from year to year, and where there is uncertainty about whether a given jurisdiction will be eligible for an upcoming competition.
- There is also interest in making the eligibility calculations as simple as possible, while also being judicious in determining what parts of NSF's overall portfolio should or should not be included in the calculation.
- Numerous interested stakeholders in this process:
 - EPSCoR research community;
 - Agency partners w/ EPSCoR or EPSCoR-like programs;
 - OMB and Congress (esp. from EPSCoR jurisdictions)

Eligibility Methodology: Development Process



- Engagement with Agency partners early on to determine desired level of coordination;
 - One call in December; more discussion planned.
- Inform OMB, OSTP, and Congress as appropriate;
 - Conference calls and email communication as needed (coordination w/ NSF Office of Legislative & Public Affairs & NSF Office of Budget)
- Engagement with jurisdictional research leadership to consider their input and concerns;
 - Webinar in March 2019;
 - Extended discussion at May 2019 EPSCoR PD/PA/PI Meeting
 - Email, phone discussions as needed
- Final decision process within NSF
- Rollout at Fall 2019 EPSCoR National Conference, to be implemented starting with the release of the FY 2020 calculation. New eligibility model will take effect at the start of FY 2021.
- FY 2019 eligibility table will be used for all of FY 2020.

Summary of Stakeholder Feedback



- Utilize five years of data instead of three years
- Exclude EPSCoR funding
- Exclude funding for national facilities
- Don't normalize
- Different induction and departure thresholds to ease transition for “graduating” jurisdictions

Post-Feedback Steps



- Internal Discussion among NSF EPSCoR and other NSF staff
- Extensive Scenario Testing
- Draft Plan
- Additional Discussion & Scenario Testing
- Plan Finalization & Approval
 - Signoff by NSF COO last week

Analyses Performed



Initial set of analyses based on stakeholder feedback:

- All based on prior 5 years of data
- Variables:
 - Data source: Either NSF Total Funding*, NSF Research and Related Activities (R&RA) Funding, or R&RA *and* Education and Human Resources (EHR) Funding.
 - Exclusions: Either Current Exclusions (Ship and Arctic/Antarctic Operations), No Exclusions, EPSCoR Funding, NSF Funding to Other Federal Agencies, or a Combination of These Variables.
 - No normalization factors utilized
- Resulted in 12 sets of analyses.
 - Factors considered included: the set of eligible jurisdictions under each scenario, the Δ above/below the 0.75% threshold, data trends
 - Of these, 5 were chosen for a refined set of retrospective analyses

* NSF Total includes R&RA, EHR and MREFC

Analyses Performed (cont.)



- Retrospective analyses:
 - Utilized prior 10 years of funding data
 - Resulted in 6 unique eligibility tables for each respective scenario, since each table is based on a 5-year sum of funding data
 - Total of 30 additional analyses
 - Allowed visualization of eligibility changes over time for each scenario
 - Factors considered included: the set of eligible jurisdictions under each scenario, the Δ above/below the 0.75% threshold, data trends
 - Allowed a more refined examination of data and variables, resulting in a comprehensive set of recommendations for refining EPSCoR eligibility

Methodology Changes



	Current Eligibility	Proposed Eligibility	Rationale
Methodology	Definitive eligibility cutoff line	Hysteresis: eligibility cutoff maintained, but adds time-limited buffer which maintains eligibility above the eligibility cutoff line.	A hysteresis approach will help to eliminate year-to-year eligibility fluctuation and provide a funding buffer for those jurisdictions on an upward trajectory.
Eligibility	Equal to or less than 0.75% of NSF research support	Equal to or less than 0.75% of NSF research support and up to 5 years if within 0.76% - 0.79% * *All percentages rounded to the nearest hundredth of a percent	Maintaining eligibility for jurisdictions that improve their research competitiveness by exceeding the 0.75% eligibility cutoff will help to ensure that they maintain their momentum. Requiring them to fall back below the 0.75% eligibility cutoff should they meet or exceed 0.80% of NSF total funding will help to maintain overall stability for the eligibility pool. Eligibility applies to all funding mechanisms
Data Source	NSF Research Support Funding Only	NSF Total Funding	EPSCoR's mission is to increase jurisdictional competitiveness. By including all NSF funding in the eligibility calculation, EPSCoR is better able to gauge NSF funding competitiveness for all jurisdictions across the nation.
Time Frame	Prior 3 Years	Prior 5 Years	Extending the calculation range helps to further stabilize eligibility.
Exclusions	Ship Operations and Arctic/Antarctic Support	EPSCoR RII & Workshops/ Conferences And NSF Funding to Other Federal Agencies	Removing EPSCoR funding from the eligibility calculation helps to stabilize eligibility by removing EPSCoR interventions so that all jurisdictions are judged by their current competitiveness. NSF funding to other federal agencies is also excluded since this funding supports nationwide R&D and is not solely of benefit to the jurisdictions. These exclusions are in alignment with EPSCoR's fundamental goal to build capacity for eligible jurisdictions to be competitive for NSF funding outside of the EPSCoR program.
Effective Date	Upon publication	October 1, Each Fiscal Year	Shifting the effective date of the eligibility table eliminates confusion about who can apply for specific RII competitions and allows for jurisdictions to better plan for proposal submission.

Eligibility Recommendation: Hysteresis



Explanation:

- EPSCoR eligibility level remains at 0.75% for new or re-entering jurisdictions.
- Jurisdictions retain eligibility for up to five years if their share of NSF funding falls between 0.76%-0.79%. (*All percentages rounded to nearest 0.01%*)
- After five years within the 0.76%-0.79% range they would be declared ineligible.
- If at any time within that five-year period they reach 0.80% or above, then they would automatically be ineligible and not regain eligibility until they fall back to 0.75% or below.
- Regardless of path, at any given time a jurisdiction is either fully eligible for all activities, or fully ineligible for any funding of new awards.

Rationale:

This method helps to eliminate year-to-year eligibility fluctuation and provides a funding buffer for those jurisdictions on an upward trajectory.

A jurisdiction is eligible to participate in NSF EPSCoR if their most recent 5-year level of total NSF funding is equal to or less than 0.75% of the total NSF budget. Jurisdictions above 0.75% but less than 0.80% are allowed to remain EPSCoR-eligible for up to 5 years.

State	FY14 Total	FY15 Total	FY16 Total	FY17 Total	FY18 Total	FY 2014-18 Total	EPSCoR Total	Federal Total	Adjusted \$	% of Total \$
(Drill to Inst)	Amt \$k	Amt \$k		Amt \$k						
Grand Total	\$6,766,552	\$6,967,463	\$7,110,054	\$7,016,546	\$7,457,851	\$35,318,466	\$668,224	\$739,255	\$33,910,987	100.00%
Other	\$21,758	\$25,489	\$26,715	\$18,894	\$23,354	\$116,210				
US Total	\$6,744,793	\$6,941,974	\$7,083,339	\$6,997,652	\$7,434,497	\$35,202,255				
Guam	\$129	\$2,055	\$2,107	\$2,516	-	\$6,807	\$6,129	-	\$678	0.00%
Virgin Islands	\$4,967	\$4,570	\$6,666	\$5,109	\$6,304	\$27,616	\$20,171	-	\$7,445	0.02%
Vermont	\$13,539	\$11,871	\$9,695	\$15,665	\$19,389	\$70,159	\$26,674	-	\$43,485	0.13%
West Virginia	\$15,122	\$14,961	\$14,924	\$14,347	\$15,959	\$75,313	\$20,161	\$688	\$54,464	0.16%
Wyoming	\$14,437	\$13,813	\$15,879	\$13,344	\$17,068	\$74,541	\$18,926	-	\$55,615	0.16%
South Dakota	\$22,403	\$18,696	\$11,628	\$14,822	\$15,021	\$82,570	\$24,066	-	\$58,504	0.17%
Puerto Rico	\$18,203	\$8,372	\$15,481	\$10,285	\$19,488	\$71,829	\$12,000	-	\$59,829	0.18%
North Dakota	\$17,245	\$14,217	\$21,064	\$13,434	\$16,051	\$82,011	\$21,807	-	\$60,204	0.18%
Arkansas	\$19,048	\$16,207	\$24,647	\$15,411	\$28,979	\$104,292	\$30,597	-	\$73,695	0.22%
Nevada	\$22,458	\$17,718	\$15,612	\$18,375	\$22,091	\$96,254	\$16,350	-	\$79,904	0.24%
Mississippi	\$16,296	\$22,973	\$32,332	\$20,946	\$21,791	\$114,338	\$25,883	-	\$88,455	0.26%
Idaho	\$13,448	\$26,162	\$22,984	\$24,701	\$24,745	\$112,040	\$22,171	-	\$89,869	0.27%
Maine	\$21,176	\$26,164	\$17,104	\$22,314	\$33,440	\$120,198	\$23,253	-	\$96,945	0.29%
Montana	\$25,397	\$21,626	\$33,826	\$31,780	\$30,567	\$143,196	\$27,125	-	\$116,071	0.34%
Kentucky	\$26,395	\$31,772	\$31,214	\$30,048	\$32,887	\$152,316	\$27,267	-	\$125,049	0.37%
Delaware	\$39,208	\$25,593	\$46,120	\$25,204	\$36,652	\$172,777	\$30,271	-	\$142,506	0.42%
Nebraska	\$35,805	\$33,386	\$31,725	\$37,926	\$34,167	\$173,009	\$24,407	-	\$148,602	0.44%
Oklahoma	\$33,144	\$46,000	\$29,789	\$40,468	\$24,624	\$174,025	\$22,120	\$2,463	\$149,442	0.44%
Kansas	\$27,717	\$38,966	\$34,560	\$41,596	\$41,173	\$184,012	\$28,662	-	\$155,350	0.46%
New Hampshire	\$37,503	\$35,834	\$42,246	\$40,038	\$38,751	\$194,372	\$29,167	\$8,948	\$156,257	0.46%
Louisiana	\$38,893	\$30,614	\$45,598	\$36,916	\$42,513	\$194,534	\$35,132	-	\$159,402	0.47%
Alaska	\$39,193	\$35,607	\$35,701	\$46,325	\$45,032	\$201,858	\$20,379	-	\$181,479	0.54%
Hawaii	\$41,295	\$41,636	\$43,054	\$45,167	\$45,314	\$216,466	\$13,137	-	\$203,329	0.60%
Rhode Island	\$45,545	\$50,039	\$41,888	\$49,387	\$43,605	\$230,464	\$24,445	-	\$206,019	0.61%
South Carolina	\$53,813	\$58,598	\$60,161	\$75,564	\$64,019	\$312,155	\$28,851	\$72,337	\$210,967	0.62%
Alabama	\$45,305	\$34,281	\$46,041	\$51,155	\$60,140	\$236,922	\$18,693	-	\$218,229	0.64%
New Mexico	\$43,102	\$56,473	\$51,843	\$51,704	\$46,030	\$249,152	\$26,190	\$1,112	\$221,850	0.65%
Iowa	\$56,006	\$59,338	\$59,550	\$47,675	\$50,677	\$273,246	\$8,100		\$265,146	0.78%
Missouri	\$53,684	\$68,210	\$68,790	\$68,068	\$68,107	\$326,859	\$22,890	\$2,100	\$301,869	0.89%
Utah	\$57,771	\$68,835	\$63,642	\$55,014	\$69,120	\$314,382	\$9,000		\$305,382	0.90%
Tennessee	\$66,625	\$67,401	\$80,782	\$58,260	\$70,213	\$343,281	\$4,200	\$10,258	\$328,823	0.97%

Summary



*Goal of the new proposed eligibility is to be **simple, transparent, fair and stable***

In-line with stakeholder input, study recommendations from both STPI and NAS, and the data analyses it seems clear that the best fit for programmatic eligibility is to:

- Utilize NSF Total Funding (R&RA, EHR, and MREFC)
 - Exclude EPSCoR funding (RII program and EPSCoR conferences/workshops) *and* NSF funding to other federal agencies
 - Base eligibility on percentage of sum over the prior five-years
 - Apply hysteresis level to further mitigate eligibility fluctuation
 - Shift the effective date of the eligibility to better align with the fiscal year to which it applies.
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Impact



- Proposed changes in alignment with EPSCoR's mission and recent report recommendations made by STPI and NAS.
 - NASA and DOE were consulted and agree with the new methodology.
 - The calculation using the new methodology will be published in January 2020 and be effective for the FY 2021 proposal competitions.
 - This effectively means that the FY 2019 eligibility table will be used for FY 2020.
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Thank-you



List of Analyses Performed

Data Source	Exclusions
Research and Related Activities	Current*
Research and Related Activities	None
Research and Related Activities	EPSCoR funding
Research and Related Activities	Current and EPSCoR funding
Research and Related Activities	EPSCoR funding and NSF funding to other fed. agencies
NSF Total (R&RA, EHR, MREFC)	None
NSF Total (R&RA, EHR, MREFC)	EPSCoR funding
NSF Total (R&RA, EHR, MREFC)	Current and EPSCoR funding
NSF Total (R&RA, EHR, MREFC)	EPSCoR funding and NSF funding to other fed. agencies
R&RA and EHR	None
R&RA and EHR	EPSCoR funding
R&RA and EHR	Current and EPSCoR funding

*Current exclusions: ship and Arctic/Antarctic operations

Retrospective Analyses Performed



Data Source	Exclusions
Research and Related Activities	Current*
NSF Total (R&RA, EHR, MREFC)	None
NSF Total (R&RA, EHR, MREFC)	EPSCoR funding
NSF Total (R&RA, EHR, MREFC)	EPSCoR funding and NSF funding to other fed. agencies
R&RA and EHR	None
R&RA and EHR	EPSCoR funding

5 unique eligibility tables for each respective scenario were generated, based on the 5-year rolling sum of funding data. This resulted in a total of 30 additional analyses.

*Current exclusions: ship and Arctic/Antarctic operations