



Cover Page for Proposal
Submitted to the
National Aeronautics and
Space Administration

NASA Proposal Number

TBD on Submit

NASA PROCEDURE FOR HANDLING PROPOSALS

This proposal shall be used and disclosed for evaluation purposes only, and a copy of this Government notice shall be applied to any reproduction or abstract thereof. Any authorized restrictive notices that the submitter places on this proposal shall also be strictly complied with. Disclosure of this proposal for any reason outside the Government evaluation purposes shall be made only to the extent authorized by the Government.

SECTION I - Proposal Information

Principal Investigator Gregory Bothun		E-mail Address nuts@bigmoo.uoregon.edu		Phone Number 541-346-2569	
Street Address (1) 1371 E 13th Ave			Street Address (2)		
City Eugene		State / Province OR		Postal Code 97403-9700	Country Code US
Proposal Title : Oregon Climate Literacy Education Initiative					
Proposed Start Date 11 / 01 / 2010	Proposed End Date 10 / 31 / 2013	Total Budget 350,219.00	Year 1 Budget 114,583.00	Year 2 Budget 112,658.00	Year 3 Budget 122,978.00

SECTION II - Application Information

NASA Program Announcement Number NNL10ZB1011C	NASA Program Announcement Title Global Climate Change Education (GCCE): Research Experiences, Modeling & Data				
For Consideration By NASA Organization (<i>the soliciting organization, or the organization to which an unsolicited proposal is submitted</i>) NASA , Headquarters , Office of Education , Integration					
Date Submitted		Submission Method Electronic Submission Only	Grants.gov Application Identifier		Applicant Proposal Identifier
Type of Application New	Predecessor Award Number	Other Federal Agencies to Which Proposal Has Been Submitted			
International Participation No	Type of International Participation				

SECTION III - Submitting Organization Information

DUNS Number 948117312	CAGE Code 4B865	Employer Identification Number (EIN or TIN) 481278531	Organization Type 2A		
Organization Name (Standard/Legal Name) University Of Oregon, Eugene				Company Division	
Organization DBA Name RESEARCH SERVICES AND ADMINISTRATION				Division Number	
Street Address (1) 5219 UNIVERSITY OF OREGON			Street Address (2)		
City EUGENE		State / Province OR		Postal Code 974035295	Country Code USA

SECTION IV - Proposal Point of Contact Information

Name Gregory Bothun		Email Address nuts@bigmoo.uoregon.edu		Phone Number 541-346-2569	
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SECTION V - Certification and Authorization

Certification of Compliance with Applicable Executive Orders and U.S. Code

By submitting the proposal identified in the Cover Sheet/Proposal Summary in response to this Research Announcement, the Authorizing Official of the proposing organization (or the individual proposer if there is no proposing organization) as identified below:

- certifies that the statements made in this proposal are true and complete to the best of his/her knowledge;
- agrees to accept the obligations to comply with NASA award terms and conditions if an award is made as a result of this proposal; and
- confirms compliance with all provisions, rules, and stipulations set forth in the two Certifications and one Assurance contained in this NRA (namely, (i) the Assurance of Compliance with the NASA Regulations Pursuant to Nondiscrimination in Federally Assisted Programs, and (ii) Certifications, Disclosures, and Assurances Regarding Lobbying and Debarment and Suspension.

Willful provision of false information in this proposal and/or its supporting documents, or in reports required under an ensuing award, is a criminal offense (U.S. Code, Title 18, Section 1001).

Authorized Organizational Representative (AOR) Name		AOR E-mail Address		Phone Number	
AOR Signature (<i>Must have AOR's original signature. Do not sign "for" AOR.</i>)				Date	

PI Name : Gregory Bothun		NASA Proposal Number TBD on Submit	
Organization Name : University Of Oregon, Eugene			
Proposal Title : Oregon Climate Literacy Education Initiative			
SECTION VI - Team Members			
Team Member Role PI	Team Member Name Gregory Bothun	Contact Phone 541-346-2569	E-mail Address nuts@bigmoo.uoregon.edu
Organization/Business Relationship University Of Oregon, Eugene		Cage Code 4B865	DUNS# 948117312
International Participation No	U.S. Government Agency		Total Funds Requested 0.00
Team Member Role Co-I	Team Member Name Kevin Carr	Contact Phone 503-752-0253	E-mail Address kcarr@pacificu.edu
Organization/Business Relationship Pacific University		Cage Code 6V094	DUNS# 055978035
International Participation No	U.S. Government Agency		Total Funds Requested 0.00

PI Name : Gregory Bothun	NASA Proposal Number TBD on Submit
Organization Name : University Of Oregon, Eugene	
Proposal Title : Oregon Climate Literacy Education Initiative	

SECTION VII - Project Summary

Oregon Climate Literacy Education Initiative (OCLEI) is an innovative partnership of the University of Oregon, Pacific University-College of Education, and a consortium of rural Oregon school districts. OCLEI will transform climate change education in partner middle and high schools by providing a year-long teacher professional development program consisting of extensive earth systems and climate change science coursework, training in the use of NASA earth observation data and earth system models, and sustained support. OCLEI will ensure maximum classroom impact on student learning by engaging scientists, teachers, and administrators together in co-teaching partnerships, in which all participants work together in rural classrooms to implement innovative pedagogy. Successful OCLEI climate change education models and curriculum will be disseminated statewide through the Oregon NASA Space Grants Consortium and Oregon Science Teachers Association. The essential question guiding OCLEI is: How can NASA resources and programs transform climate change and earth systems science education in Oregon's rural middle and secondary schools? The goals and objectives of OCLEI are:

Improve teaching and learning about global climate change in three rural secondary schools and three associated middle schools, directly serving 36 teachers and ~3600 students

Increase teacher climate change and earth systems science literacy by providing district-based teams of middle school math and/or science teachers 12 quarter-hours of coursework in earth system science.

Improve teacher access to NASA climate change and NASA earth systems science resources by providing district-based teams with training in the use of NASA Earth Observation data and NASA Earth system models. This will entail detailed hands-on workshops in various computer labs to introduce to the participants the vast array of ON line resources and data which currently exist.

Encourage pedagogical innovation by providing research-supported, data-driven instructional models and data visualization tools applied to topics of climate change and earth systems science. This is a key component. Our partnership has had a long history of providing teachers with innovative tools to assist them with in data organization and analysis.

Transform educational practice by co-teaching alongside participant teachers in their classrooms, developing and enacting climate/earth systems science lessons and units, and evaluating the impact on student learning. This has both a multiplicative effect and leads to better sustainability of the curriculum and the delivery of the curriculum.

Context: A Pew Research Survey released July 9, 2009 estimates that while 84% of AAAS member scientists think that the earth is getting warmer due to human activity, only 49% of the public agrees. Similar results were also found in the 2009 report by the Yale University project on climate change found a general complacency among the US population on both issues of climate change and energy generation. This proposal targets the middle and high school science classroom as the initial attempt to raise citizen literacy in climate (and energy) issues. Our experience suggests that most current middle and high school science teachers have not taken a single pre-service course on Earth System Science and hence there is a large need for professional development in this area. OCLEI leverages the unique scientific expertise and resources of NASA to deliver a systematic and sustained course of professional development for middle and high school science and math teachers, focusing on the highly coupled fields of global climate change and choices in global energy production and new forms of transportation.

PI Name : Gregory Bothun				NASA Proposal Number	
Organization Name : University Of Oregon, Eugene				TBD on Submit	
Proposal Title : Oregon Climate Literacy Education Initiative					
SECTION VIII - Other Project Information					
Proprietary Information					
Is proprietary/privileged information included in this application? Yes					
International Collaboration					
Does this project involve activities outside the U.S. or partnership with International Collaborators? No					
Principal Investigator No	Co-Investigator No	Collaborator No	Equipment No	Facilities No	
Explanation :					
NASA Civil Servant Project Personnel					
Are NASA civil servant personnel participating as team members on this project (include funded and unfunded)? No					
Fiscal Year	Fiscal Year	Fiscal Year	Fiscal Year	Fiscal Year	
Number of FTEs	Number of FTEs	Number of FTEs	Number of FTEs	Number of FTEs	

PI Name : Gregory Bothun	NASA Proposal Number TBD on Submit
Organization Name : University Of Oregon, Eugene	

Proposal Title : **Oregon Climate Literacy Education Initiative**

SECTION VIII - Other Project Information

Environmental Impact

Does this project have an actual or potential impact on the environment? No	Has an exemption been authorized or an environmental assessment (EA) or an environmental impact statement (EIS) been performed? No
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Environmental Impact Explanation:

Exemption/EA/EIS Explanation:

PI Name : Gregory Bothun	NASA Proposal Number TBD on Submit
Organization Name : University Of Oregon, Eugene	
Proposal Title : Oregon Climate Literacy Education Initiative	
SECTION VIII - Other Project Information	
Historical Site/Object Impact	
Does this project have the potential to affect historic, archeological, or traditional cultural sites (such as Native American burial or ceremonial grounds) or historic objects (such as an historic aircraft or spacecraft)? No	
Explanation:	

PI Name : Gregory Bothun	NASA Proposal Number TBD on Submit
Organization Name : University Of Oregon, Eugene	
Proposal Title : Oregon Climate Literacy Education Initiative	

SECTION IX - Program Specific Data

Question 1 : Short Title

Answer: Oregon Climate Literacy Education Initiative

Question 2 : Proposals may be submitted under one of two funding categories. While some proposals may include elements in more than one category, please identify the most closely aligned category.

Answer: Funding Category D/M (Goals 1 & 2): Using NASA Earth system data, interactive models and simulations to Strengthen Teaching and Learning about Global Climate

Question 3 : Indicate the primary NASA Education Objective (see Appendix A of CAN)

Answer: Objective 2.2 Elementary and Secondary Education: Educator Professional Development Long Duration

PI Name : Gregory Bothun			NASA Proposal Number TBD on Submit	
Organization Name : University Of Oregon, Eugene				
Proposal Title : Oregon Climate Literacy Education Initiative				
SECTION X - Budget				
Cumulative Budget				
Budget Cost Category	Funds Requested (\$)			
	Year 1 (\$)	Year 2 (\$)	Year 3 (\$)	Total Project (\$)
A. Direct Labor - Key Personnel	7,465.00	7,465.00	7,465.00	22,395.00
B. Direct Labor - Other Personnel	28,620.00	28,620.00	28,620.00	85,860.00
Total Number Other Personnel	2	2	2	6
Total Direct Labor Costs (A+B)	36,085.00	36,085.00	36,085.00	108,255.00
C. Direct Costs - Equipment	5,500.00	0.00	0.00	5,500.00
D. Direct Costs - Travel	3,000.00	3,000.00	3,000.00	9,000.00
Domestic Travel	3,000.00	3,000.00	3,000.00	9,000.00
Foreign Travel	0.00	0.00	0.00	0.00
E. Direct Costs - Participant/Trainee Support Costs	33,600.00	33,600.00	33,600.00	100,800.00
Tuition/Fees/Health Insurance	9,600.00	9,600.00	9,600.00	28,800.00
Stipends	24,000.00	24,000.00	24,000.00	72,000.00
Travel	0.00	0.00	0.00	0.00
Subsistence	0.00	0.00	0.00	0.00
Other	0.00	0.00	0.00	0.00
Number of Participants/Trainees	16	16	16	48
F. Other Direct Costs	18,200.00	22,200.00	30,200.00	70,600.00
Materials and Supplies	200.00	200.00	200.00	600.00
Publication Costs	0.00	0.00	4,000.00	4,000.00
Consultant Services	0.00	4,000.00	8,000.00	12,000.00
ADP/Computer Services	0.00	0.00	0.00	0.00
Subawards/Consortium/Contractual Costs	18,000.00	18,000.00	18,000.00	54,000.00
Equipment or Facility Rental/User Fees	0.00	0.00	0.00	0.00
Alterations and Renovations	0.00	0.00	0.00	0.00
Other	0.00	0.00	0.00	0.00
G. Total Direct Costs (A+B+C+D+E+F)	96,385.00	94,885.00	102,885.00	294,155.00
H. Indirect Costs	18,198.00	17,773.00	20,093.00	56,064.00
I. Total Direct and Indirect Costs (G+H)	114,583.00	112,658.00	122,978.00	350,219.00
J. Fee	0.00	0.00	0.00	0.00
K. Total Cost (I+J)	114,583.00	112,658.00	122,978.00	350,219.00
Total Cumulative Budget				350,219.00

PI Name : Gregory Bothun						NASA Proposal Number			
Organization Name : University Of Oregon, Eugene						TBD on Submit			
Proposal Title : Oregon Climate Literacy Education Initiative									
SECTION X - Budget									
Start Date : 11 / 01 / 2010		End Date : 10 / 31 / 2011		Budget Type : Project		Budget Period : 1			
A. Direct Labor - Key Personnel									
Name		Project Role	Base Salary (\$)	Cal. Months	Acad. Months	Summ. Months	Requested Salary (\$)	Fringe Benefits (\$)	Funds Requested (\$)
Bothun, Gregory		PI	11,310.00			.5	5,655.00	1,810.00	7,465.00
Total Key Personnel Costs									7,465.00
B. Direct Labor - Other Personnel									
Number of Personnel	Project Role		Cal. Months	Acad. Months	Summ. Months	Requested Salary (\$)	Fringe Benefits (\$)	Funds Requested (\$)	
1	Undergraduate Students		12			6,000.00	300.00	6,300.00	
1	Computer Programmer		4			14,400.00	7,920.00	22,320.00	
2	Total Number Other Personnel							Total Other Personnel Costs	28,620.00
Total Direct Labor Costs (Salary, Wages, Fringe Benefits) (A+B)									36,085.00

PI Name : Gregory Bothun		NASA Proposal Number	
Organization Name : University Of Oregon, Eugene		TBD on Submit	
Proposal Title : Oregon Climate Literacy Education Initiative			
SECTION X - Budget			
Start Date : 11 / 01 / 2010	End Date : 10 / 31 / 2011	Budget Type : Project	Budget Period : 1
C. Direct Costs - Equipment			
Item No.	Equipment Item Description	Funds Requested (\$)	
1	laptop computer/data projector/storage media	3,000.00	
2	internet weather stations for participating schools	2,500.00	
Total Equipment Costs		5,500.00	
D. Direct Costs - Travel			
			Funds Requested (\$)
1. Domestic Travel (Including Canada, Mexico, and U.S. Possessions)			3,000.00
2. Foreign Travel			0.00
Total Travel Costs			3,000.00
E. Direct Costs - Participant/Trainee Support Costs			
			Funds Requested (\$)
1. Tuition/Fees/Health Insurance			9,600.00
2. Stipends			24,000.00
3. Travel			0.00
4. Subsistence			0.00
Number of Participants/Trainees: 16		Total Participant/Trainee Support Costs	33,600.00

PI Name : Gregory Bothun		NASA Proposal Number	
Organization Name : University Of Oregon, Eugene		TBD on Submit	
Proposal Title : Oregon Climate Literacy Education Initiative			
SECTION X - Budget			
Start Date : 11 / 01 / 2010	End Date : 10 / 31 / 2011	Budget Type : Project	Budget Period : 1
F. Other Direct Costs			
			Funds Requested (\$)
1. Materials and Supplies			200.00
2. Publication Costs			0.00
3. Consultant Services			0.00
4. ADP/Computer Services			0.00
5. Subawards/Consortium/Contractual Costs			18,000.00
6. Equipment or Facility Rental/User Fees			0.00
7. Alterations and Renovations			0.00
Total Other Direct Costs			18,200.00
G. Total Direct Costs			
			Funds Requested (\$)
Total Direct Costs (A+B+C+D+E+F)			96,385.00
H. Indirect Costs			
	Indirect Cost Rate (%)	Indirect Cost Base (\$)	Funds Requested (\$)
Senior Personnel Salaries + Fringe	29.00	7,465.00	2,165.00
Other Salaries	29.00	28,620.00	8,300.00
Travel	29.00	3,000.00	870.00
Equipment	29.00	5,500.00	1,585.00
Subcontract to Pacific University	29.00	18,000.00	5,220.00
Materials and Supplies	29.00	200.00	58.00
Cognizant Federal Agency: None	Total Indirect Costs		18,198.00
I. Direct and Indirect Costs			
			Funds Requested (\$)
Total Direct and Indirect Costs (G+H)			114,583.00
J. Fee			
			Funds Requested (\$)
Fee			0.00
K. Total Cost			
			Funds Requested (\$)
Total Cost with Fee (I+J)			114,583.00

PI Name : Gregory Bothun						NASA Proposal Number			
Organization Name : University Of Oregon, Eugene						TBD on Submit			
Proposal Title : Oregon Climate Literacy Education Initiative									
SECTION X - Budget									
Start Date : 11 / 01 / 2011		End Date : 10 / 31 / 2012		Budget Type : Project		Budget Period : 2			
A. Direct Labor - Key Personnel									
Name		Project Role	Base Salary (\$)	Cal. Months	Acad. Months	Summ. Months	Requested Salary (\$)	Fringe Benefits (\$)	Funds Requested (\$)
Bothun, Gregory		PI	11,310.00			.5	5,655.00	1,810.00	7,465.00
Total Key Personnel Costs									7,465.00
B. Direct Labor - Other Personnel									
Number of Personnel	Project Role		Cal. Months	Acad. Months	Summ. Months	Requested Salary (\$)	Fringe Benefits (\$)	Funds Requested (\$)	
1	Undergraduate Students		12			6,000.00	300.00	6,300.00	
1	Computer Programmer		4			14,400.00	7,920.00	22,320.00	
2	Total Number Other Personnel							Total Other Personnel Costs	28,620.00
Total Direct Labor Costs (Salary, Wages, Fringe Benefits) (A+B)									36,085.00

PI Name : Gregory Bothun		NASA Proposal Number	
Organization Name : University Of Oregon, Eugene		TBD on Submit	
Proposal Title : Oregon Climate Literacy Education Initiative			
SECTION X - Budget			
Start Date : 11 / 01 / 2011	End Date : 10 / 31 / 2012	Budget Type : Project	Budget Period : 2
C. Direct Costs - Equipment			
Item No.	Equipment Item Description		Funds Requested (\$)
	Total Equipment Costs		0.00
D. Direct Costs - Travel			
			Funds Requested (\$)
1.	Domestic Travel (Including Canada, Mexico, and U.S. Possessions)		3,000.00
2.	Foreign Travel		0.00
	Total Travel Costs		3,000.00
E. Direct Costs - Participant/Trainee Support Costs			
			Funds Requested (\$)
1.	Tuition/Fees/Health Insurance		9,600.00
2.	Stipends		24,000.00
3.	Travel		0.00
4.	Subsistence		0.00
Number of Participants/Trainees: 16		Total Participant/Trainee Support Costs	33,600.00

PI Name : Gregory Bothun		NASA Proposal Number	
Organization Name : University Of Oregon, Eugene		TBD on Submit	
Proposal Title : Oregon Climate Literacy Education Initiative			
SECTION X - Budget			
Start Date : 11 / 01 / 2011	End Date : 10 / 31 / 2012	Budget Type : Project	Budget Period : 2
F. Other Direct Costs			
			Funds Requested (\$)
1. Materials and Supplies			200.00
2. Publication Costs			0.00
3. Consultant Services			4,000.00
4. ADP/Computer Services			0.00
5. Subawards/Consortium/Contractual Costs			18,000.00
6. Equipment or Facility Rental/User Fees			0.00
7. Alterations and Renovations			0.00
Total Other Direct Costs			22,200.00
G. Total Direct Costs			
			Funds Requested (\$)
Total Direct Costs (A+B+C+D+E+F)			94,885.00
H. Indirect Costs			
	Indirect Cost Rate (%)	Indirect Cost Base (\$)	Funds Requested (\$)
Senior Personnel Salaries + Fringe	29.00	7,465.00	2,165.00
Subcontract to Pacific University	29.00	18,000.00	5,220.00
Travel	29.00	3,000.00	870.00
Materials and Supplies	29.00	200.00	58.00
Consultan Services for Evaluation	29.00	4,000.00	1,160.00
Other Salaries	29.00	28,620.00	8,300.00
Cognizant Federal Agency: None		Total Indirect Costs	17,773.00
I. Direct and Indirect Costs			
			Funds Requested (\$)
Total Direct and Indirect Costs (G+H)			112,658.00
J. Fee			
			Funds Requested (\$)
Fee			0.00
K. Total Cost			
			Funds Requested (\$)
Total Cost with Fee (I+J)			112,658.00

PI Name : Gregory Bothun						NASA Proposal Number			
Organization Name : University Of Oregon, Eugene						TBD on Submit			
Proposal Title : Oregon Climate Literacy Education Initiative									
SECTION X - Budget									
Start Date : 11 / 01 / 2012		End Date : 10 / 31 / 2013		Budget Type : Project		Budget Period : 3			
A. Direct Labor - Key Personnel									
Name		Project Role	Base Salary (\$)	Cal. Months	Acad. Months	Summ. Months	Requested Salary (\$)	Fringe Benefits (\$)	Funds Requested (\$)
Bothun, Gregory		PI	11,310.00			.5	5,655.00	1,810.00	7,465.00
Total Key Personnel Costs									7,465.00
B. Direct Labor - Other Personnel									
Number of Personnel	Project Role		Cal. Months	Acad. Months	Summ. Months	Requested Salary (\$)	Fringe Benefits (\$)	Funds Requested (\$)	
1	Undergraduate Students		12			6,000.00	300.00	6,300.00	
1	Computer Programmer		4			14,400.00	7,920.00	22,320.00	
2	Total Number Other Personnel							Total Other Personnel Costs	28,620.00
Total Direct Labor Costs (Salary, Wages, Fringe Benefits) (A+B)									36,085.00

PI Name : Gregory Bothun			NASA Proposal Number	
Organization Name : University Of Oregon, Eugene			TBD on Submit	
Proposal Title : Oregon Climate Literacy Education Initiative				
SECTION X - Budget				
Start Date : 11 / 01 / 2012		End Date : 10 / 31 / 2013		Budget Type : Project
				Budget Period : 3
C. Direct Costs - Equipment				
Item No.	Equipment Item Description			Funds Requested (\$)
Total Equipment Costs				0.00
D. Direct Costs - Travel				
				Funds Requested (\$)
1. Domestic Travel (Including Canada, Mexico, and U.S. Possessions)				3,000.00
2. Foreign Travel				0.00
Total Travel Costs				3,000.00
E. Direct Costs - Participant/Trainee Support Costs				
				Funds Requested (\$)
1. Tuition/Fees/Health Insurance				9,600.00
2. Stipends				24,000.00
3. Travel				0.00
4. Subsistence				0.00
Number of Participants/Trainees: 16			Total Participant/Trainee Support Costs	
			33,600.00	

PI Name : Gregory Bothun		NASA Proposal Number	
Organization Name : University Of Oregon, Eugene		TBD on Submit	
Proposal Title : Oregon Climate Literacy Education Initiative			
SECTION X - Budget			
Start Date : 11 / 01 / 2012	End Date : 10 / 31 / 2013	Budget Type : Project	Budget Period : 3
F. Other Direct Costs			
			Funds Requested (\$)
1. Materials and Supplies			200.00
2. Publication Costs			4,000.00
3. Consultant Services			8,000.00
4. ADP/Computer Services			0.00
5. Subawards/Consortium/Contractual Costs			18,000.00
6. Equipment or Facility Rental/User Fees			0.00
7. Alterations and Renovations			0.00
Total Other Direct Costs			30,200.00
G. Total Direct Costs			
			Funds Requested (\$)
Total Direct Costs (A+B+C+D+E+F)			102,885.00
H. Indirect Costs			
	Indirect Cost Rate (%)	Indirect Cost Base (\$)	Funds Requested (\$)
Materials and Supplies	29.00	200.00	58.00
Subcontract to Pacific University	29.00	18,000.00	5,220.00
Travel	29.00	3,000.00	870.00
Other Salaries	29.00	28,620.00	8,300.00
Publication Costs	29.00	4,000.00	1,160.00
Consultant Services for Evaluation	29.00	8,000.00	2,320.00
Senior Personnel Salaries + Fringe	29.00	7,465.00	2,165.00
Cognizant Federal Agency: None		Total Indirect Costs	20,093.00
I. Direct and Indirect Costs			
			Funds Requested (\$)
Total Direct and Indirect Costs (G+H)			122,978.00
J. Fee			
			Funds Requested (\$)
Fee			0.00
K. Total Cost			
			Funds Requested (\$)
Total Cost with Fee (I+J)			122,978.00