The University of Texas
Rio Grande Valley
College of Sciences

March 29, 2023

Ashley Stewart, Coordinator, Administrative Services
School of Natural Resources and the Environment
University of Arizona
ENR2-Room N327
1064 E. Lowell Street
Tuscon, AZ 85721
Email: akstewart@email.arizona.edu

Re: New CESU Partnership Application, Desert Southwest

Ms. Stewart and Members of the Desert Southwest CESU:

Please consider this formal letter of interest from the University of Texas Rio Grande Valley (UTRGV) to apply for enrollment as a Nonfederal partner institution in the Desert Southwest Cooperative Ecosystem Studies Unit (DS-CESU). I, along with administrators on the UTRGV campus have read the CESU agreement and agree to support the CESU mission and goals and fulfill the roles and responsibilities of nonfederal partner. As the objectives of the DS-CESU are to provide collaborative research, education, and technical assistance in addressing desert ecosystem resource issues at local, regional, national, and international levels and place special emphasis on collaboration among partners, e.g. tribal, federal, and partner institutions such as universities, state and local government entities, and non-government organizations (NGOs), UTRGV is prepared to be an active and productive partner within this unit.

UTRGV, established in 2015 is a member of the University of Texas system and one of the largest Hispanic Serving Institutions in the USA. We are accredited by the SACS Commission on Colleges to award associate, baccalaureate, post-baccalaureate, masters and doctorate degrees across 13 Colleges and Schools. In 2021-22 we had an enrollment of 31,939 students. UTRGV currently has a designation as a Carnegie R-2 Doctoral University.

UTRGV could provide significant contribution to the DS-CESU in several areas. I anticipate the primary initial focus would be through the previous collaborations of myself with the USFWS Springsnail working group and state agencies in Utah, Nevada, and Arizona. But other areas of potential collaboration could include but are not limited to:

Renewable Natural Resources and Conservation Management

- Conserving biodiversity
- Landscape ecology and maintenance of connectivity
- Restoration ecology

Department of Biology

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- Ecological disturbances, especially fire and invasive species
- Sustainable water use and development
- Water quality
- Threatened and endangered species
- Sky Islands and landscape change
- Riparian ecosystem resources
- Environmental Flows

Cultural Resources

- Cultural landscape documentation and conservation
- Climate change impacts at archeological sites
- Historic archaeology
- Material science and cultural resource conservation
- Cultural resource planning
- Archival science

Climate Change, Ecosystem Goods and Services, and Education

- Climate change impacts
- Sustainability
- Benefits of Ecosystems Services
- Public Outreach and Education

Included with this letter is the Application and all supporting documentation required for application for enrollment in the DS-CESU. If any existing partner desires additional information, please do not hesitate to contact me. It would help built a strong collaborative partnership if UTRGV were selected for membership into the DS-CESU.

Sincerely,

Kathryn E. Perez, Ph.D.
Department of Biology
The University of Texas Rio Grande Valley
1201 W. University Dr.
Edinburg, TX 78539
Office (956) 665-7145
Kathryn.perez@utrgv.edu

APPLICATION TO
DESERT SOUTHWEST COOPERATIVE ECOSYSTEM STUDIES UNIT

ORGANIZATION: University of Texas Rio Grande Valley (UTRGV)

Administrative / Grants Representative
Yvette Espindola
Interim Director of Sponsored Programs
1201 W. University Drive
Edinburg, TX 78539-2909
Phone: 956-665-5008
Email: yvette.espindola@utrgv.edu

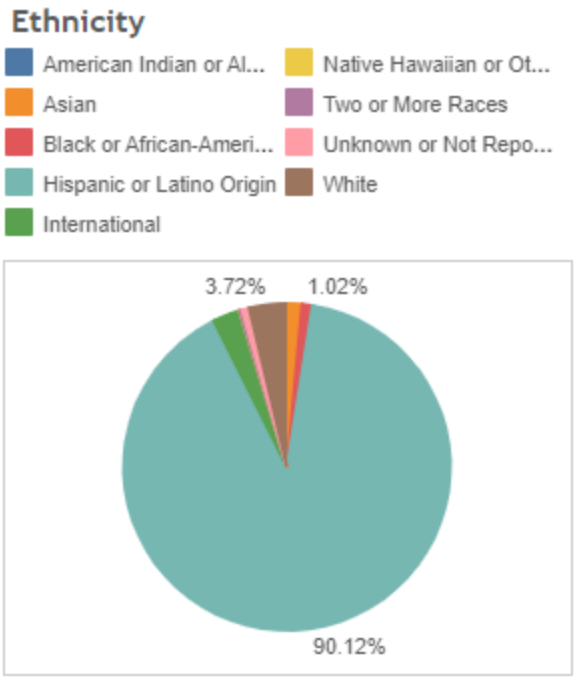
Technical Representative
Dr. Kathryn Perez
Associate Professor, Biology
1201 W. University Drive
Edinburg, TX 78539-2909
Phone: 956-665-3537
Email: kathyrn.perez@utrgv.edu

MISSION: To transform the Rio Grande Valley, the Americas, and the world through an innovative and accessible educational environment that promotes student success, research, creative works, health and well-being, community engagement, sustainable development, and commercialization of university discoveries.

Student success is at the core of UTRGV's mission and informs our core priorities and strategic initiatives. As one of the largest Hispanic-Serving Institutions in the United States, UTRGV is in a unique position to create models of higher education that best serve Hispanic Students. The University strives to prepare and empower students to thrive in a rigorous academic environment, to contribute to the global economy and to become community, education, health, and industry leaders. UTRGV's distributed nature and location on the border with Mexico increase access to opportunities in a region that has historically had limited access to higher education. Its student population is largely Hispanic and first-generation. Many students also come from bilingual or Spanish-speaking households, and lower-income families. Approximately 62% of undergraduate students are Pell-eligible.

STUDENT DEMOGRAPHICS:

UTRGV had approximately 30,000 students enrolled in Fall 2021 and slight decrease in enrollment in Spring 2022 to 29,041 student. The majority of UTRGV's student population is primarily undergraduate students. The University is a primarily Minority Serving Institution and has been designated by U.S. Department of Education as a Hispanic Serving Institution. UTRGV's student population is approximately 90% Hispanics which are primarily from the local Rio Grande Valley. A screenshot of the student enrollment for the Fall 2021 and Spring 2022 is included below.



Student Enrollment – Fall and Spring 2022

	Fall	Spring
Grand Total	32,227	29,041
Lower Level Undergraduate	10,762	8,394
Upper Level Undergraduate	16,117	15,570
Masters	4,700	4,672
Doctoral	426	405
Medical	222	

Most students are currently enrolled in undergraduate programs and the College of Liberal Arts has the largest number of students enrolled, with an amount of 6,630 in the past Spring semester. However, the Biology Department has the largest enrollment of students.

PRIMARY PROGRAMS:

Biology, Chemistry, Center for Vector Borne Diseases, School of Earth Environment & Marine Science, Sustainable Agriculture & Rural Advancement (SARA)

FACULTY/STAFF:

FACULTY/STAFF	AREA OF RELEVANCE
Dirrigl, Frank	Environmental Biology and Land Use Ecology. Rare Species Biology and Conservation. Comparative Vertebrate Osteology and Taphonomy
Feria Arroyo, Teresa	Biogeography, Ecology, Conservation
Berg, Karl S.	Ornithology, Behavioral Ecology, Acoustic Communication, Evolutionary Developmental Psychobiology, Conservation Biology
Perez, Kathryn	Systematics, Taxonomy, Malacology, Biogeography, Ecology, Biology Education Research
Pruitt, Kenneth	Bird and Mammal Ecology and Conservation
Soti, Pushpa	Soil Ecology
Taylor, Christopher	Aquatic Ecology, Ichthyology, Biogeography, Conversation
Zaidan, Fred	Bioenergetics, Digestive Physiology, Geographic Range Limiting Factors, Herpetology, Physiological Ecology, Reproductive Hormone Cycles, Snake Ecology

FACILITIES AND EQUIPMENT: Dr. Perez Lab

- BioRad Thermalcycler
- Electrophoresis equipment – mini, midi, and large horizontal submarine.
- PCR hood
- Fume hood
- Refrigerator and Freezer for materials storage
- -80 freezer
- Centrifuges (Eppendorf, 5424, refrigerated; ~10 various sizes including 8-strips and plates).
- Balance
- Stir plates
- Heat block
- Incubator
- Pipettors, tips, glassware, and plastics for molecular biology.
- Qubit
- Vials, jars, labels, and other curatorial supplies for collections storage of wet and dry specimens.
- Dissection equipment
- 3 Cal. Academy format snail museum cabinets for active projects.
- Vials, jars, labels, and other curatorial supplies for collections storage of wet and dry specimens.
- 3 Nikon dissection microscopes
- 2 olympus microscopes, 1 dissection and 1 compound.

- Desktop computers and printer for general research, analysis, and writing activities for students.
- Software relevant to phylogenetics and taxonomy

Molecular Core Facility (Edinburg) contains:

- BioRad ChemiDoc MP Imaging System for agarose gel analyses
- QPCR
- 96 well and 384 well Thermal cyclers
- Nanodrop
- Reverse Osmosis filtration system
- Agilent BioAnalyzer

Microscopy Core facilities contains:

- Benchtop SEM – Nanoimages, SNE4500M
- EVO® LS10 Scanning Electron Microscope
- Critical point dryer
  Desk II Denton Vacuum Cold Sputter

Collections Core facility contains:

- Desktop and laptop computer.
- Leica S9i, ringlight, and associated desktop computer.
- 8 cabinets for storage of snail wet and dry specimens.
- ~50 cabinets for storage of vertebrate skins and bone specimens.
- Vials, jars, labels, and other curatorial supplies for collections storage of wet and dry specimens.

Field Storage facility:

- Field collections equipment such as boots, waders, whirlpacks, backpacks, storage jars.
- Hess samplers, dip nets, drift nets, bottle traps,
- Bou-rouch sampling equipment
- Disinfection materials

EXPERIENCE:

Schwartz, B.F. (PI), **K.E. Perez** (Co-PI), B.T. Hutchins (Co-PI), P. Diaz (Co-PI). 2019-2022. Conservation status evaluation of Trans-Pecos SGCN groundwater-dependent invertebrates. USFWS – State Wildlife Grant. Total grant $390,194; UTRGV subaward: $91,891.

Perez, K.E. (PI), N. Barr. 2018-19. Molecular Identification of Invasive Veronicellid Slugs. USDA Farm Bill. $58,171.

Perez, K.E. (PI), J. Nekola (coPI). 2016-2018. Status assessments and revision of the Species of Greatest Conservation Need (SGCN) List for Texan Terrestrial Gastropods (Mollusca: Gastropoda: Pulmonata). USFWS – State Wildlife Grant. $148,957.

Perez, K.E. 2016-2018. What is the common, abundant *Oxyloma* species along the Potomac River? George Washington Memorial Parkway, National Park Service, $19,700.

Perez, K.E. 2014. Land snail survey of Effigy Mounds State Park. United States Fish and Wildlife Service. $15,000.

M. Kuchta, **K.E**. **Perez,** T. Hyde, A. Little. 2010. Wisconsin land snail database and status surveys in the Driftless area. USFWS - State Wildlife Grants. $ 30,000.

Perez, K.E., T. Hyde, M. Kuchta, J. Theler, J. Nekola, A. Little. 2009. Wisconsin land snail database and status surveys in the Driftless area. USFWS - State Wildlife Grants $57,348.

FEDERAL RELATIONSHIPS: UTRGV currently has secured competitive grants from the U.S Department of Agriculture, U.S. Department of Defense, U.S. Department of Interior and, U.S. Fish and Wildlife Services totaling more than $12 million.

INDIRECT COST RATE: Please see the attached letter of support from Dr. Can (John) Saygin, PhD, Senior Vice President for Research.

The University of Texas Rio Grande Valley
Research

22-23:1116

March 30, 2023

Desert Southwest CESU
1849 C. Street, NW, Room 2649
Washington, DC 20240

RE: Indirect Cost Rate restriction

On behalf of the University of Texas Rio Grande Valley, I approve and support the engagement and participation in the Desert Southwest Cooperative Ecosystem Studies Unit Cooperative and Joint Venture Agreement for Dr. Kathryn Perez. I also agree to the 17.5% Indirect Cost Rate restriction specified by the Consortium.

Authorized by:

DocuSigned by:
Can Saygin
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Can (John) Saygin, PhD
Senior Vice President for Research
Dean of the Graduate College

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April 6, 2023

Ashley Stewart, Program Coordinator
Desert Southwest Cooperative Ecosystem Studies Unit
1064 E. Lowell Street Room N327
Tucson, Arizona 85721

Dear Ms. Stewart,

The Arizona Game and Fish Department (Department) has allocated State Wildlife Grant federal funds to support research on springsnail identification. In recent years, three undescribed species of *Pyrgulopsis* springsnails (family Hydrobiidae) were discovered among different watersheds in Arizona. The Department would like to collaborate with Dr. Kathryn Perez at the University of Texas Rio Grande Valley (UTRGV) to formally describe these species using both genetic and morphological examination. The results of this research will be published in peer-reviewed scientific literature to help inform natural resource managers on the status and distribution of these species and future management needs. The Department intends to pass through State Wildlife Grant funding to UTRGV to support Dr. Perez in this research. The Department would like to use the Desert Southwest Cooperative Ecosystem Studies Unit Cooperative and Joint Venture Agreement (CESU) as the overarching agreement to conduct this research with federal and university partners.

UTRGV would like to join the Desert Southwest CESU as a partner to participate in this research project and future research collaborations with the Department and other CESU partners. The U.S. Fish and Wildlife Service is supportive of UTRGV of requesting to join the Desert Southwest CESU. Dr. Perez and UTRGV have previously worked on federally funded research projects for mollusks with the Gulf Coast CESU—investigating a land snail from the George Washington Memorial Parkway. This previous work resulted in a report to the National Park Service and peer-reviewed publication clarifying the taxonomy of some *Oxyloma* (family Succineidae) species.

If you require further assistance or have any questions, please contact me at jsorensen@azgfd.gov or by mobile 480-243-5496.

Sincerely,

Jeff Sorensen
Invertebrate Wildlife Program Manager