

Contract Number

211168

CFDA Number

15.615

THE STATE OF TEXAS

INTERAGENCY COOPERATION CONTRACT

COUNTY OF TRAVIS

This Contract is entered into by and between the State agencies shown below as Contracting Parties, pursuant to the authority granted and in compliance with the provisions of "The Interagency Cooperation Act", Chapter 771 of the Texas Government Code.

I. CONTRACTING PARTIES:

The Receiving Agency: Texas Parks and Wildlife Department (TPWD)

The Performing Agency: Sam Houston State University (SHSU)

II. STATEMENT OF SERVICES TO BE PERFORMED:

SHSU shall (1) assess the current conservation status of the endangered Comanche Springs pupfish and Pecos gambusia in the ciénegas at Balmorhea State Park, Texas, (2) assess the value of restored critical habitats for the conservation of these taxa, and (3) establish ecosystem-based management and conservation strategies for endemic taxa of desert ciénegas; over three seasons. SHSU shall perform all tasks necessary to meet the objectives and complete the project as set out in Attachment A.

All publications arising from this research shall acknowledge TPWD, as well as Cooperative Endangered Species Funds (Section 6), or such fund as may supersede it in funding this project.

All data and analyses resulting from this project, and all information regarding the occurrences of Comanche Springs pupfish (*Cyprinodon elegans*) and Pecos gambusia (*Gambusia nobilis*) related to this project, becomes the property of TPWD, and will be presented to TPWD in an electronic format determined by TPWD upon request, and not later than due date of Final Report.

With respect to such Intellectual Property as is (i) incorporated in the Work, or (ii) produced by SHSU or SHSU employees, subcontractors, or subcontractor's employees during the course of performing the Work, SHSU hereby grants to TPWD a nonexclusive, perpetual, irrevocable, enterprise-wide license to use, copy, publish, and modify such Intellectual Property, and allow others to do so for TPWD purposes. SHSU shall secure all necessary intellectual property licenses from third parties and warrants that the Work and the intended use of the Work will not infringe any property rights of any third party.

Landowner Permission: In accordance with 12.103 of the Texas Parks and Wildlife Code, SHSU acknowledges that any work to be performed on private lands in Texas using these funds requires that grantees secure written permission from the private landowner(s) for the purposes of (i) access to the land, and (ii) use of data collected on that land. As such the Landowner Permission for Wildlife Research Form, is attached hereto as Attachment B, and is incorporated herein for all purposes.

Equipment and supplies purchased under this Agreement shall be used, managed, and disposed of in accordance with the Texas Uniform Grant Management Standards.

SHSU shall submit following guidelines provided by TPWD (1) **Interim Performance Reports on or before 30 September 2010 and 2011**, and (2) **a Final Report on or before 30 September 2012**. The Reports shall then be forwarded to U. S. Fish and Wildlife Service (USFWS, Austin) for review and comments. TPWD will send revisions requested by USFWS, Austin, to the Principal Investigator for SHSU, who shall respond to TPWD in writing within sixty (60) days of receipt of revision request.

III. BASIS FOR CALCULATING REIMBURSABLE COSTS:

See Estimated Cost in Attachment A for details.

Funds must be directed to completing tasks outlined in Attachment A to qualify for reimbursement.

For payment purposes, the Performing Agency (agency receiving payment) shall submit to the Receiving Agency (agency making payment) an invoice with the Performing Agency's RTI (for funds transfer at the Treasury) or a Purchase Voucher (for deposit in local bank account). The Receiving Agency will enter payment information into USAS.

Expenditures for travel and travel-related expenses will be reimbursed at the official rate authorized by the State of Texas.

The performing agency may make adjustments up to 5% within cost categories without prior approval from TPWD, provided that the total reimbursable costs do not exceed total federal share costs.

IV. CONTRACT AMOUNT:

The total amount of this Contract shall not exceed: Twenty Eight Thousand Four Hundred Eighty Two Dollars (\$28,482.00).

V. PAYMENT FOR SERVICES:

Receiving Agency shall pay for services received from appropriation items or accounts of the Receiving Agency from which like expenditures would normally be paid, based upon vouchers drawn by the Receiving Agency payable to Performing Agency.

The cost of materials and supplies should be charged at their actual prices. Proper documentation is required for reimbursement

Payments received by the Performing Agency shall be credited to its current appropriation item(s) or account(s) from which the expenditures of that character were originally made.

Budgeted monies not spent in a given fiscal year may be eligible to be rolled over to the following fiscal year(s).

Any excess costs from one awarded TPWD contract cannot be submitted for reimbursement against another TPWD contract.

Reimbursements are conditioned on the Contract activities being performed in compliance with the Contract.

\$5,696.40, which is twenty percent (20%) of total Federal Share funds, will be held until receipt and acceptance of final report by TPWD.

VI. INVOICING:

Payments for service performed shall be billed: Monthly.

VOUCHERS WILL BE SENT TO:
Dr. C. Craig Farquhar
Wildlife Division
Texas Parks and Wildlife Department
4200 Smith School Road
Austin, Texas 78744

Invoices shall include details of work completed during the invoiced period. Backup documentation must be submitted for both the contract expenses incurred and the match amounts. Cost share must be

documented on each invoice. A sample Invoice with match documentation is attached hereto as Attachment C.

If the invoice or backup documentation is not complete it will delay the processing of your invoice.

Invoices must include costs incurred from within a single state fiscal year (beginning 1 September, ending 31 August). Invoices containing costs from more than one state fiscal year will not be paid.

The entire match amount must be obligated by the end of the period of performance or the performing agency risks a proportionate reduction in the amount of federal funds awarded under this Contract. If Performing Agency does not meet the match requirement of this agreement, the amount of federal funds to be disbursed will be proportionately lowered or, if already disbursed, a refund of federal funds will be required.

All invoices and reports must be received within 60 days of end of each fiscal year or termination of contract. Invoices not received within this time frame may not be paid.

VII. CONTRACT CONTACT INFORMATION

TPWD Project Coordinator
Luci Cook-Hildreth
Natural Resources Specialist
Texas Parks and Wildlife Department
4200 Smith School Road
Austin, Texas 78744
512-389-8750
Luci.cook-hildreth@tpwd.state.tx.us

TPWD Contract Point of Contact
Tammy Dunham, CTPM, CTCM
Contract Specialist
Texas Parks and Wildlife Department
4200 Smith School Road
Austin, Texas 78744
512-389-4752 office
tammy.dunham@tpwd.state.tx.us

SHSU PI Name & Contact Info
Dr. Chad Hargrave
Department of Biological Sciences
Sam Houston State University
Huntsville, TX 77341
CWH005@SHSU.EDU

SHSU Contract Point of Contact
Denise Ballard
Contract Administrator
Box 2392
Huntsville, Tx 77341-2392
936-294-3833
dballard@shsu.edu

VII. TERM OF CONTRACT:

This Contract is to begin upon date of signature by both parties, and
shall terminate 28 February 2013.

An extension to this contract may be granted with prior written approval by TPWD.

This contract is subject to cancellation, without penalty, either in whole or in part, if funds are not appropriated by the Texas Legislature, or otherwise made available, to TPWD.

VIII. GENERAL TERMS AND CONDITIONS:

Definitions: As used throughout this contract, the following terms shall have the meaning set forth below:

- A. Capitalized Property is real or personal property that have an estimated life of greater than one year. A capital asset has a value equal to or greater than the capitalization threshold established for that asset type. In accordance with State Property Accounting (SPA) regulations
- B. Controlled Property is a capital asset that has a value less than the capitalization threshold established for that asset type, however due to its high-risk threshold, is required to be reported to SPA. The

Comptrollers controlled assets list can be found online at:
<https://fmxcpa.state.tx.us/fmx/spa/classclosed/control.php>.

C. **Contractor** shall mean that firm, provider, organization, individual or other entity performing service(s) under this contract, and shall include all employees of the Performing Agency.

Abandonment or Default: If the contractor defaults on the contract, TPWD reserves the right to cancel this Contract without notice. The defaulting contractor will not be considered in the re-solicitation and may not be considered in future solicitations for the same type of work, unless the specification or scope of work significantly changed. The period of suspension will be determined by the agency based on the seriousness of the default.

Amendments: This Contract may be amended by mutual agreement of the parties. Such amendments shall not be binding unless they are in writing and signed by personnel authorized to bind each of the parties.

Audit: Performing Agency understands that acceptance of funds under this contract acts as acceptance of the authority of the State Auditor's Office, TPWD or any successor agency, to conduct an audit or investigation in connection with those funds. Performing Agency further agrees to cooperate fully with the above parties in the conduct of the audit or investigation, including providing access to any information the state auditor considers relevant to the investigation or audit. Performing Agency shall ensure that this clause concerning the authority to audit funds received indirectly by subcontractors through the Performing Agency and the requirement to cooperate is included in any subcontract it awards.

Disallowed Costs: The Performing Agency is responsible for any audit exceptions or disallowed costs incurred by its own organization or that of its Subcontractors.

Dispute Resolution: Any disputes arising from this agreement shall be resolved using Chapter 2260 of the Texas Government Code

TPWD may avail itself of any remedy or sanction provided in this Contract or in law to recover any losses arising from or caused by Performing Agency's substandard performance or any non-conformity with this Contract or the law.

Performing Agency shall carry on the Contract Activities and adhere to the progress schedule during all disputes or disagreements with TPWD unless ordered to stop the Contract Activities. No Contract Activities shall be delayed or postponed pending resolution of any disputes or disagreements.

Neither payment by TPWD nor any other act or omission other than an explicit written release constitutes a release of Performing Agency from liability for losses under this Contract.

Non-discrimination: The undersigned is subject to Title VI of the Civil Rights Act of 1964, Section 504 or Rehabilitation Act of 1973, Title II of the Americans with disabilities Act of 1990, the Age Discrimination Act of 1975, Title IX of the Education Amendments of 1972, and offers all persons the opportunity to participate in programs or activities regardless of race, color, national origin, age, sex or disability. Further, it is agreed that no individual will be turned away or otherwise denied access to or benefit from any program or activity that is directly associated with a program on the basis of race, color national origin, age, and sex (in educational activities) or disability. The prime contractor shall ensure that this clause is included in all subcontracts.

Proprietary or Confidential Information: Contractor will not disclose any information to which it is privy under this Contract without the prior consent of the agency. Contract will indemnify and hold harmless the State of Texas, its officers and employees, and TPWD, its officers and employees for any claims or damages that arise from the disclosure by Contractor or its contractors of information held by the State of Texas.

Public Disclosure: Information, documentation and other material in connection with this contract may be subject to public disclosure pursuant to Chapter 552 of the Texas Government Code ("the Public

Information Act"). No public disclosures or news releases pertaining to this contract shall be made without prior written approval of TPWD.

Termination: This Contract shall terminate upon full performance of all requirements contained in this Contract, unless otherwise extended or renewed as provided in accordance with the contract terms and conditions.

Termination for Default: TPWD may, by written notice of default to the contractor, terminate this Contract, in whole or in part, for cause if the contractor fails to perform in full compliance with the contract requirements, through no fault of TPWD. TPWD will provide a thirty (30) day written notice of termination to the contractor of intent to terminate, and TPWD will provide the contractor with an opportunity for consultation with TPWD prior to termination.

Upon receipt of written notice to terminate, the contractor shall promptly discontinue all services affected (unless the notice directs otherwise) and shall deliver or otherwise make available to TPWD, all data, drawings, specifications, reports, estimates, summaries, and such other information and materials as may have been accumulated by the contractor in performing this Contract, whether completed or in process

Other Law: Performing Agency understands and agrees that by accepting money for services under this Contract, it will comply with all federal laws and regulations related to grants of federal funds under this Contract. As part of this agreement, Performing Agency will make the necessary certifications and agreements required, including but not limited to federal assurances, Attachments B and C.

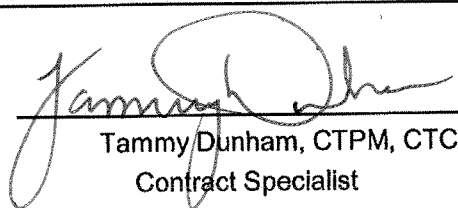
The undersigned contracting parties do hereby certify that, (1) the services specified above are necessary and essential for activities that are properly within the statutory functions and programs of the effected agencies of State Government, (2) the proposed arrangements serve the interest of efficient and economical administration of the State Government, and (3) the services, supplies or materials contracted for are not required by Section 21 of Article 16 of the Constitution of Texas to be supplied under contract given to the lowest responsible bidder.

PERFORMING AGENCY

RECEIVING AGENCY

TEXAS PARKS AND WILDLIFE DEPARTMENT

By:



Tammy Dunham, CTPM, CTCM
Contract Specialist

Date:

10/12/09

SAM HOUSTON STATE UNIVERSITY

By:



Dan G. Davis
Associate Vice President, Research
Administration

Date:

10/9/09

Title

ATTACHMENT A

Conservation Status of Comanche Springs pupfish (*Cyprinodon elegans*) and Pecos gambusia (*Gambusia nobilis*) in the ciénegas of Balmorhea State Park, Texas

Principal Investigator: Dr. Chad Hargrave, Sam Houston State Univ., Huntsville, TX

Need: Historically, Comanche Springs pupfish (*Cyprinodon elegans*) and Pecos gambusia (*Gambusia nobilis*) inhabited two large desert wetland (ciénega) systems separated by approximately 100 km (Hubbs et al. 1981, Hubbs et al. 1983). One system was fed by the Balmorhea springs complex (Phantom Lake, San Solomon, Giffin, and East Sandia springs), and one by Comanche Springs (Fig. 1). These ciénegas and their associated springs provided valuable habitat for these two endemic fishes as well as an entire community of interacting organisms (Hendrickson and Minckley 1984). However, human alteration of the Balmorhea and Comanche spring systems for agricultural irrigation destroyed the associated wetland habitats, and none of these natural systems remain today. This endangered the persistence of Comanche Springs pupfish and Pecos gambusia (Hubbs et al. 1981, Hubbs et al. 1983).

When the original San Solomon ciénega was modified, and for the most part destroyed, the only "aquatic habitat" remaining was in concrete irrigation canals. Although better than no habitat at all, the irrigation canals, at best, provided a tenuous existence for much of the aquatic biota. The Comanche Springs pupfish and Pecos gambusia managed to survive in the irrigation canals, but their numbers were greatly reduced. As a result, these species were elevated to endangered status and conservation efforts were aimed at preventing their extinction (Hubbs et al. 1981, Hubbs et al. 1983).

In an attempt to conserve these endangered species, the Texas Parks and Wildlife Department (TPWD) restored a critical desert wetland habitat by creating the San Solomon Ciénega at Balmorhea State Park in 1996 through a cooperative effort among private, state, and federal entities. This re-creation of a desert wetland habitat within the boundaries of the original, natural ciénega provided critical habitat necessary for survival of desert wetland biota. As a result, the native fish fauna, including Comanche Springs pupfish and Pecos gambusia, have flourished, and this location now provides a natural habitat with the largest known concentration of Comanche Springs pupfish and a viable population of Pecos gambusia. It is believed that the primary benefit of the San Solomon Ciénega to the survival of these endangered fishes is the creation of a "natural" habitat with viable ecosystem-level processes that promote population stability. However, there have been no concerted monitoring efforts since 2001 and there is no information on the ecosystem dynamics of this system.

Based on the success of the San Solomon Ciénega, TPWD is now in the process of creating a second ciénega at Balmorhea State Park by replacing the small, refuge canal with a new 'natural' wetland habitat. This small refuge canal (120 m) was constructed in 1974 at Balmorhea State Park in an effort to improve habitat for the endangered species (Echelle and Hubbs 1978). During a two-year sampling study (Garrett and Price 1993), Comanche Springs pupfish population size in the park refuge canal was estimated to be as low as 968 (May 1990) and as high as 6,480 (September 1990). It is expected that the creation of a second ciénega in this spring system will further promote the successful conservation of Comanche Springs pupfish and Pecos gambusia by doubling the amount of critical habitat, restoring critical ecosystem-level processes that promote population viability.

With the completion of this second ciénega by autumn of 2009 there now exists a great opportunity to document the ecological mechanisms driving the population dynamics of fishes in these desert wetlands. Because successful species conservation not only relies on a thorough understanding of population-dynamics of the species being conserved but also of the ecosystem-level process driving populations, we propose to implement a 'whole ecosystem' conservation approach in these ciénega ecosystems. By more fully understanding both ecosystem and taxa, an efficient and effective conservation plan can be established to promote long-term viability of these endangered fishes. With the information gained from this study, we can better manage the existing ciénegas in the San Solomon spring system and have useful insights into the development and functions of the new ciénegas across desert ecosystems.

Objective: To (1) assess the current conservation status of the endangered Comanche Springs pupfish and Pecos gambusia in the ciénegas at Balmorhea State Park, Texas, (2) assess the value of restored critical habitats for the conservation of these taxa, and (3) establish ecosystem-based management and conservation strategies for

endemic taxa of desert ciénegas; over three seasons.

Expected Results and Benefits:

1. Populations

This study will provide current estimates of population densities for both Comanche Springs pupfish and Pecos gambusia in the ciénega systems (i.e., San Solomon Ciénega and the new ciénega) within Balmorhea State Park. Population density data are an essential first step in species conservation, because they provide a quantitative way to assess the potential viability of a species in a habitat. In addition, this study will produce population estimates of all other fishes in the ciénega systems. Population data, along with food web structure, will be valuable for evaluating potential competitive and/or facilitative food web interactions that might affect population viability of Comanche Springs pupfish and Pecos gambusia

2. Energy source

We will produce a quantitative evaluation of the primary sources of energy driving Comanche Springs pupfish and Pecos gambusia populations in the ciénega systems. Because population size is regulated by energy (food) availability, it is critical to understand the dominant energy pathways driving secondary production in order to establish a comprehensive conservation plan. Because food resources can originate within the aquatic ecosystem as algae or outside the aquatic ecosystem in the terrestrial landscape, understanding which energy sources drive species abundance and biomass within these ciénegas will provide valuable insight into the habitat characteristics responsible for viable populations of the endangered taxa. Moreover, we will document energy sources for all the additional species within the systems, which is necessary for detection of potentially competitive interactions among taxa that also could regulate populations of Comanche Springs pupfish and Pecos gambusia.

3. Trophic position

We will identify trophic position of Comanche Springs pupfish and Pecos gambusia in both ciénegas. These trophic data will contribute to a quantitative food web for both habitats. The trophic position of Comanche Springs pupfish and Pecos gambusia within these food webs is critical for their conservation, because population size is influenced by trophic position via several mechanisms, including energy conservation and interspecific interactions. For example, species foraging on lower trophic levels can have larger population densities because of more efficient energy transfer between trophic levels. Thus, understanding trophic position of Comanche Springs pupfish and Pecos gambusia is important for understanding potential energetic limitations to their population size. Likewise, population size often is regulated by competitive interactions. Thus, the densities of these endangered taxa probably are affected by the densities of other taxa in the habitats. Understanding these complex food web dynamics will provide valuable insight into the mechanisms driving population viability of Comanche Springs pupfish and Pecos gambusia in the ciénega systems.

4. Implications

Our proposed work will allow managers to evaluate the direct benefits of ciénega reconstruction for Comanche Springs pupfish and Pecos gambusia conservation by evaluating population dynamics in two ciénegas. In addition, and perhaps more importantly, our data also will allow managers to evaluate the indirect benefits of ciénega reconstruction by evaluating energy dynamics and food web structure in two ciénegas. The reconstruction of natural critical habitats, such as the San Solomon Ciénega, is likely to provide a diverse array of food resources needed to sustain viable populations of these desert taxa. Likewise, natural habitats promote trophic diversity within the fish community, which likely will reduce interspecific competition and promote viable populations of endangered taxa.

Approach:

We will compare population density of Comanche Springs pupfish and Pecos gambusia, and food web structure of San Solomon Ciénega to the new ciénega at three time periods: November 2009, March 2010, and July 2010. To do so, we will (1) estimate populations using the *counts on sample plots method* (Van Den Avyle 1993), and quantify food web structure using (2) stable isotope, ^{13}C and ^{15}N , signatures (Fry 2006) and (3) gut content analysis.

1. Population estimates

We will estimate population sizes (\hat{N}) and associated variance $V(\hat{N})$ for all fish species in the ciénegas using the counts on sample plots method

$$\hat{N} = \frac{A}{a} \bar{n},$$

where A = total population area (the San Solomon Ciénega or new ciénega), a = size of the plot, \bar{n} = the average number of animals counted per sample plot, and

$$V(\hat{N}) = \frac{A^2}{a} \frac{V(\bar{n})}{s} \frac{A-s \cdot a}{A},$$

where $V(\hat{N}) = \sum_{i=1}^s \frac{(n_i - \bar{n})^2}{(s-1)}$, n_i = number of animals counted in the i^{th} plot, and s = number of plots used.

To capture fishes for the population estimates, we will first block off five large sections of each habitat using five 16.7m x 2m (4.2mm mesh) seines. We will slowly pull each seine from the shoreline, and carefully collect all fishes from the net. Immediately following capture, we will transfer fishes to insulated coolers containing fresh stream water. This water will be replaced repeatedly to reduce stress and promote survival. In addition, we will keep fish at low densities (c.a. 100-200) within each cooler. We will remove individuals from the coolers with a dip net and transfer them to a small Plexiglas viewing tank marked with a 1cm grid. While the fishes are in the viewing tank, we will identify and count each species, and we will take a digital photograph of the viewing tank. Using this digital image and the 1cm grid for reference, we will measure each individual within the viewing tank in the laboratory.

We will collect a random subsample ($n = 20$) of fishes from each of the sample plots described above. This random sample will include fish from each size class in proportion to their natural abundance. For example, if 60% of fishes fall in the medium size class, we will randomly select 12 individuals from that group. In the field, we will measure and weigh wet all 20 individuals for each species. Following these measurements, we will freeze 10 individuals on dry ice for stable isotope analysis and preserve 10 individuals in 10% formalin for gut content analysis.

We will use the length and weight data collected in the field to calculate length-weight regressions for each species (Hargrave *et al.* 2006). Using these regressions, the length data from the viewing box, and the population estimates for each species, we will estimate total population biomass for each species in both habitats. This will help indicate the relative energy demands by each population between both habitats.

2. Stable Isotope Analysis

The primary carbon (energy) source and trophic position for each species in San Solomon Ciénega and the new ciénega will be determined using ^{13}C and ^{15}N isotope signatures. Ratios of $^{13}\text{C}:^{12}\text{C}$ and $^{15}\text{N}:^{14}\text{N}$ provide a time-integrated indicator of carbon source and trophic position in the food web, respectively (Fry 2006). The relative isotopic signatures among organisms in an ecosystem can be used to quantify food web structure of a community, allowing for the pathways of energy flow and food web interactions to be determined empirically (Hamilton *et al.* 1992).

We will analyze stable isotope signatures from all major components of both food webs including both aquatic and terrestrial components. Our aquatic components include fishes, aquatic invertebrates, coarse particulate organic matter (CPOM), fine particulate organic matter (FPOM), and algae, while our terrestrial component includes flying insects. We will collect fishes using the methods described above and collect aquatic invertebrates, CPOM, FPOM, and algae from 10 sample stations selected to represent the range of microhabitats within each habitat.

In addition, we will collect aquatic invertebrates from detritus using a 250 μm mesh dip net and from sediments using a core sampler. We will separate invertebrates from detritus and sediments, sort them by feeding guild (grazer, shredder, and collector-gatherer; Matthews 1998), and allow them to evacuate guts in containers with freshwater for 48 h. We will collect coarse particulate organic matter and wash off other forms of organic matter (e.g., periphyton and FPOM) using distilled water. We will collect FPOM and periphyton from sediment samples and separate algae from FPOM by centrifuging in colloidal silica (Hamilton and Lewis 1992), and filtered on glass fiber filters. From the terrestrial ecosystem, we will determine ^{13}C and ^{15}N isotope signatures for terrestrial insects. We will collect terrestrial invertebrates from 10 locations within the riparian zone of both habitats using pan traps at the water's edge and surface.

We will dry samples to a constant mass at 60 °C, and grind the dorsal muscle tissue of fishes and whole organisms in all others to a powder with a mortar and pestle. Subsamples ($n = 5$ to 10 for each ecosystem component) will be analyzed in the Stable Isotope Mass Spectrometry Laboratory at the University of Arkansas with a Thermo Finnigan

Delta Plus mass spectrometer with a CE 110 elemental analyzer and Conflow II interface in continuous flow mode (CF_IRMS). Finally, we will calculate stable isotope ratios in the standard notation expressed on a per mil (‰) basis:

$$\delta^{13}\text{C} = \left[\frac{{}^{13}\text{C}/{}^{12}\text{C}_{\text{sample}}}{{}^{13}\text{C}/{}^{12}\text{C}_{\text{standard}}} \right] - 1 \times 1000$$
$$\delta^{15}\text{N} = \left[\frac{{}^{15}\text{N}/{}^{14}\text{N}_{\text{sample}}}{{}^{15}\text{N}/{}^{14}\text{N}_{\text{standard}}} \right] - 1 \times 1000.$$

3. Gut content analysis

To evaluate the instantaneous food web structure at the time of sampling, we will analyze gut contents for 10 preserved individuals for each species from both habitats. These data, along with food availability data (collected for stable isotope analysis), will help indicate diet preference by each species in both habitats. We will remove gut contents in the upper portion of the alimentary tract and spread on a 0.8mm gridded Petri dish (Hargrave 2006). We will record percent area for each food item, which we assumed is proportional to the volume of food in the gut. We will then relate trophic position of each species to stable isotope data and use this information to build food webs.

Project Personnel:

Dr. Chad W. Hargrave
Department of Biological Sciences
Sam Houston State University
Huntsville, TX 77341
CWH005@SHSU.EDU

Dr. P. Raelynn Deaton
Department of Biological Sciences
Sam Houston State University
Huntsville, TX 77341
prd002@shsu.edu

Dr. Gary P. Garrett
HoH Fisheries Science Center
Texas Parks & Wildlife Dept.
5103 Junction Hwy
Mountain Home, TX 78058
gary.garrett@tpwd.state.tx.us

Literature Cited:

- Echelle, A. A. and C. Hubbs. 1978. Haven for endangered pupfish. Texas Parks and Wildlife Magazine June: 9-11.
- Fry, B. 2006. Stable isotope ecology. Springer, New York.
- Garrett, G. P. and A. H. Price. 1993. Comanche Springs pupfish (*Cyprinodon elegans*) status survey. Final Report, Endangered Species Act, Section 6, Project No. E-1-4. Texas Parks and Wildlife Department, Austin, Texas.
- Hamilton, S. K. and W. M. Lewis. 1992. Stable carbon and nitrogen isotopes in algae and detritus in the Orinoco River floodplain, Venezuela. *Geochimica et Cosmochimica Acta*. 56:4237-4246.
- Hamilton, S. K., Lewis, W. M. and S. J. Sippel. 1992. Energy sources for aquatic animals in the Orinoco River floodplain: evidence from stable isotopes. *Oecologia*. 89:324-330.
- Hargrave, C. W. 2006. A test of three alternative pathways for consumer regulation of primary productivity. *Oecologia*. 149:123-132.
- Hargrave, C. W., Rameriz, R., Brooks, M., Eggleton, M., Sutherland, K., Deaton, R., and H. Galbraith. 2006. Indirect food web interactions increase growth of an algivorous stream fish. *Freshwater Biology*. 51:1901-1910.

Hendrickson, D. A. and W. L. Minckley. 1984. Ciénegas - Vanishing climax communities of the American Southwest. *Desert Plants* 6:131-175.

Hubbs, C., Echelle, A.A, Contreras-Balderas, S., Hatch, M.D., Potter, F.E., Jensen, B. 1981. Recovery plan for the Comanche Springs pupfish. U.S. Fish and Wildlife Service.

Hubbs, C., Contreras-Balderas, S., Echelle, A.A., Hatch, M.D., Jensen, B.L., Potter, F.E., Hoddenback, G., McPherson, W. 1981. Recovery plan for Pecos gambusia (*Gambusia nobilis*). U.S. Fish and Wildlife Service.

Matthews, W. J. 1998. Patterns in freshwater fish ecology. Springer, New York.

Van Den Avyle. 1993. Dynamics of exploited fish populations. *In Inland Fisheries Management in North America* (Eds. Kohler, C. C. and W. A. Hubert). pp. 105-135. American Fisheries Society, Bethesda, Maryland.

Estimated Cost:

Description	Federal	Match	Total
Personnel:			
Chad W. Hargrave (1 month)	0.00	5336.00	5336.00
P. Raelynn Deaton (1 month)	0.00	5778.00	5778.00
Gary P. Garrett	0.00	0.00	0.00
Field Research Technicians (\$9 × 10 h × 12 days × 4 students)	4320.00	0.00	4320.00
Laboratory Research Technicians (\$9 × 10 h × 12 weeks × 30students)	3240.00	0.00	3240.00
Total Personnel	7560.00	11114.00	18674.00
Travel			
Chad W. Hargrave (\$36 × 12 days)	432.00	0.00	432.00
P. Raelynn Deaton (\$36 × 12 days)	432.00	0.00	432.00
Gary P. Garrett	0.00	0.00	0.00
Field Research Technicians <i>per diem</i> (\$36 × 12 days × 4 students)	1728.00	0.00	1728.00
Mileage (0.585 × 3714 miles)	2176.20	0.00	2176.20
Total Travel	4768.20	0.00	4768.20
Equipment			
Mobile laboratory	0.00	18000.00	18000.00
Coolers	200.00	0.00	200.00
Seines	2000.00	0.00	2000.00
Total Equipment	2200.00	18000.00	20200.00
Supplies			
Filters	300.00	0.00	300.00
Weighing pans	350.00	0.00	350.00
Vials	350.00	0.00	350.00
Formalin	100.00	0.00	100.00

Alcohol	300.00	0.00	300.00
Dry ice	100.00	0.00	100.00
Total Supplies	1500.00	0.00	1500.00
Other			
University of Arkansas Stable Isotope lab (\$15.00 × 500 samples)	8250.00	0.00	8250.00
Total Other	8250.00	0.00	8250.00
Fringe Benefits			
Chad W. Hargrave (32%)	0.00	1707.52	1724.48
P. Raelynn Deaton (32%)	0.00	1848.96	1848.96
Gary P. Garrett	0.00	0.00	0
Field Research Technicians (10%)	432.00	0.00	432
Laboratory Research Technicians (10%)	324.00	0.00	324
Total Fringe Benefits	756	3556.48	4312.48
Indirect Costs			
SHSU Administrative Overhead (15%)	3447.97	0	3447.97
Total Costs	28482.17	32670.48	61152.65



LANDOWNER PERMISSION FOR WILDLIFE RESEARCH

(Pursuant to Section 12.103 of the Texas Parks and Wildlife Code)

1. **Use of Information:** I hereby grant approval for Texas Parks and Wildlife Department employees to enter property I own or manage to conduct scientific investigations and research on wildlife and to record and use (such as in analyses) site-specific information from the property. This may include placing that information onto a topographic map and entering the information into a Department database. Thus, the information could be viewed by the public.

(Landowner or authorized agent)

(Date)

2. **Reporting of Information:** I hereby grant approval for Texas Parks and Wildlife Department employees to report (such as in publications or technical reports) the above approved information in a manner that permits identification of the location of the specific parcel of property I own or manage.

(Landowner or authorized agent)

(Date)

3. **Other Conditions:** List any other conditions that apply to this approval.

4. **Name and Address:**

(Name of Landowner or Authorized Agent)

(Address)

(City, State, Zip)

5. **Optional:**

(Name of Ranch or Tract)

(County)

(Acreage)

(Home Phone)

(Office Phone)

(FAX)

Texas Parks and Wildlife Department maintains the information collected through this form. With few exceptions, you are entitled to be informed about the information we collect. Under Sections 552.021 and 553.023 of the Texas Government Code, you are also entitled to receive and review the information. Under Section 559.004, you are also entitled to have this information corrected. For assistance call 512-389-4978.

Attachment C
Sample Invoice with Match (on vendor letterhead)

ADDRESS:

Send to the address of the contact

Invoice Date: MM/DD/YY

person on the contract.

Invoice #: #####

Payment amount for Performance Period: **\$5,865.00**
(Total Costs in Column B, Expenditure Categories)

RE: Contract # _____

Performance Period: **MM/DD/YY through MM/DD/YY**
(same as Performance Period in Column B)

	(A)	(B)	(C)	(D)
		Performance Period for MM/DD/YY through MM/DD/YY		
Expenditure Categories	Contract Budget		Cumulative Expenses	Balance of Budget as of MM/DD/YY
Salaries	\$10,000.00	\$2,000.00	\$2,000.00	\$8,000.00
Fringe Benefits (25%) *	\$2,500.00	\$500.00	\$500.00	\$2,000.00
Professional and Contracted Services	\$5,000.00	\$2,000.00	\$2,000.00	\$3,000.00
Travel	\$1,000.00	\$200.00	\$200.00	\$800.00
Supplies	\$2,500.00	\$400.00	\$400.00	\$2,100.00
Equipment	\$5,000.00	\$0.00	\$0.00	\$5,000.00
Total Direct Costs	\$26,000.00	\$5,100.00	\$5,100.00	\$20,900.00
Indirect (if allowable) 15% *	\$3,900.00	\$765.00	\$765.00	\$3,135.00
Total Costs	\$29,900.00	<u>\$5,865.00</u>	\$5,865.00	\$24,035.00

Match Expenditures

Salaries	\$10,000.00	\$2,000.00	\$2,000.00	\$8,000.00
Fringe Benefits	\$2,500.00	\$500.00	\$500.00	\$2,000.00
Professional and Contracted Services	\$5,000.00	\$2,000.00	\$2,000.00	\$3,000.00
Travel	\$1,000.00	\$200.00	\$200.00	\$800.00
Supplies	\$2,500.00	\$400.00	\$400.00	\$2,100.00
Equipment	\$5,000.00	\$0.00	\$0.00	\$5,000.00
Total Direct Costs	\$26,000.00	\$5,100.00	\$5,100.00	\$20,900.00
Indirect (if allowable)	\$3,900.00	\$765.00	\$765.00	\$3,135.00
Total Costs	\$29,900.00	\$5,865.00	\$5,865.00	\$24,035.00

* Fringe Rates & Indirect Rates must be approved in the grant application process with TPWD.

I, subrecipient/vendor, certify that this invoice is correct and that matching funds (if required in the contract) have been provided and will be subject to audit under OMB Circular A-133. I further certify that this invoice has not been previously paid.

U.S. Department of the Interior

**Certifications Regarding Debarment, Suspension and
Other Responsibility Matters, Drug-Free Workplace
Requirements and Lobbying**

Persons signing this form should refer to the regulations referenced below for complete instructions:

Certification Regarding Debarment, Suspension, and Other Responsibility Matters - Primary Covered Transactions - **The prospective primary participant further agrees by submitting this proposal that it will include the clause titled, "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions. See below for language to be used or use this form certification and sign. (See Appendix A of Subpart D of 43 CFR Part 12.)**

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions - (See Appendix B of Subpart D of 43 CFR Part 12.)

Certification Regarding Drug-Free Workplace Requirements - Alternate I. (Grantees Other Than Individuals) and Alternate II. (Grantees Who are Individuals) - (See Appendix C of Subpart D of 43 CFR Part 12)

Signature on this form provides for compliance with certification requirements under 43 CFR Parts 12 and 18. The certifications shall be treated as a material representation of fact upon which reliance will be placed when the Department of the Interior determines to award the covered transaction, grant, cooperative agreement or loan.

**PART A: Certification Regarding Debarment, Suspension, and Other Responsibility Matters-
Primary Covered Transactions**

CHECK ☐ IF THIS CERTIFICATION IS FOR A PRIMARY COVERED TRANSACTION AND IS APPLICABLE.

- (1) The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:
 - (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded by any Federal department or agency;
 - (b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
 - (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
 - (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
- (2) Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

**PART B: Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion -
Lower Tier Covered Transactions**

CHECK ☐ IF THIS CERTIFICATION IS FOR A LOWER TIER COVERED TRANSACTION AND IS APPLICABLE.

- (1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- (2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

PART C: Certification Regarding Drug-Free Workplace Requirements

CHECK ☐ IF THIS CERTIFICATION IS FOR AN APPLICANT WHO IS NOT AN INDIVIDUAL.

Alternate I. (Grantees Other Than Individuals)**A. The grantee certifies that it will or continue to provide a drug-free workplace by:**

- (a) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the grantee's workplace and specifying the actions that will be taken against employees for violation of such prohibition;
- (b) Establishing an ongoing drug-free awareness program to inform employees about--
 - (1) The dangers of drug abuse in the workplace;
 - (2) The grantee's policy of maintaining a drug-free workplace;
 - (3) Any available drug counseling, rehabilitation, and employee assistance programs; and
 - (4) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;
- (c) Making it a requirement that each employee to be engaged in the performance of the grant be given a copy of the statement required by paragraph (a);
- (d) Notifying the employee in the statement required by paragraph (a) that, as a condition of employment under the grant, the employee will --
 - (1) Abide by the terms of the statement; and
 - (2) Notify the employer in writing of his or her conviction for a violation of a criminal drug statute occurring in the workplace no later than five calendar days after such conviction;
- (e) Notifying the agency in writing, within ten calendar days after receiving notice under subparagraph (d)(2) from an employee or otherwise receiving actual notice of such conviction. Employers of convicted employees must provide notice, including position title, to every grant officer on whose grant activity the convicted employee was working, unless the Federal agency has designated a central point for the receipt of such notices. Notice shall include the identification number(s) of each affected grant;
- (f) Taking one of the following actions, within 30 calendar days of receiving notice under subparagraph (d)(2), with respect to any employee who is so convicted --
 - (1) Taking appropriate personnel action against such an employee, up to and including termination, consistent with the requirements of the Rehabilitation Act of 1973, as amended; or
 - (2) Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency;
- (g) Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs (a) (b), (c), (d), (e) and (f).

B. The grantee may insert in the space provided below the site(s) for the performance of work done in connection with the specific grant:

Place of Performance (Street address, city, county, state, zip code)

Check ☐ if there are workplaces on files that are not identified here.

PART D: Certification Regarding Drug-Free Workplace Requirements

CHECK ☐ IF THIS CERTIFICATION IS FOR AN APPLICANT WHO IS AN INDIVIDUAL.

Alternate II. (Grantees Who Are Individuals)

- (a) The grantee certifies that, as a condition of the grant, he or she will not engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance in conducting any activity with the grant;
- (b) If convicted of a criminal drug offense resulting from a violation occurring during the conduct of any grant activity, he or she will report the conviction, in writing, within 10 calendar days of the conviction, to the grant officer or other designee, unless the Federal agency designates a central point for the receipt of such notices. When notice is made to such a central point, it shall include the identification number(s) of each affected grant.

PART E: Certification Regarding Lobbying
Certification for Contracts, Grants, Loans, and Cooperative Agreements

CHECK ☐ IF CERTIFICATION IS FOR THE AWARD OF ANY OF THE FOLLOWING AND
THE AMOUNT EXCEEDS \$100,000: A FEDERAL GRANT OR COOPERATIVE AGREEMENT;
SUBCONTRACT, OR SUBGRANT UNDER THE GRANT OR COOPERATIVE AGREEMENT.

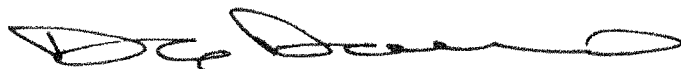
CHECK ☐ IF CERTIFICATION FOR THE AWARD OF A FEDERAL
LOAN EXCEEDING THE AMOUNT OF \$150,000, OR A SUBGRANT OR
SUBCONTRACT EXCEEDING \$100,000, UNDER THE LOAN.

The undersigned certifies, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, and officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

As the authorized certifying official, I hereby certify that the above specified certifications are true.



SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL

Dan G. Davis, CPA Associate Vice President, Research Administration

TYPED NAME AND TITLE

10/09/09

DATE

ASSURANCES - NON-CONSTRUCTION PROGRAMS

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0040), Washington, DC 20503.


**PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET.
SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.**

NOTE: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

1. Has the legal authority to apply for Federal assistance and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
4. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
5. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee-3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.
7. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
8. Will comply, as applicable, with provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

9. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333), regarding labor standards for federally-assisted construction subagreements.
10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
11. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
12. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
13. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).
14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.
15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. §§2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.
16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
18. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL 	TITLE Associate Vice President, Research Administration
APPLICANT ORGANIZATION Sam Houston State University	DATE SUBMITTED 10/9/09